Migration and communication: An analysis of how refugees in Bonn Germany use the smartphone

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Abstract

Human migration has become a global phenomenon. With 258 million migrants around the world as of 2018 and 70.8 million of these being refugees, migration issues have become a public discourse. Even though 34% of the global audience believe that global migration should be reduced, 20.4 million refugees find themselves in foreign countries. An important factor for refugees is how they communicate using their smartphones while in their host countries. Using descriptive research design and deploying questionnaire to elicit responses from 48 purposively refugees in the German city of Bonn, and hinged on the Migration Network theory, this research finds out that refugees use their smartphones mostly to communicate with their families and getting information about their home countries. The research recommends that further research be conducted on how refugees in foreign countries communicate with host citizens.

Keywords: 1 Migration, 2 refugees, 3 communication, 4 smartphone.

Introduction

Migration is a complex phenomenon that touches on the increasing interconnectivity of the world (McAuliffe, 2018). Migration is intertwined with the economic, social and security dimensions of people, leading to trade and cultural exchange as well as business opportunities. It can affect people from all walks of life, from all backgrounds and all states. Migration is determined by the flow, the number of people involved, the reasons for their movement, the time they spend in migration, and the nature of that migration. Migration, in general, can either be Internal Migration which involves the movement of people with a state, country, or continent or External Migration which involves the movement of person to a different state, country, or continent. Internal and external migration can be further divided into Domestic or Interregional, Intracontinental and Intercontinental. Domestic or Interregional is the
movement of people within a country (e.g. from Edo state to Enugu state, both states in Nigeria). Intracontinental migration is the movement of people between countries on a given continent. (e.g. from Ghana to Nigeria, both in Africa). Intercontinental migration is the movement of people between continents. (e.g. from Nigeria (Africa) to Germany (Europe).

The migration of a person can either be temporary or semi-permanent, which implies the seasonal movements of migrants, e.g. farm labourers or permanent which implies the permanent change of location of a migrant. (Ultimatevisa.com, 2019)

Migrations began with the movements of the first humans from their origins in East Africa to their current location in the world. Migrants from Asia went to North and South America over a while, through the land bridge over the Bering Strait. Many times in the past, specific events caused human migration patterns. The industrial revolution throughout 1843-1939 sent over 50 million people from Europe to the USA, Canada, Argentina, Australia, New Zealand, and South Africa.

There are primarily five reasons why people migrate. These are environmental (searching for better climate and trying to avoid calamities and natural disasters), economic (in search for good jobs and better working environment), cultural (search for religious freedom and quality education), social (searching for a better quality of life or reuniting with family members or friends) and political (trying to escape from civil war or political persecution).

Refugees are migrants who have been forced to flee their country due to persecution, war or violence (UNHCR, 2019). A refugee is one who faces or experiences persecution as a result of his/her race, religion, nationality, political opinion or membership in a particular social group or the potential or actual outbreak of violence or war; ethnic, tribal or religious. Generally, refugee nurse fear of returning to their home countries. Two-thirds of all refugees globally emanate from only five countries, namely; Syria, Afghanistan, South Sudan, Myanmar and Somalia.

As soon as refugees settle in their host countries and communities, a key part of their life is how to get the right information and communicate. Generally, refugees have communication needs which include how to settle down in their new home or for some even how to return home (Williams, 2016) and to contact family, friends and other migrant communities. (Alencar, Kondova & Ribbens, 2018). Indeed, refugees living in camps develop virtual connections with family and friends outside the camp, in their countries of origin and sometimes in the country they are aiming to emigrate to through phone and social networking sites such as Facebook and WhatsApp. (Macgregor, 2018).

In their journeys, refugees see the smartphone as an essential companion in their stay abroad. As the most global of all digital devices, the smartphone is an essential part of refugee Lives. (Habekuss & Schmitt, 2015; Brenner & Frouws, 2019). Some scholars opine that three things are of utmost importance to refugees: Water, phone, food," stating that "today's refugees have replaced their suitcases with smartphones as they pursue their migratory journeys" (Gillespie, 2016; Kaplan, 2018; Macgregor, 2018). This study undertakes to investigate how refugees in Bonn city of Germany use one of the most important things: the smartphone.
Statement of the Problem

Previous researches have focused on what refugees use the smartphone to do mostly on their journeys, and many focused on social media such as Facebook and Twitter and concluded that these tools have played supporting roles to refugee while on their journeys to their final destinations. Researches have, however, not established what specifically refugees now settled in their final destination countries use the smartphone for. This is the gap that this study intends to interrogate.

This research intends to investigate if refugees settled in their final destination using the smartphone to relate with family, friends, search for jobs, life partners or friends and to what extent.

Research Objectives

This research has the following broad objectives:

i. To find out the nations of origin of refugees in Bonn city.
ii. To find out the gender and age bracket of Bonn refugees.
iii. To find out the percentage of Bonn refugees who own smartphones.
iv. To investigate the extent to which Bonn refugees use their smartphones.
v. To find out if the gender of Bonn refugees affect the extent of their communication with the smartphone.

Research Questions

The following research questions have been formulated to be addressed in this study:

i. What are the nations of origin of Refugees in Bonn?
ii. Which sex and age bracket of refugees are most accommodated in Bonn city?
iii. What is the percentage of Bonn refugees who own smartphones?
iv. To what extent do Bonn refugees use smartphones?
v. Does gender affect Bonn refugees' communication with the smartphone?

Hypothesis

H0 (Null hypothesis): There is no significant relationship between the gender of a refugee and their main communication with the smartphone.

Conceptual Clarification

For a proper grasp of the discussion in this paper, the following concepts would be explained.

Migration

Migration is the movement of a person or a group of persons, either across an international border or within a State. (House of European History, 2019). Migrants generally move due to economic, social, political or environmental reasons. Migration can be seen either from the prism of immigration or emigration. Immigration means people coming in to settle in a country while Emigration means people leaving their home. Consequently, Emigrants leave...
their country, while immigrants enter a country. Migration impacts on both the place left behind and on the place where migrants move to and settle in. (IOM, 201).

**Communication**

The term "communication" is been derived from the Latin word "communis," which means "common". (Velentzas, Mamalis & Broni, 2010). This context, "to communicate" means "to make common" or "to make known", "to share". This type of conclusion includes verbal, non-verbal and electronic forms of human interaction. It is the meaningful exchange of information between two or a group of people. (Velentzas & Broni, n.d). Communication is a learned skill. Although people are born with the physical ability to talk, they must make the extra effort to learn and develop communicative skills in other to communicate well.

**Refugees**

A refugee is someone who has been forced to flee his or her country because of persecution, war or violence. (UNHCR, 2019). Refugees are specifically used to refer to those who are catered for by their host countries by providing them with the basic necessities for human existence such as abode, food and medication care, amongst others.

There is a difference between "refugee" and "migrant" and ought not to be used interchangeably. While refugees are people who live outside their country of origin as a result of the fear of persecution, conflict, violence, or other circumstances that have seriously disturbed public order, and who, as a result, require 'international protection' (UNHCR, 2018). Due to their perilous situation, they often cross borders to seek protection in other countries. Refugees are those who find it difficult and dangerous to return to their home because they cannot receive such protections in their home countries. Thus, states are required not to deny such people asylum under international law (UNHCR, 2018). Migrant, on the other hand, is defined by the United Nations International Organization for Migration as "a person who moves away from his or her place of usual residence, whether within a country or across an international border, temporarily or permanently, and for a variety of reasons." (International Organization for Migration, 2020). The difference between a refugee and migrant, therefore, lies in the presence or absence threat to life, the possibility of return and coverage by international law. In the case of refugees, there is a proximate danger to life by way of war, persecution and conflict, the refugee has little or no possibility of returning to the home country due to the existence of the threats and international law compels nations to grant asylum status to refugees. However, for migrants, there may not necessarily be any danger to life as the migrant simply wants to move to other locations for various reason which may be mainly economic, religious or social. A migrant has a right to return to his home country as there was no threat that compelled him to move out in the first place and there is no international law that compels any nation to accept a migrant. That power is in the discretion of the destination country.

The United Nation Human Rights Commission for Refugees, UNHRC, (2020) states that there are 25.9 million refugees worldwide. This is a part of the 70.8 million people forced out of their places of abode globally. Two-thirds of World refugees come from five countries: Syria, Afghanistan, South Sudan, Myanmar and Somalia (Figure 1 below). Syria is the country that generated the highest number of refugees worldwide totalling 6.7 million. This confirms UNHRC assertion that 37, 000 people are daily forced from their homes due to conflicts and perceptions. Male and female refugees each make up 50 per cent of the total global refugees (UNHRC, 2020).
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Figure 1: Major source countries of origin. 
Source: www.unhcr.org

Figure 2: Major recipient countries of new asylum applications.
Source: www.unhcr.org

Smartphone
A smartphone is a handheld device (phone) that grants access to applications that go beyond basic voice and Short Message Service (SMS) and uses the 3rd Generation (3G) network or higher. (Hill, 2010).
Bonn

Bonn is an administrative district in the region of Cologne in the state of North-Rhine–Westphalia. It is a city located on the Rhine River, which is about 15 miles (24 km) south of Cologne. It was the capital of Western Germany from 1949 to 1990 when East and West Germany reunited and the Berlin was named as the capital. However, Bonn continued to serve as the seat of the German federal government from 1990 until 2000 while Berlin was being prepared as the capital after which the government offices and officials moved to Berlin. (Encyclopædia Britannica, 2020).

As at December 2018, Bonn had a population of 337,415 inhabitants with 97,000 being immigrants (bonn.de. 2020) with citizens from about 180 countries living in Bonn.

Figure 3: Bonn city in Germany.

Source: insights.missouri.edu
**Review of Related Literature**

**Refugees and phone use**

Gillespie (2015) had conducted a research on 'Mapping Refugee Media Journeys: Smart Phones and Social Media Networks' in which he tried to interrogate how refugees use their smartphones and social media along their journeys with a particular emphasis on Facebook and Twitter) and concluded that since refugees lack adequate information from reliable sources, they have to rely on social media which can be misleading, and even sometimes risky.

The smartphone is the most important tool for most refugees. As Habekuss&Schmitt (2015) say about the case of a Syrian refugee:

> In the space of a few short text messages, parents back home in Syria are describing what's happening in Damascus today. In one chat a friend is talking about his accommodation in Aachen, which he's just moved into. Meanwhile, friends they've met online are sending invitations to play Candy Crush. Every few minutes one of the men picks up his phone, unlocks the screen, looks at any updates on his Facebook news stream, answers a message, puts it back down only to pick it up again in a few seconds. This is the 21st century's daily choreography – and the telephone is the refugee's most valuable tool.

Alenca, Kondova and Ribbens (2018) researched the use of the smartphone by refugees in the Netherlands by developing four clusters of whether smartphone's use by refugees is as a companion, an organisational hub, a lifeline or a diversion and concluded that refugees use smartphones to contact family, friends and migrant communities and to get a sense of security. However, Jumbert, Bellanova and Gellert (2018) admit that the smartphone offers itself as a lifeline by way of searching for information particularly while on their immigration journeys, it is also increasingly becoming a security tool for Governments to track the paths of refugees as a security precaution.

Harney (2013) had researched how migrants in Italy used the mobile phone to communicate with family members and friends during challenging times particularly in the process of regularising their asylum status in Naples, Italy. Many of such migrants agree that SMS messages to such member helped them navigate challenges in migrant countries.

**Theoretical Framework**

**Family Migration Network**

The Neoclassical Theory of Migration propounded by Lewis and Todaro (Davila, 2012) has been the dominant prism through which migration and migration-related issues were conceived. Lewis' famous 1954 article, "Economic development with unlimited supplies of labor," and Todaro's 1969 piece, "A model of labor migration and urban unemployment in less-developed countries" have largely been seen as the foundation on which the neoclassical migratory theory is built, the precursor of the family migration network (Davila, 2012). The Neoclassical Theory of Migration assumes that labour markets and even economies, in general, are heavily influenced on the long run by trade and migration factors (European
In other words, a movement towards equilibrium namely, that migrants usually move from societies and states where labour is abundant and wages are low, to societies where labour is scarce and wages are high. Migrant make decisions about if, when and how to migrate as long as the wages in the destination societies are attractive. As the point of making such decisions migrant weigh the costs and risks of relocating and still take the risks of relocating. Later the New Economics migration theory developed from the neoclassical migratory theory. It is a slight moderation of the previous neoclassical theory. It introduced the dimension of the family inclusion in the decision to migrate, such that family members agree on who among the family members should migrate to diversify the sources of income for the family (Piché, 2013). If such migrations are successful the family income improves and if it goes bad, then the family incomes become worse.

A third phase of the development of migration theory is the Migration Systems and Networks or Family migration network. This theory focuses on the relationship between migrants at the origin and destination countries (Piché, 2013; Wickramasinghe & Wimalaratana, 2016).

The above understanding of migratory theory is similar to Hammar, Brochmann, Tamas and Faist (1997) and Faist and Faist (2000) classification of immigration theories into three main categories, namely: micro-level, macro-level and meso-level of migration (Figure 3). Micro-level theories consider migration decisions from an individual's perspective, i.e. a person's desires and expectations. Macro-level theories consider migration decisions from an aggregate point of view, i.e. the economic structure of the country. Meso-level is where migration decisions lie in between the two former theories, i.e. family bonds, social networks, peer groups and isolated minority communities.

**Methodology**

**Research Design**

Descriptive Research is adopted for this study. Akhtar (2016) argues that descriptive research design which is also known as statistical research is used "to identify and obtain information on characteristics of a particular issue like community, group or people" (p.75). It investigates social events, social structure and social situations and aims at portraying accurately the characteristics of a particular group or situation, which include for example a descriptive study of workers in a factory, their age distribution, their income distribution, their educational level, and their state of their physical health. Descriptive studies are concerned with the attitude or views (of a person or persons) towards anything e.g. attitudes presidential form of government, right to strike, capital punishment, prohibition, college autonomy etc. (Akhtar, 2016).

This design is apt for this study because the study intends to investigate the attitude of a particular group (refugees and how they use the smartphone to communicate.

**Method of Data Collection**

Survey method was used to collect data. Survey method is usually used in descriptive design to collect data from the designated population. The survey method of data collection is used to gather information not available from other sources from an unbiased representation of the population of interest. Such a method of data collection ensures Standardization of
measurement because the same information is collected from every respondent (Owens, 2002).

**Population of the Study**

The study studied how refugees in the city of Bonn in Germany as of September 2019 communicate using the smartphone and what the main contents of their communication are.

According to the Coordinator of Refugee works in Bonn and environment, Lena von Seggern (Seggern, personal communication September 28 2019) there were 1,679 refugees living in nine (9) refugee camps in the city of Bonn as of 28 September 2019.

**Sample Size and Technique**

Sampling method relates to the way observations are selected from a given population. In other words, it is a process used in statistical analysis in which a predetermined number of observations will be taken from a larger population. It is a smaller representation of large whole (Tuovila, 2019).

For this study, 48 refugees were randomly selected in the five refugee camps in Bonn for the period of two weeks from 14th to 28th September 2019. 100 questionnaires with fourteen questions (see appendix) were sent out to the refugees but only 55 were returned out of which only 48 were properly filled for analysis.

**Data Presentation and Analysis**

The data generated for this study are obtained using the SPSS tools and are presented below.

**Research Question 1**

*What are the nations of origin of Refugees in Bonn?*

Figure 4: Nations of origin of refugees in Bonn, Germany.
The Figure 4 above shows that Syria, which is a nation at war, has the highest percentage of refugees in Bonn (54.1%) as at September 2019 while Afghanistan, Albania, Azerbaijan, Bangladesh, Ghana and Palestine have the least percentages of refugees in Bonn (2.08%). Table 1 shows the continent of origin of the refugees. The figures show that refugees in Germany are from only three continents with the Asian continent making up the highest number of refugees with 85.3%, followed by Africa with 12.6% and Europe with 2.1%.

<table>
<thead>
<tr>
<th>Country</th>
<th>Frequency</th>
<th>Per cent (%)</th>
<th>Continent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ghana</td>
<td>1</td>
<td>2.1</td>
<td>Africa</td>
</tr>
<tr>
<td>Syria</td>
<td>26</td>
<td>54.2</td>
<td>Asia</td>
</tr>
<tr>
<td>Iraq</td>
<td>3</td>
<td>6.3</td>
<td>Asia</td>
</tr>
<tr>
<td>Afghanistan</td>
<td>1</td>
<td>2.1</td>
<td>Asia</td>
</tr>
<tr>
<td>Eritrea</td>
<td>3</td>
<td>6.3</td>
<td>Africa</td>
</tr>
<tr>
<td>Sri Lanka</td>
<td>4</td>
<td>8.3</td>
<td>Asia</td>
</tr>
<tr>
<td>Armenia</td>
<td>2</td>
<td>4.2</td>
<td>Asia</td>
</tr>
<tr>
<td>Iran</td>
<td>2</td>
<td>4.2</td>
<td>Asia</td>
</tr>
<tr>
<td>Egypt</td>
<td>2</td>
<td>4.2</td>
<td>Africa</td>
</tr>
<tr>
<td>Palestine</td>
<td>1</td>
<td>2.1</td>
<td>Asia</td>
</tr>
<tr>
<td>Bangladesh</td>
<td>1</td>
<td>2.1</td>
<td>Asia</td>
</tr>
<tr>
<td>Azerbaijan</td>
<td>1</td>
<td>2.1</td>
<td>Asia</td>
</tr>
<tr>
<td>Albania</td>
<td>1</td>
<td>2.1</td>
<td>Europe</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>48</strong></td>
<td><strong>100.0</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

Table 1: Nations of refugees in Bonn, Germany showing continents of origin.

**Research Question 2**

Which sex and age bracket of refugees are most accommodated in Bonn city?

<table>
<thead>
<tr>
<th>Sex</th>
<th>Frequency</th>
<th>Per cent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>20</td>
<td>41.7</td>
</tr>
<tr>
<td>Male</td>
<td>28</td>
<td>58.3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>48</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

Table 2: Sex of refugees in Bonn, Germany.
With 58.1% of all refugees in Bonn with the period of this study being males as shown in Table 2, there are thus approximately three males in every five refugees in Bonn and Figure 5 shows that young people between the ages of 18 and 35 constitute an overwhelming 60.4% which also implies that three out of every five refugees are young people from 18 to 35 years.

Research Question 3

What is the percentage of Bonn refugees who own smartphones?

<table>
<thead>
<tr>
<th>Sex</th>
<th>Do you own a smartphone</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>Male</td>
<td>28</td>
<td>28</td>
</tr>
<tr>
<td>Total</td>
<td>48</td>
<td>48</td>
</tr>
</tbody>
</table>

*Table 3: Ownership of smartphones by refugees in Bonn, Germany.*

Table 3 shows that all refugees surveyed owned a smartphone which implies that an absolute majority of 100% of all refugees (males and females) own a smartphone.

Research Question 4

To what extent do Bonn refugees use smartphones?
Table 4: Extent of smartphone use by refugees in Bonn, Germany.

Table 4 shows how refugees in Bonn city of Germany use smartphones. Figures show that a significant percentage of all refugees (39.7%) use their smartphone to contact their family members back at home. This shows that refugees in two out of every five instances use the smartphone to contact their family members at home. Similarly, many refugees have significant use of their smartphone for chatting with friends (25.4%). This implies that one in every four times Bonn refugees use their smartphones to chat with friends. The data shows that refugees prefer to communicate with familiar persons, namely family and friends when they are outside their home (cumulatively making up an overwhelming 65.1% refugee engagement with their smartphones). The least activities that refugees use their smartphone to engage in are searching for life partners (1.6%) and information about which next European country to emigrate to (1.6%).

Research Question 5

Does gender affect Bonn refugees’ communication with the smartphone?
Figure 6: Refugees’ communication with their families through the smartphone based on their gender.

Figure 6 shows how refugees use the smartphone to communicate with their families while in the city of Bonn in Germany. The table shows that male refugees in Bonn (33.33%) communicate more frequently with their families at home than their female counterparts (18.75%). Ironically a minute percentage of male refugees (2.08%) do not communicate with their families at all while in Bonn. When computed cumulatively, the results show that male refugees are more positively disposed (very often and often) to communicate with family members while in Bonn (46%) than their female counterparts (33%).

Hypothesis Test

H0 (Null hypothesis): There is no significant relationship between the gender of a refugee and their main communication with the smartphone.

To test the above hypothesis, Chi-square computation was run.
With a predetermined alpha level of significance at 0.5 and the degree of freedom at 1 degree, the chi-square table above (Table 6) gives the X² as 0.601. Since our corresponding probability is between 0.10 and 0.05, that means that the p-value is above 0.05, it is actually 0.601. Since a p-value of 0.601 is more than the conventionally accepted significance level of 0.05 (i.e. $p < 0.05$) the null hypothesis is confirmed. In other words, there is no significant relationship between the gender of a refugee and their main communication with the smartphone.

### Discussion of Findings

The research findings reveal that Syria is the single nation with the largest percentage of refugees in Bonn, Germany in the period under review. In fact, Syria alone has more than 50% (it is actually 54.1%) of all refugees in Bonn as at 28th September 2019. On the other hand, Afghanistan, Albania, Azerbaijan, Bangladesh, Ghana and Palestine have the least number of refugees in Bonn within the same period (only 2.08%). When viewed from the dimension of continents, Asia has an overwhelming number of refugees in Bonn (85.3%). In fact, four out of every five refugees in Bonn are from the continent of Asia. (Table 1). Conversely, Europe has the least number of refugees in Bonn with only 2.1%. This finding confirms Lewis and Todaro (Davila, 2012) family Migration Network which asserts that refugees tend to migrate from societies and states where labour is abundant and wages are low, to societies where labour is scarce and wages are high. The countries of origin of refugees, mainly Ghana, Bangladesh and Armenia are poor and may explain the justification for their migration to Germany. Similarly, the finding has further confirmed United Nations findings that refugees are those forced to flee their home countries due to persecution, war or violence. (UNHCR, 2019). The research finding may explain the high number of refugees from Syria, a war-torn country.

The findings of the research show that male refugees (58.1%) were more than female refugees in Bonn. For every five refugees, three were males and two were females. Besides, findings show that an overwhelming percentage of refugees in Bonn were young people between the ages of 18 and 35 (60.4%). In other words, three out of every five refugees in Bonn is a young person between 18 and 35 years. This study deviates from findings by United Nation High Commission for Refugees (UNHRC) which put the number of male refugees as slightly above their female counterparts.

Findings reveal that all surveyed refugees in Bonn owned a smartphone (100%). Findings further show that refugees use their smartphone in approximately 40% of cases (39.7%) to

<table>
<thead>
<tr>
<th>Chi-Square Tests</th>
<th>Value</th>
<th>df</th>
<th>Asymp. Sig. (2-sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi-Square</td>
<td>1,867a</td>
<td>3</td>
<td>.601</td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>2,222</td>
<td>3</td>
<td>.528</td>
</tr>
<tr>
<td>Linear-by-Linear Association</td>
<td>.018</td>
<td>1</td>
<td>.894</td>
</tr>
<tr>
<td>N of Valid Cases</td>
<td>48</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Table 6: Chi-Square test for the hypothesis.*
contact their family members back at home and similarly a high number of cases refugees use their smartphone to chat with friends (25.4%). This implies one in every four times a refugee use the smartphone it is to chat with friends. This implies that refugees in Bonn Germany prefer to communicate with familiar persons, namely family and friends when they are outside their home in cumulatively 65.1% of cases. The results show that refugees in Bonn are least concerned with searching for life partners and information about which next European country to emigrate to in cumulatively 3.2% of cases. An overwhelming 100 per cent smartphone ownership by refugees confirms researches by Habekuss & Schmitt (2015) which found out that smartphone was the most important tool for any refugee.

The research findings show that male refugees in Bonn (33% translating to 63% of all Bonn refugees) communicate more frequently with their families than their female counterparts (19% translating to 37% of all Bonn refugees).

When a chi-square test was conducted, results show that there is no significant relationship between the gender of a refugee and their main communication with the smartphone. This means that the gender of a refugee plays no roles in how he/she will communicate with the smartphone.

**Conclusion**

Based on the findings above, it can be concluded that the vast majority of refugees in Bonn city of Germany are Asians with Syrian nationals having the highest number of refugees in Bonn. However, European citizens have the least number of refugees in Bonn.

Also, the research found out there were more male than female refugees in Bonn and the majority of these were young people between the ages of 18 and 35.

It can be concluded that all refugees in Bonn irrespective of the country of origin own a smartphone and use the smartphones primarily to communicate with family and friends.

The research concludes that the gender of the refugees does not affect how they communicate using the smartphone.

**Recommendations**

Based on the conclusion of the research above, the following are recommended:

1. Further research should be conducted to find out the main subjects of the communication of Bonn refugees with family and friends and whether such subjects are financial, religious or social wellbeing of family members.

2. Research should be carried out to determine how frequently and the duration of refugees communication using the smartphone.

3. Further research should be carried out in other cities of Germany (and other refugee-hosting countries) to test the findings of this research.
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