

Effect of Digital Communication Uses on Nuclear Family Interaction Pattern



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Abstract:

Objective: This study scrutinizes the negative effects in the interaction time among the family members because of the continuous use of digital communication. The researcher assumed that this mode of interaction causes emotional and cultural negative effects on members of a family. Literature review shows that because family members now prefer spending their time on different means of digital communication instead of physical or face-to-face interaction, it may cause an indirect communication between them, which may in turn, negatively affect their interaction time and ultimately, cause a communication distance and weakening of bond between them. Erving Goffman's theory of impression management and dramaturgy is used to explain how digital communication may negatively affect the interaction pattern among members of a nuclear family.

Methodology: Adults/parents from fifty nuclear families of Lahore were respondents of the study. A non-probability sampling procedure and a structured questionnaire was used to collect data via google forms. The researcher used SPSS program for statistical analysis (i.e., Chi square) and descriptive analysis (i.e., rows frequency and percentage table for dependent variable which is nuclear family interaction pattern).

Results: The results of chi square show insignificant relationship between effect of digital communication on family members with frequent use of digital means of communication around

family members and frequently used digital instruments respectively (P value = 0.422, $p \leq .05$), (P value = 0.594, $p \leq .05$).

Concluding Recommendations: The researcher's hypothesis is refuted as statistical analysis indicates that digital communication does not negatively affect the nuclear family interaction pattern. For future research, more similar research is needed to be done such as using a particular digital instrument, conducting the study in different times and surveying both parents and children to fill the gaps present in the current study.

Introduction:

The degree to which human beings communicate is a significant part which makes them human. They have a natural desire to express their emotions, feelings, and viewpoints, etc. which they do so through a channel lying at the centre of human existence known as communication. Research shows that the development of body language and signals have occurred under human communication through the decades. Various studies assert that the main purpose of human communication is to meet the fundamental needs of interaction and connection as continuous communication leads to shared understanding and ultimately strengthening of the relationship. Several years after the development of spoken words, ability to speak, writing and printing, computer was invented. Several studies have maintained that the invention of computer was in fact the beginning of digital communication. As it is important for human beings to communicate to survive, the means of interaction have been evolved with the innovation of digital means of communication which has become a language of the new digital world.

Digital communication uses have both positive and negative effects on the nuclear family interaction patterns. It has proved to be very helpful in the time of COVID-19 pandemic. It has helped in connecting families together during the lockdown. For example, children who are studying abroad and could not visit their parents during lockdown, digital communication improvised call applications, text messaging and social networking sites. Social media applications such as Facebook, Instagram, etc. also create a sense of connectedness in a way that it keeps the individuals updated about each other's lives as users post their pictures, videos and live coverage stories on such apps. Digital communication is also effective in a sense that it helps people to be there for each other via text messages and calls when being physically present is not possible. Other than the positive effects, use of digital communication also negatively affects the family interaction pattern. Human beings have now become dependent on digital communication

to express their opinions, feelings, and thoughts, etc. Its continuous use has drifted apart the family members because they are always occupied in the digital world instead of sitting together and interacting with each other. For example, a family gathered for lunch, though present under the same roof, would not be as interactive with one another as they would be on these digital means of communication at that moment. Some would be busy taking pictures to upload them on social media, others would be busy in internet surfing and text messaging, etc.

The researcher has observed that although digital communication has both positive and negative effects on the family interaction patterns, especially the nuclear family, the negative effects outweigh the positive ones. The researcher's main approach is to take mainly parents' perspective as to how digital communication impacts the nuclear family interaction pattern.

Interpersonal communication has caved in and let the new digital communicating devices take control over the individuals. These digital devices have allowed people to communicate without being in proximity, which is ultimately affecting the family interaction time i.e., set of different activities they could engage in to interact with one another. Family is a group of people related to each other through blood or marriage residing in the same house as defined by Ekong (1988, p.203) in his study "An Introduction to Rural Sociology". Earlier, in the Western world, a family was described as the smallest social group of the society consisting of father, mother and their biological kids living together. According to the study "Family Communication: Overcoming Obstacles" conducted by Loveless and Holman (2007), a conventional nuclear family comprises of two individuals of the opposite gender who are legally married to one another and live under the same roof. Daly (1996) in his study "Families & time: Keeping pace in a hurried culture (Vol. 7)" defines family interaction as an idea that includes various activities with varying degrees of interaction among the members of a family. Studies assert that family members have

various opportunities to communicate with one another such as different kinds of family gatherings. Many studies argue that communication among family is very important as it helps the members to convey their feelings, emotions, opinions, etc. to one another. Scientific studies maintain that as communicating interpersonally involves natural sensory organs such as body language, posture, face expressions, gesture, eye contact, etc. it enables individuals, in this case family members to have a better understanding of one another. It is not only important what is said but also how it is said. Experiences show that talking to one another helps the family members get aware of each other's concerns and find a possible solution to get rid of them. Various studies assert that if a family actively communicates with each other, then there is a high chance that they will succeed in resolving their problems. This will also help them develop a good bond with one another.

Scientific studies have proved that the degree of one-to-one communication among the family members is decreasing now-a-days. The new world of digitalization and modernization has also changed the way of communication among family members. For example, Haig, M. (2002) & Akhlaq, A. Malik, N. and Khan, N. (2013) in their studies "Mobile Marketing: The Message Revolution" and "Family Communication and Family System as the Predicators of Family Satisfaction in Adolescents" respectively found out that about 80% of the children of the ages 14 to 16 have their own mobile phones, and 90% teens use their cell phones more for messaging instead of talking. One of the studies maintain that the rapid growth of social media is transfiguring the interpersonal communication. Individuals who use social media applications such as Instagram, WhatsApp, Twitter and Facebook, etc. spend an average of around 20 minutes each day and their friend list may consist of around 150 to 200 people. Two-thirds of these individuals log in to these social networking sites once a day at the minimum. Studies show

that the innovation of advanced communicating devices (i.e., all forms of communication which are made possible through technological medium) including mobile phones, Internet, digital technologies, telephone, computing devices, emails, social media, etc. have made it possible for the individuals to communicate with each other without being present in the same room, but at some cost. Many studies argue that these digital means of communication have restricted space and time and has given an individual full control over the information due to which these communicating devices are being misused. For example, family members residing in the same house prefer texting each other if they want to say something instead of getting up to convey their message. This shows that digital communication is certainly affecting the relationship between family members on daily basis as they are not 'present' face-to-face even when they are sharing the same roof, hence causing a distance between them. Children are always busy in text messaging, listening to songs, using social media applications, surfing Internet, playing video games and watching TV shows and movies. These practices are not only restricted to homes but almost everywhere where the cell phone signals such as 4G, etc. are available. Parents, on the other hand, are busy engaging in their own world of digitalization i.e., checking emails, watching dramas and news channels on television and talking on mobile phones, etc. rather than spending time, communicating and building a connection with their children. Though, Taylor, J. (2013) in his study "Is Technology Creating a Family Divide?" observes that parents are now counterbalancing the increasing gap by joining social networking sites and befriending their children on such sites which most of the kids find uncomfortable. A study conducted on family interaction pattern shows that families are now busy being occupied in the digital world due to which they do not get to spend more time together and communicate with one another. Because

of this very reason, the bond between the family members has weakened as compared to the time before digitalization.

Research Question:

“To what extent the use of digital communication negatively affects nuclear family interaction pattern?”

Independent Variable: Digital communication uses

Dependent Variable: Nuclear family interaction pattern

Hypothesis:

The increased use of digital communication negatively affects the interaction pattern among members of a nuclear family.

Objectives of the Study:

The basic objectives of study are as follows:

- The researcher wants to study the effect of digital communication practices on nuclear family in Lahore.
- The researcher wants to study that to what extent the negative effects are faced by nuclear family members.
- The researcher wants to study the types of family patterns emerged because of digiculture.
- The researcher also wants to find out relationship between the two variables, if any.

Significance of the Study:

The present study is useful to understand the changes that emerged in interaction patterns of nuclear family system because of digiculture especially with the reference of COVID-19 pandemic. The study can open the new avenues to understand diversification emerging in nuclear family interaction patterns because of digiculture under sociological perspective. The study can be helpful for students, policy makers and government authorities to preserve nuclear family systems in society. The study can help the relevant authorities to take appropriate measures to combat negative aspects (if any) of digiculture on nuclear family system. It can also help the researchers and university students to take advantage of this research by using the same methodology for conducting more thorough research in other aspects of digiculture on nuclear family systems.

Definitions and Concepts:

Digital Communication:

Digital communication is defined as a mode of communication which includes “wireline communication networks (e.g., digital subscriber loop, cable, fiber optics), wireless communication (e.g., cell phones and wireless local area networks), and storage media (e.g., compact disks, hard drives).”

Nuclear Family:

A nuclear family is defined as “a married couple, co-resident with their biological, dependent children.”

Uses of Digital Communication:

- Mobile phones
- Internet
- Telephones
- Computing devices
- E-mails
- Social media applications such as Facebook, Instagram, Twitter, etc.
- Electronic media

Effect of Digital Communication:

Positive Effects:

In these studies “Cultivating social resources on social network sites: Facebook relationship maintenance behaviors and their role in social capital processes”, “Face-to-face or Facebook: can social connectedness be derived online”, “Smart phones and mediated relationships: the changing face of relational communication”, “How social are social media? A review of online social behaviour and connectedness”, “How do online game communities retain gamers? Social presence and social capital perspectives” and “Staying connected while on the move: cell phone use and social connectedness”, Ellison et al. (2014); Grieve et al. (2013); Pettegrew and Day (2015); Ryan et al. (2017); Tseng et al. (2015); Wei and Lo (2006) respectively show that digital communication such as text messaging, video call applications, social networking sites, online video games, etc. assist the individuals in maintaining relationships, form a sense of intimacy which therefore, result in social connectivity. The studies “De-demonizing distance in mobile family lives: co-presence, care circulation and polymedia as vibrant matter”, “Doing family” through ICT-mediated ordinary co-presence: transnational communication practices of Romanian migrants in Switzerland” and “Intimacy in long-distance relationships over video chat. In: Proceedings of the SIGCHI conference on human factors in computing systems” are about families who live far away from each other such as those in long distance relationships and immigrant families, Baldassar (2016); Nedelcu and Wyss (2016); Neustaedter and Greenberg (2012) respectively propose that video calls help people feel like they are in proximity, hence creating a sense of closeness among them. Wong (2020) in his study “Hidden youth? A new perspective on the sociality of young people “withdrawn” in the bedroom in a digital age”

maintains that youngsters have confined themselves to their rooms or homes for quite a long period of time but the invention of digital means of communication, especially online video games community has proved to be very helpful for their affability. Baym (2015) in his study “Personal Connections in the Digital Age” asserts that digital communication plays an important role in situations where interpersonal interaction is unwanted and impossible.

Negative Effects:

Advanced digital means of communication have provided various opportunities like mutual activities to do in free time but everything comes with a cost, in this case, providing a space that keeps the family members occupied in their personalized activities in their own rooms while living under the same roof. Livingstone (2002) in his study “Young people and new media: Childhood and changing media environment” maintains that home entertainment provides many opportunities to interact and have fun with family members but it may also result in ‘bedroom culture’ i.e., being engaged in digital media and playing video-games in separate rooms in the same house. It shows that people have the feelings of loneliness even among people and this culture is creating many emotional and sensitive negativity as far as family relations are concerned. This became a bigger problem when one of the innovations of digital communication i.e., mobile phones came on surface and drastically broadened people’s access to entertainment, information and other social networking sites such as Facebook, Twitter, Instagram, etc. which eventually made people distant from their co-present situation. Many studies argue that these digital means of communication have restricted space and time and has given an individual full control over the information due to which these communicating devices are being misused. Because of this control, people spend their time alone with the devices and not with the family members. It was observed that sometimes people ignore interactions, relations with the family

members by using these devices without any purpose. For example, family members residing in the same house prefer texting each other if they want to say something instead of getting up to convey their message. This shows that digital communication is certainly affecting the relationship between family members on daily basis as they are not ‘present’ face-to-face even when they are sharing the same roof, hence causing emotionally disengagement and a distance between them. Children are always busy in text messaging, listening to songs, using social media applications, surfing Internet, playing video games and watching TV shows and movies. These practices are not only restricted to homes but almost everywhere where the cell phone signals such as 4G, etc. are available. Parents, on the other hand, are busy engaging in their own world of digitalization i.e., checking emails, watching dramas and news channels on television and talking on mobile phones, etc. rather than spending time, communicating and building a connection with their children. So, the researcher has a right to assume that digiculture has produced culture of social distancing and emotional disengagement.

Effect on Family Interaction Pattern:

Harper, et al. (2008) in their study “Being human: Human-computer interaction in the year 2020” show that tweeting and text messaging have become leading forms of interpersonal communication among the family members. It has become so prevalent that it has become a natural choice to keep in touch this way. Similar research was conducted which concluded that the excessively increased use of new and advanced digital communicating devices is causing disruption in the relationships among members of a family as these make them lose interest in conversing with one another, hence weakening the bond between the family members. Olayiwola and Owagbemi (2014), Holmes and Sachs (2007) & George and Ukpong (2013) in their study “Strains in Traditional Family Values in a Yoruba Community: A Study of Families in Akoko-

Land in Ondo State, Nigeria”, “Family Communication: Overcoming Obstacles” and “Combating the 21st Century Family Challenges in Nigeria for Social Stability through Family Counseling Services” respectively assert that several intellectuals and social scientists have showed their concern regarding the increased use of technology in Nigerian families which led to a decrease in marriage rates and increase in individualism in marital relationships. This causes distance and eventually weakening of bond between the partners. The main reason of this is the excessive use of digital communication. Invention of digital communication has created a communication gap between the family members which has ultimately caused a distance and weaking of bond between the family members. It is because they prefer spending time individually being engaged in the new world of digitalization rather than spending that time interacting with one another.

Literature Review:

In these studies “Cultivating social resources on social network sites: Facebook relationship maintenance behaviors and their role in social capital processes”, “Face-to-face or Facebook: can social connectedness be derived online”, “Smart phones and mediated relationships: the changing face of relational communication”, “How social are social media? A review of online social behaviour and connectedness”, “How do online game communities retain gamers? Social presence and social capital perspectives” and “Staying connected while on the move: cell phone use and social connectedness”, Ellison et al. (2014); Grieve et al. (2013); Pettegrew and Day (2015); Ryan et al. (2017); Tseng et al. (2015); Wei and Lo (2006) respectively assert that digital communication such as text messaging, video call applications, social networking sites, online video games, etc. assist the individuals in maintaining relationships, form a sense of intimacy which therefore, result in social connectivity. The studies “De-demonizing distance in mobile family lives: co-presence, care circulation and polymedia as vibrant matter”, “Doing family” through ICT-mediated ordinary co-presence: transnational communication practices of Romanian migrants in Switzerland” and “Intimacy in long-distance relationships over video chat. In: Proceedings of the SIGCHI conference on human factors in computing systems” are about families who live far away from each other such as those in long distance relationships and immigrant families, Baldassar (2016); Nedelcu and Wyss (2016); Neustaedter and Greenberg (2012) respectively propose that video calls help people feel like they are in proximity, hence creating a sense of closeness among them. Ames et al. (2010) in their study “Making love in the network closet: the benefits and work of family videochat” show that video calls can imitate the idea of in-person social interaction as it allows various family members on both sides of call to communicate simultaneously. Baldassar (2016) in his study “De-demonizing distance in mobile

family lives: co-presence, care circulation and polymedia as vibrant matter” asserts that text messaging, on the other hand, may not be as effective as video calls in creating a sense of togetherness but they provide a sense of “being there” for someone. Wong (2020) in his study “Hidden youth? A new perspective on the sociality of young people “withdrawn” in the bedroom in a digital age” asserts that youngsters have confined themselves to their rooms or homes for quite a long period of time but the invent of digital means of communication, especially online video games community has proved to be very helpful for their affability. Hancock, Thom-Santelli and Ritchie (2004) in their study “Deception and design: The impact of communication technology on lying behavior” state that this new and advanced digital means of communication has proven very convenient as it has made easier for the individuals to communicate with as many people as they want concurrently without being physically present in the same room. Thus, Baym (2015) in his study “Personal Connections in the Digital Age” maintains that digital communication plays an important role in situations where interpersonal interaction is unwanted and impossible.

In this study “Principles of human communication”, Durojaiye & Ipaye, (1983) & Watzlawick et al. (2014) argue that with the passage of time, the pattern of communication among the family members has changed due to socialization, westernization and most importantly digitalization. In this study “Social media: An effective tool for social mobilization in Nigeria”, Dunu & Ugochukwu, (2015) & Norwegian Ministry of Modernization (2009) assert that this new digiculture has disturbed the conventional methods of family interaction, motivating them to learn new digital tools and master the new ways of digital means of communication, so that they can maintain and keep on developing new digital expertise to survive in this modern and advanced digital world. The new world of digitalization consists of two citizens; ‘digital natives’

who are born in this time and ‘digital immigrants’ who were born before the time of digitalization and learned how to live in this new culture. The layout of text messages has also altered among the family over time. Either present in proximity or separated, family members have now become dependent upon oral forms of communication that entails face-to-face conversation. Information can be interchanged both simultaneously (i.e., texts and posts in online chat rooms) and asynchronously (where conversation does not take place at the same time such as text messages and e-mails). This leads to distance between family members and restricts the social interaction among them. The advent of digital means of communication has come in between the human physical interaction and has also changed the methods of communication process. Indeed, advanced digital means have provided various opportunities like mutual activities to do in free time but everything comes with a cost, in this case, providing a space that keeps the family members occupied in their personalized activities in their own rooms while living under the same roof. For example, Blair-Loy (2009) & Chelsey (2005) in their study “Work without end? Scheduling flexibility and work-to-family conflict among stockbrokers” and “Blurring boundaries? Linking technology use, spillover, individual distress, and family satisfaction” respectively assert that now parents can work from home and have more time to spend with their kids but this free time is being spent on digital means. Likewise, Livingstone (2002) in his study “Young people and new media: Childhood and changing media environment” states that home entertainment provides many opportunities to interact and have fun with family members but it may also result in ‘bedroom culture’ i.e., being engaged in digital media and playing video-games in separate rooms in the same house. This became a bigger problem when one of the innovations of digital communication i.e., mobile phones came on surface and drastically broadened people’s access to entertainment, information and other social networking

sites such as Facebook, Twitter, Instagram, etc. which eventually made people distant from their co-present situation. Thulin & Vilhelmson (2007) in their study “Mobiles everywhere: Youth, the mobile phone, and changes in everyday practice” assert that mobile phones are tied to one individual, providing space for personalized screen-centric activities at the cost of affectionate interaction time among family. In this study “Can you connect with me now? How the presence of mobile communication technology influences face-to-face conversation quality”, Przybylski & Weinstein (2012, p.244) propose that mobile phones function as a prime that “activates implicit representations of wider social networks, which in turn crowd out face-to-face conversations”. Similarly, Turkle (2011) in his study “Alone together: Why we must move from technology and less from each other” proposes that in the time of global connectivity, individuals are growingly using digital means of communication such as computers, mobile phones and Internet, etc. to converse with other people while sitting alone and prefer texting rather than having a meaningful conversation with those who are sitting around. Such deep and purposeful conversations are absent in the presence of digital means of communication, as it makes the user unable to wholly participate in the present moment.

According to a study conducted by Computer Industry Almanac (2010), the last generation has witnessed remarkable increase in the use of digital means of communication in routine life. In the year 2010, 170 million personal computers were sold around the globe, with a 69% rise in sales in the United States from the year 2010 to 2014. In the year of 2010, 72% citizens of United States above the age of 3 used the Internet. In a study “Networked families”, Kennedy, Smith, Well, & Wellman (2008) found out that nearly 58% of the married couples with kids have two or more computers in their houses, 89% of these houses have more than one mobile phones, and about 60% of the kids in these households between ages 7-17 have their own mobile phones.

As a matter of fact, one fourth of the homes in America have a mobile phone instead of a telephone according to Blumberg & Luke's (2009) study named "Reevaluating the need for concern regarding noncoverage bias in landline surveys", and Hampton, Sessions, Her, & Rainie (2009) in their study "Social isolation and new technology: How the internet and mobile phones impact Americans' social networks" maintain that mobile phones are the most used digital means of communication to communicate with one's social network. Video games have also become prevalent with the advent of digital communication. For example, NPD Group (2010) in their study "While the majority of mobile devices used by parents and kids have fewer than 20 apps for children, close to 10 percent have more than 60" found out that 20% individuals play video games via social networking sites and about three-fourths houses have members who take part in video gaming on computers. A ubiquity of Internet-based technologies in everyday life is intense. Toma et al., (2016) in their study "Lies in the eye of the beholder: Asymmetric beliefs about one's own and others' deceptiveness in mediated and face-to-face communication" assert that people are growingly taking advantage of the benefits that digital communication offers. For example, tweeting and text messaging have become leading forms of interpersonal communication among the family members as per the study named "Being human: Human-computer interaction in the year 2020" by Harper, et al. (2008). It has become so prevalent that it has become a natural choice to keep in touch this way. Similar research was conducted which concluded that the excessively increased use of new and advanced digital communicating devices is causing disruption in the relationships among members of a family as these make them lose interest in conversing with one another, hence weakening the bond between the family members. Olayiwola and Owagbemi (2014), Holmes and Sachs (2007) & George and Ukpong (2013) in their study "Strains in Traditional Family Values in a Yoruba Community: A Study of

Families in Akoko-Land in Ondo State, Nigeria”, “Family Communication: Overcoming Obstacles” and “Combating the 21st Century Family Challenges in Nigeria for Social Stability through Family Counseling Services” respectively state that several intellectuals and social scientists have showed their concern regarding the increased use of technology in Nigerian families which has led to a decrease in marriage rates and increase in individualism in marital relationships due to the weakening of bond between the partners. The main reason of this is the excessive use of digital communication. According to the data collected by the Nigerian Communications Commission’s (NCC, 2015), 97 million people which constitutes 51.1% Nigeria’s population use internet-based websites and social media applications, especially Facebook. O’Keeffe & Clark-Pearson (2011) in their study “Clinical report- the impact of social media on children, adolescents and families” assert that such networking sites is a source of amusement for the individuals of the current generation but also pose a serious threat to important family values. Another study “Influence of technology usage on family communication patterns and functioning: A systematic review” shows that the use of digital communication is increasing among families and the family members mostly converse with one another through these digital means due to which their free time, attachment outside the digital world and communication is adversely affected. According to this study “Internet paradox: A social technology that reduces social involvement and psychological well-being?” conducted by Kraut et al., (1998), the more the use of Internet, the less the interaction with the family in the household and decline in social circle.

From the above studies’, it is found out that digital communication uses negatively affect family interaction pattern, especially in the nuclear families. The invent of digital communication has created an in-person communication gap between the family members which has ultimately

caused a distance between them. It is because they prefer spending time individually being engaged in the new world of digitalization rather than spending that time interacting with one another. Everyone at home is busy being occupied in different modes of digital communication according to their interests. With the new digital advancements, there has been an increasing gap between the family members. The researcher can assume that the more the gap is, the weaker the bond and more the negative interaction patterns among the family members. Thus, the previous studies mentioned in the literature review do support the researcher's assumption. The researcher has a logic to assume,

“To what extent the use of digital communication negatively affects nuclear family interaction pattern?”

Theoretical Framework:

According to Erving Goffman's theory of impression management and dramaturgy, all individuals of a society are the social actors who play various social functions depending on the social stages. He noticed that society is so complex that out of a variety of different roles, a few gets jumbled (Dillon, 2010). The concern of the present study is that digital communication may bring in "outside" stages or new activities e.g., new advanced digital instruments such as mobile phones, Internet, computing devices, electronic media, e-mails, and social networking sites (e.g., Facebook, Instagram, and Twitter, etc.) that may negatively affect the interaction time among the members of a nuclear family and cause communication distance and weakening of bond among them.

Methodology:

Because of the present circumstances of COVID-19 pandemic, the researcher has many limitations to get the data from the relevant respondents by using any scientifically approved commonly used methods. Because of COVID-19 pandemic, the researcher is unable to interact physically with the respondents, so the researcher has to use digital communication system to collect the data and responses from the relevant respondents of the present study.

Universe:

All the nuclear families residing in Lahore is the universe of the present study, and those who are using digital communication techniques for communication and have more than two individuals as the family members.

Respondents:

Adults i.e., husband and wife/parents of families who use digital communication systems for their communication with others and among themselves are the respondents of the present research.

Research Ethics:

The researcher must rigorously follow the research ethics while carrying out a study. The researcher must provide protection to the participant. The meeting and the information gathered must remain confidential so that the participant remains protected in every way. The researcher should always remain within the line of limit and not invade the participant's privacy and avoid asking questions that the participant feels uncomfortable answering. Morally speaking, the researcher must take complete responsibility of the collected data and must not manipulate it for his/her own interest.

Sample Size and Sampling Procedure:

Almost fifty families who qualify as respondents of present study were the sample size of the present study. The questionnaire consists of 18 questions. There are total 5 demographic questions including profession, age, household income, education and family size. The selection of respondents was adopted through convenient sampling procedure. A non-probability sampling was used for the collection of data. The survey was filled by the adults of the nuclear family i.e., both husband and wife/parents.

Tool of Data Collection:

A structured questionnaire was used as a tool of data collection for the present study.

Data Collection Technique:

In order to collect data, a survey was curated using google forms and sent among respondents via emails and WhatsApp. The researcher also requested friends and acquaintances to ask their parents to fill out the survey.

Data Analysis:

After data collection, data organization and tabulation, analysis of data can be conducted by applying appropriate statistical methods and techniques. The researcher used SPSS program for analysis of present study.

Result and Findings:

After completion of data analysis, the findings and results were disseminated at the end of research.

Table 1. Non-Socio Demographic Variables Frequency Table

| Variables | N | Frequency | Percentage |
|-----------------------------------|----------|------------------|-------------------|
| Age | | | |
| 30-35 | 95 | 40 | 42.1 |
| 36-40 | | 18 | 18.9 |
| 41-45 | | 9 | 9.5 |
| Above 45 | | 28 | 29.5 |
| Education | | | |
| High School | 96 | 1 | 1.0 |
| Bachelor's Degree | | 28 | 29.2 |
| Master's Degree | | 62 | 64.6 |
| Other | | 5 | 5.2 |
| Profession | | | |
| Doctor | 99 | 11 | 11.1 |
| Engineer | | 9 | 9.1 |
| Banker | | 38 | 38.4 |
| Teacher | | 17 | 17.2 |
| Journalist | | 1 | 1.0 |
| Government servant | | 5 | 5.1 |
| Housewife | | 8 | 8.1 |
| Other | | 10 | 10.1 |
| Family Size | | | |
| 2 | 99 | 2 | 2.0 |
| 3 | | 9 | 9.1 |
| 4 | | 13 | 13.1 |
| 5 | | 39 | 39.4 |
| Above 5 | | 36 | 36.4 |
| Monthly Household Income | | | |
| Rs. 50,000 – Rs. 100,000 | 99 | 47 | 47.5 |
| Rs. 150,000 – Rs. 200,000 | | 25 | 25.3 |
| Rs. 250,000 – Rs. 300,000 | | 16 | 16.2 |
| Above Rs. 300,000 | | 11 | 11.1 |
| Use of Digital Instruments | | | |
| Yes | 100 | 100 | 100 |

Table 2. Categorical Variables Frequency Table

| Variables | N | Frequency | Percentage |
|---|-----|-----------|------------|
| Frequent Use of Digital Means of Communication around Family Members | | | |
| Very Frequently | 100 | 35 | 35.0 |
| Frequently | | 42 | 42.0 |
| Occasionally | | 20 | 20.0 |
| Rarely | | 2 | 2.0 |
| Very Rarely | | 1 | 1.0 |
| Mode of Communication More Used with Family Members | | | |
| Digital | 100 | 37 | 37.0 |
| Communication | | | |
| Verbal | | 63 | 63.0 |
| Communication | | | |
| Reason of Using Digital Communication More | | | |
| Convenient | 100 | 55 | 94.8 |
| Shyness | | 2 | 3.4 |
| Not so open with family | | 1 | 1.7 |
| Use of Digital Communication by Family | | | |
| Yes | 100 | 71 | 71.0 |
| No | | 12 | 12.0 |
| Sometimes | | 17 | 17.0 |
| Like the Use of Digital Instruments | | | |
| Yes | 100 | 72 | 72.0 |
| No | | 28 | 28.0 |
| Extent of Dislike Using Digital Instruments | | | |
| To a Great Extent | 75 | 3 | 4.0 |
| Somewhat | | 25 | 33.3 |
| Very Little | | 12 | 16.0 |
| Not at All | | 35 | 46.7 |
| Reason of Dislike | | | |
| Creates gap between us | 73 | 28 | 38.4 |
| Misunderstood communication | | 18 | 24.7 |
| General ethics | | 27 | 37.0 |
| Negative Effect of Digital Communication | | | |
| Yes | 100 | 74 | 74.0 |
| No | | 26 | 26.0 |
| Want to Get Rid of Digital Communication | | | |
| Yes | 100 | 29 | 29.0 |
| No | | 71 | 71.0 |
| Possibility of Getting Rid of Digital Instrument | | | |
| Minimizing its use | 45 | 19 | 42.2 |
| By totally stopping irrelevant usage | | 2 | 4.4 |

| | | | |
|---|-----|-----|-------|
| (Scrolling for no reason, etc.) | | | |
| By not using it for entertainment purposes | | 1 | 2.2 |
| Don't want to get rid of it | | 23 | 51.1 |
| Mobile Phones Frequently Used | | | |
| Yes | 100 | 96 | 96.0 |
| No | | 4 | 4.0 |
| Internet Frequently Used | | | |
| Yes | 100 | 100 | 100.0 |
| No | | | |
| E-mails Frequently Used | | | |
| Yes | 100 | 9 | 9.0 |
| No | | 91 | 91.0 |
| Computing Devices Frequently Used | | | |
| Yes | 100 | 9 | 9.0 |
| No | | 91 | 91.0 |
| Social Media Applications (e.g., Facebook, Instagram, and Twitter, etc.) Frequently Used | | | |
| Yes | 100 | 94 | 94.0 |
| No | | 6 | 6.0 |
| All Modes of Communication Mentioned Above Frequently Used | | | |
| Yes | 100 | 3 | 3.0 |
| No | | 97 | 97.0 |
| Frequent Use of Mobile Phones with Family Members | | | |
| Yes | 100 | 58 | 58.0 |
| No | | 42 | 42.0 |
| Frequent Use of WhatsApp with Family Members | | | |
| Yes | 100 | 30 | 30.3 |
| No | | 69 | 69.7 |
| Frequent Use Other Modes of Communication with Family Members | | | |
| Yes | 100 | 8 | 8.0 |
| No | | 92 | 92.0 |
| Frequently Used Digital Instruments | | | |
| 3 | 100 | 95 | 95.0 |
| 4 | | 2 | 2.0 |
| 5 | | 3 | 3.0 |

Table 3. Rows Frequency and Percentage Table for Dependent Variable i.e., Negative Effect of Digital Communication on Family Members

| Dependent Variable – Negative Effect of Digital Communication on Family Members | | | |
|--|-------|--------|--------|
| Independent Variable - Use of digital means of communication around family members | No | Yes | Total |
| Very Frequently | 9 | 26 | 35 |
| | 25.7% | 74.3% | 100.0% |
| Frequently | 8 | 34 | 42 |
| | 19.0% | 81.0% | 100.0% |
| Occasionally | 8 | 12 | 20 |
| | 40.0% | 60.0% | 100.0% |
| Rarely | 1 | 1 | 2 |
| | 50.0% | 50.0% | 100.0% |
| Very Rarely | 0 | 1 | 1 |
| | 0.0% | 100.0% | 100.0% |
| Total | 26 | 74 | 100 |
| | 26.0% | 74.0% | 100.0% |
| Independent Variable – Frequently Used Digital Instruments | | | |
| 3 | 25 | 70 | 95 |
| | 26.3% | 73.7% | 100.0% |
| 4 | 1 | 1 | 2 |
| | 50.0% | 50.0% | 100.0% |
| 5 | 0 | 3 | 3 |
| | 0.0% | 100.0% | 100.0% |
| Total | 26 | 74 | 100 |
| | 26.0% | 74.0% | 100.0% |

As shown in Table 3, the 74.3% of the total respondents who use modes of digital communication very frequently around family members believe that they do negatively affect the family interaction pattern whereas only 25.7% of them think that digital communication does not have any adverse effect on family interaction pattern. Similarly, 81% of the respondents using the digital means of communication frequently hold the point of view that they do affect the family interaction pattern negatively whereas 19% of them think otherwise. Likewise, 60% of the participants who occasionally use digital sources maintain that these instruments adversely

affect the family interaction patterns while 40% of them tend to disagree. Similarly, 50% of the participants rarely using these digital instruments believe that there is a negative effect of digital communication on family interaction pattern while the remaining 50% think there is no such impact. Lastly, 100% of the respondents who use modes of digital communication very rarely maintain that they adversely affect the family interaction pattern.

Similarly, 73.7% of the participants who use three digital sources think that these have a negative effect on family interaction pattern while 26.3% of them tend to disagree. Likewise, 50% of the respondents using four sources of digital communication believe that these have adverse impacts on the family interaction pattern whereas the remaining 50% think otherwise. Lastly, 100% of the participants who use five digital sources maintain that these negatively affect the family interaction pattern.

Chi-Square Table:

Table 4. Chi Square Table for Dependent Variable i.e., Negative Effect of Digital Communication on Family Members

| Dependent Variable – Negative Effect of Digital Communication on Family Members | Chi Square | P* |
|---|-------------------|-----------|
| Frequent use of digital means of communication around family members | 4.044 | 0.422 |
| Frequently Used Digital Instruments (e.g., Mobile phones, internet, e-mails, computing devices, and social media applications such as Facebook, Instagram, and Twitter, etc.) | 1.658 | 0.594 |
| Mode of communication used more to communicate with family members | 0.086 | 0.818 |
| Digital communication being used more as compared to verbal communication | 0.914 | 1.000 |

| | | |
|--|-------|-------|
| Use of digital communication by whole family | 2.300 | 0.325 |
|--|-------|-------|

Key: * $p \leq .05$, 95% chance of error, $p \leq 0.1$, 99% chance of error (sample: $* < .05$)

The results indicate that there is no statistically significant association, as an alpha level of .05 was used for all the statistical tests.

Considering the statistical analysis i.e., chi square test, the researcher's hypothesis i.e., the increased use of digital communication negatively affects the interaction pattern among members of a nuclear family, is not proven as there is no statistically significant association between the dependent variable(s) and independent variable(s).

Discussion:

A few of the previous studies maintain that digital means of communication such as text messaging, social media applications and video call applications create a sense of intimacy between the family members and enable them to connect with one another in case they are living apart. Many other studies propose that digitalization has transformed the conventional methods of family interaction into modern ones. It has come in between the human physical interaction by providing the members of a family a space which makes them engaged in their personalized activities in their separate rooms while residing in the same house. This increased use of digital communication negatively affects their free time and attachment outside the digital world which further causes distance and weakens the bond among the family members. The researcher's theoretical framework maintained a similar proposal that digital communication brings in "outside" stages or new activities such as new and advanced digital instruments that adversely impacts the family interaction time and causes increased communication gap between them. The data refutes the notion that the increased use of digital communication negatively affects the interaction pattern among members of a nuclear family. Chi-square test confirmed disparity between the researcher's hypothesis and outcome. The statistical analysis shows insignificance between the independent variable i.e., digital communication uses and dependent variable i.e., nuclear family interaction pattern. This means that according to the statistical data, digital communication does not negatively affect the nuclear family interaction pattern. The descriptive analysis was also conducted by comparing the rows frequencies and percentages of dependent variable with independent variable(s) which show that the use of digital communication negatively affects the nuclear family interaction time and causes increased communication gap between them. But since the statistical data shows insignificance between independent and

dependent variable, it means that the researcher's hypothesis i.e., the increased use of digital communication negatively affects the interaction pattern among members of a nuclear family, is rebutted.

Limitations and Recommendations/Future Research:

With all the evidence gathered from the research, the study is still not fool proof. The researcher has many limitations in the whole process of thesis. The data was collected online through survey as the researcher was unable to physically interact with the respondents due to COVID-19 pandemic, and the sample size was also very small. Multiple communication modes were considered which could have confused the respondents as they are all interrelated. The researcher only used adults of the nuclear family i.e., both husband and wife/parents, as their respondents and did not consider the children that might have a different perspective than their parents, as they are more engaged in using digital instruments. But there is always a room for improvement and a different approach for conducting research. So, results can be a bit modified because there is evidence in the previous studies that digital communication has proved to change the way family members interact with one another now-a-days. So, for future research, researchers can consider all the members of a family i.e., both adults/parents and children instead of just one. They can also conduct the same research in different times with a larger sample size and try a specific mode of digital communication such as a mobile phone because people are mostly on their mobile phones while in a gathering and very less people are sitting on a laptop while interacting with their family members. These factors might contribute to give a different result. In short, more similar studies with different approaches have to be conducted to fill gaps of the present study.

Conclusion and Implications:

The study titled “Effect of Digital Communication Uses on Nuclear Family Interaction Pattern” examines the negative effects of digital communication in the interaction time among the family members by using nuclear families in Lahore who use digital communication system for communication with others and among themselves. The respondents of the study were adults of the nuclear family i.e., both husband and wife/parents. The study assumed that the increased use of digital communication has altered the interaction patterns among members of a family, which has increased the communication gap between them. As a result, they have become distanced which has further weakened the bond between them. But the researcher’s findings and results imply that it is not the case i.e., according to the statistical analysis, digital communication does not negatively affect the nuclear family interaction pattern. Hence, it was rebutted.

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Appendix A:

Informed Consent Form:

Date: July 20, 2021

Dear Respondent,

You have been invited to participate in research titled “Effect of Digital Communication Uses on Nuclear Family Interaction Pattern”. The study wants to assess the negative effects in the interaction time among the family members because of the continuous use of digital communication by using nuclear families in Lahore who use digital communication system for communication purposes with others and among themselves, as a case study. The attached questionnaire will just require your 20-25 minutes approximately to answer. There is no compensation for responding nor is there any kind of known risk. The information provided will not be released to a third party and all efforts to protect your identity and keep the information confidential will be taken. Your participation in this study is completely voluntary and you have the full legitimate right to withdraw from this at any point. By signing this form, you are agreeing that you have read the above information and indicating your consent to participate or take part in this research study.

Consent: _____

Thank you for your time and participation!

Name of the researcher: Zara Imran

BA. Hon, Department of Sociology, Forman Christian College.

E-mail: zaraimran0000@gmail.com

Signature: Zara Imran

Appendix B:

Questionnaire:

No. of respondents: _____

| Q no. | Questions |
|-------|--|
| Q1 | How old are you? <input type="radio"/> 30-35 <input type="radio"/> 36-40 <input type="radio"/> 41-45 <input type="radio"/> Above 45 |
| Q2 | Your education? <input type="radio"/> Middle School <input type="radio"/> High School <input type="radio"/> Bachelor's Degree <input type="radio"/> Master's Degree <input type="radio"/> Other _____ |
| Q3 | What is your profession? <input type="radio"/> Doctor <input type="radio"/> Engineer <input type="radio"/> Banker <input type="radio"/> Teacher |

| | |
|----|---|
| | <ul style="list-style-type: none"> <input type="radio"/> Sociologist <input type="radio"/> Journalist <input type="radio"/> Government servant <input type="radio"/> Other _____ |
| Q4 | <p>How many family members are there in your family?</p> <ul style="list-style-type: none"> <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/> Above 5 |
| Q5 | <p>What is your monthly household income?</p> <ul style="list-style-type: none"> <input type="radio"/> Rs. 50,000 – Rs. 100,000 <input type="radio"/> Rs. 150,000 – Rs. 200,000 <input type="radio"/> Rs. 250,000 – Rs. 300,000 <input type="radio"/> Above 300,000 |
| Q6 | <p>Do you use digital instruments (such as mobile phones, Internet, e-mails, computing devices and social media applications, etc.) for communication purposes?</p> <ul style="list-style-type: none"> <input type="radio"/> Yes <input type="radio"/> No |
| Q7 | <p>If you answered yes in the previous question, which digital instrument do you frequently use?</p> <ul style="list-style-type: none"> <input type="radio"/> Mobile phones |

| | |
|-----|---|
| | <ul style="list-style-type: none"> ○ Internet ○ E-mails ○ Computing devices ○ Social media applications (e.g., Facebook, Instagram and Twitter, etc.) ○ Other _____ |
| Q8 | <p>What mode of communication do you use to communicate with your family members apart from face-to-face communication?</p> <p>_____</p> |
| Q9 | <p>How frequently do you use digital means of communication around your family members?</p> <ul style="list-style-type: none"> ○ Very Frequently ○ Frequently ○ Occasionally ○ Rarely ○ Very Rarely ○ Never |
| Q10 | <p>Which mode of communication do you use more to communicate with your family members?</p> <ul style="list-style-type: none"> ○ Digital Communication ○ Verbal Communication |
| Q11 | <p>If you answered digital communication in the previous question, why do use it more as compared to verbal communication?</p> <ul style="list-style-type: none"> ○ Convenient |

| | |
|-----|--|
| | <ul style="list-style-type: none"> ○ Shyness ○ Not so open with family |
| Q12 | <p>Does your whole family use digital communication?</p> <ul style="list-style-type: none"> ○ Yes ○ No ○ Sometimes |
| Q13 | <p>Do you like using digital instruments for communication purposes?</p> <ul style="list-style-type: none"> ○ Yes ○ No |
| Q14 | <p>If you answered no in the previous question, how much do you dislike it?</p> <ul style="list-style-type: none"> ○ To a Great Extent ○ Somewhat ○ Very Little ○ Not at All |
| Q15 | <p>Why do you dislike it? Give reasons.</p> <ul style="list-style-type: none"> ○ Creates gap between us ○ Misunderstood communication ○ General ethics |
| Q16 | <p>How do you think digital communication is affecting your family members?</p> <hr/> |
| Q17 | <p>Do you want to get rid of digital communication?</p> <ul style="list-style-type: none"> ○ Yes ○ No |

| | |
|-----|---|
| Q18 | If you answered yes in the previous question, how do you think it is possible? <hr/> |
|-----|---|