The Mobile Apps and Literature Review on the Major Causes of Death According to Who (World Health Organization)

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The Mobile Apps and Literature Review on the Major Causes of Death According to Who (World Health Organization)

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ABSTRACT

Background: The rapid improvements and developments day by day in the field of Mobile Computing and medical sciences has created an outstanding scenario for the developments and enhancements of electronic-Health and mobile-Health, especially after the introduction of mobile phones and Smartphone's in the market.
Objective: The main theme of this paper is a qualitative outlook and compares the number of mobile applications in different apps stores and review of the research articles on these diseases which are the main causes of death in different zones of the world according to the WHO (World Health Organization).
Methods: Different types of mobile applications and research experts has been made on diseases which are the most important causes of death in different areas of the world that include specially Ebola virus disease, Alzheimer's and Depression, also these applications in smart phones and research articles has describe these diseases and conditions that are the main causes of death.
Results: Search queries are applied from 2013 to March 2015 on various apps stores and research journals related to selected diseases which are the major causes of death. We have found 1,014 apps from various mobile apps stores and total of 28,840 research articles from various journals related to nominated diseases.
Significance: The proposed apps stores and review of the articles have some merits and demerits on the basis of language and some searches.
KEYWORDS: Mobile Computing, Death Diseases, Ebola, World Health Organization (WHO).

I. INTRODUCTION

In recent years the developments in science and medicine have made an aged population and long-standing existence of those who suffer prolonged diseases due to up-to-date treatments and medications. Due to this the quality of life expectancy (life time) has been improved for health care clients(Rigby M, 2012). On behalf of this expectancy, there have been some important advances in health care delivery service by the use of the Internet services, correspondingly known as electronic-Health (e-Health),which has well-defined by the International Telecommunication Union (ITU)as per the outline that includes over all information and communication technologies needed to make the health system work (America & Medicine, 2001)(White A, 2013).

The Mobile-Health (mhealth) have variety of meanings. For some authors it is the perception of electronic-Health (eHealth) which offers health information and services through mobile technologies such as tablet computers, smartphones and mobile phones(A., 2012); while for other authors, this term is defined as "emerging mobile communications and network technologies for healthcare systems"(Micheli-Tzanakou E. R, 2014). The development of mobile communications devices such as mobile phones and tablet computers has rapid development in the field of mobile health (mHealth), the usage of mobile-enabled applications that supply health care information and records. These mobile applications provide an active engagement of patients and providers in health care and a new means of improving health products. The mobile-health (mHealth) is self-operative and self-management tool (Silva BM, 2013), on the basis of this anyone can access to a wide range of informative and educational materials, also it's facilitate the clients. For example it avoids from face to face visits to the doctor's office. Anyone can easily access and view his own electronic medical record.

As in figure.1 Ebola virus which is transfers from one body to another respectively, the disorderness on normal brains and the depression, this transformation and disorderness may lead to various diseases which are the major causes of death.

This paper is totally focused on number of apps in different apps stores and number of research articles about various diseases, stroke and other cerebrovascular diseases, lower respiratory infection, diarrheal diseases, ischemic heart disease, HIV/AIDS, bronchus, lungs cancers, trachea, and malaria, chronic obstructive pulmonary disease, and other dementias especially Ebola and Alzheimer's (Murray CJ, 2013) (Mathers C, 2004)(regions, April,2015) which the major causes of death, And It's also provides qualitative outlook of the death causing diseases commonly used by world health

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organization (WHO)and also the number of apps in different apps stores and number of research literature are shown and discussed.
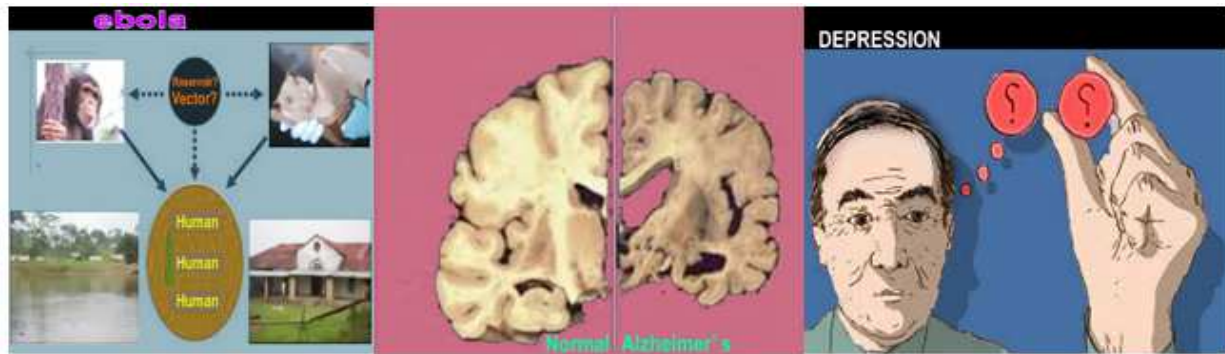

Figure. 1 Diseases which are the main causes of mortality

2. Awareness about Death Causing Diseases

This paper presented details on various diseases found in humans and how these diseases have a tendency to leading causes of death. Different authors' research work and survey of the various apps stores have been considered and how they discussed these diseases to solve the Problems related with mortality and their future works.

2.1 List of few death causing diseases

- Ebola virus disease (EVD)
- Alzheimer's disease
- Depression disease
- Stroke disease
- Cerebrovascular disease etc.

2.1.1 Ebola Virus Disease

Pollutions with Ebola viruses originating from Africa cause a severe infection in humans known as Ebola virus disease (EVD).Ebola disease arises in the family of "Filoviridae". The transmission of this virus which is the leading cause of death having many phases For example, it comes from animals in the wild to humans and from wild to the real world domestic environment and at last from this phase to healthcare bodies in the clinical background (Hoenen T, 2012). The symptoms of Ebola include severe headache, weakness, Vomiting, Fatigue and Fever.

2.1.2 Alzheimer's Disease

Alzheimer's disease is the major cause of dementia. It defines the short term memory loss and problems with thinking. Due to this disease the latest and fresh activities are difficult in memorizing (Hebert LE, may 2013) symptoms are the language problem, loss of stimulus, not managing self-care and social issues.

2.1.3 Depression Disease

Depression is a severe, common, and repetitive disorder and condition that reduced the effective and functioning quality of life (Vivo, 2008), and cause mortality in humans. It's extremely dominant and causes large suffering and disease burden despite the survival of wide ranging treatment results.

2.1.4 Stroke Disease

Stroke disease is a disease that disturb the veins leading to and inside the brain(Mackay J, 2004). A stroke happens when a blood vessel that transfers nutrients and oxygen towards the brain is either jammed by a clot or burst. It's the major cause of disability and death.

2.1.5 Cerebrovascular Disease

A cerebrovascular disease states to a condition that disturb the blood movement and circulation towards brain(Ionita CC, 2009). This disease causing imperfect or no blood movement to affected and required areas of the brain.
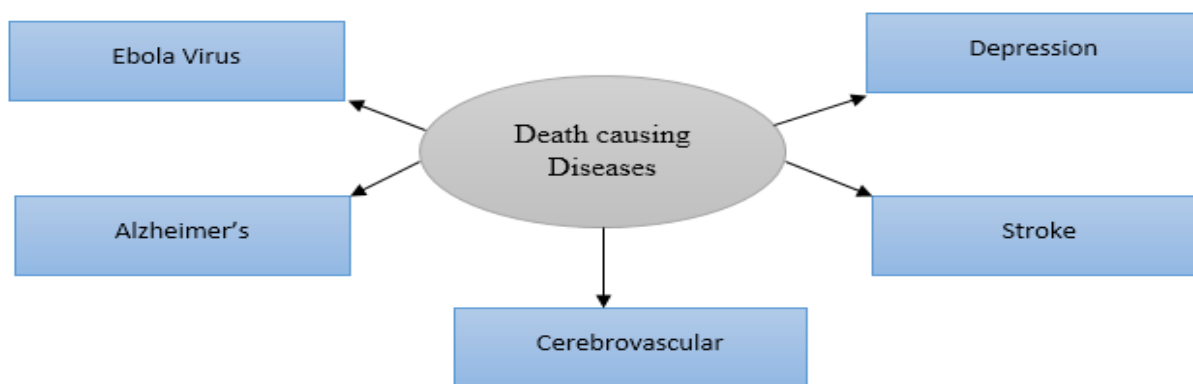
Figure. 2 Various Death Causing Diseases

3. Related Work

In recent ages, researchers and analyst have more concentration on Death Causing Diseases due to their verity of mobile applications in different apps stores and research articles in various journals (Am., 2012) (VaccineResearch@who.int, 2013). These apps and research articles are providing medical facility, important information and health care condition etc. Due to high mortality of humans and rapid technology alterations, the development of apps for the major cause of death in different apps stores with research and development regarding number of literature review is a challenging task. Many mobile apps and research literature proposed (Am., 2012)(VaccineResearch@who.int, 2013)in recent years to resolve the problems associated with Mortality.

In research papers(Peter T. Nelson, 2012)(Others, 2015)the Apps of various apps stores and research articles up to March 2015 are compared according to some aspects in order to find out an adaptive technique for those diseases which are causing Mortality.

In this paper we matched and calculating apps in different apps stores and number of research articles by choosing three diseases (Ebola, Alzheimer's and Depression) correlated with mortality.

3.1 Apps Stores and Research Articles

Mobile apps stores and research articles determines the ratio of various diseases which are the major causes of death, and also describe how these diseases cause the death with respect to time. These apps stores and research articles estimates the total number of death. For the death causing diseases various mobile apps stores like Apple (iTunes), Android (Google Play), BlackBerry (App World), iOS (iPhone) and Windows Mobile (Microsoft)(Google play., 2013)(Apple iTunes, 2013)(windows phone, 2013)(Blackberry worldf, n.d.)And research articles MMR, The New England journal of medicine, NCBI (PMC) and the American journal of medicine are proposed. The selection of specific mobile apps in apps stores and research articles affects the result of mortality. That's why it's important to select suitable apps in apps stores which have access to medical and Health care information.

METHODOLOGY

Various mobile app stores such as: Apple (iTunes), Android (Google Play), BlackBerry (AppWorld), iOS (iPhone) and Windows Mobile (Microsoft) and research journals like the New England journal of medicine, NCBI (PMC) research journal, MMR (Military Medical Research) journal and American journal of medicine are searched out to find out the result on selected diseases from March 2013 to March 2015 . Different types of mobile applications and research experts has been made on diseases which are the most important causes of death in different areas of the world that include, especially Ebola virus disease, Alzheimer's and Depression, also these applications in smart phones and research articles has describe these diseases and conditions that are the main causes of death.

4. RESULTS AND DISCUSSION

In this section performance evaluation of selected death causing diseases i-e Ebola virus disease (EVD), Alzheimer's disease and Depression disease is achieved using survey of various Mobile apps stores and research articles regarding mobile health (mHealth) applications. We analyze these diseases in two different scenarios where one scenario describes about number of apps in different apps stores while the other presents the total number of research articles in different journals related to the selected diseases(Murray CJ, 2013),(Mathers C, 2004), and (regions, April,2015).

4.1 Scenario A

In scenario A, Those apps are excluded from the collected apps results which are not relevant to the criteria of our selection such as: Games, Tone of language (which are not in English) and Flash Cards which are helpful for students during their examination.

4.1.1 Ebola Virus Disease

The search queries for Ebola virus disease (EVD) are applied Up to March, 2015 and the output of apps from different apps stores (The New England journal of medicine, 2015), (htt3), (htt6), (htt9) are almost 260. After checking the apps only 254 are selected for the study while the remaining is excluded. The search result of Google Play return 178 apps only 175 are selected for the study while two Games and one Flash Card were found which were excluded from the total. The result of iOS return 45 apps in which 42 apps are selected for the study and the remaining are excluded which are not satisfy the requirements. Windows phone return 36 result which are selected for the study. BlackBerry return 1 result which is selected for the study and there is no flash card and games are founded.

Figure 3. Flow diagram illustrating the exclusion of apps at various stages of the study.

Deaths: The total numbers of deaths on Ebola virus disease are found 11,065 up to May 2015.

4.1.2 Alzheimer's Disease

For Alzheimer's disease the search queries are applied up to March, 2015. The total result of apps are 366 collected from different app store(The New England journal of medicine, 2015),(htt2),(htt5),(htt8).After checking the apps only 303 apps are selected for the study while the remaining are excluded. The search result of Google play return 77 apps only 42 apps are selected for the study and 35 games are found which are excluded from the total, whereas blackberry return 4 apps which are selected for the study. Windows phone return 11 apps which are selected for the study. Also iOS return 274 apps in which 28 apps are correlated to games were excluded and only 246 apps were selected for the study.
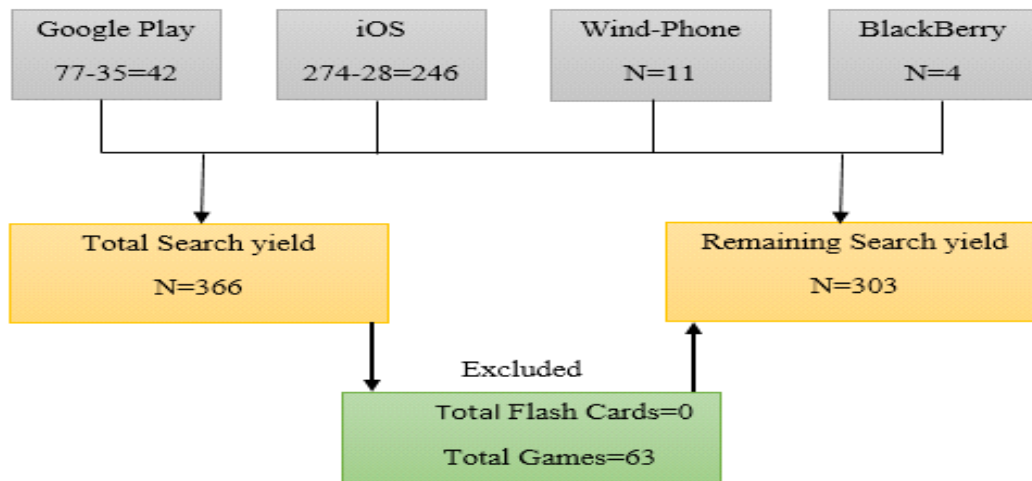

Figure 4. Flow diagram illustrating the exclusion of apps at various stages of the study.

4.1.3 Depression Disease
Once the search queries are applied on the depression disease, we were found total of 388 apps Up to March, 2015 from various app stores (25h2), (htt1), (htt4), (htt7).Subsequently by checking the apps only 379 apps were selected for the study. The search outcome of Google play returns totally 211 apps, only 202 apps were selected whereas 9 games were found which were excluded from the total. Also blackberry return 35 apps which were selected for the study. Window phone return 142 apps which were selected for the study and there is no flash cards and games are founded which are not the part of the actual result.

Figure 5. Flow diagram illustrating the mHealth apps by store.

4.2 Scenario B
In this scenario, the records are collected about research articles in last two years from March 2013 to March 2015. The search queries are applied and the research articles are extracted on selected diseases such as: Ebola virus disease, Alzheimer's and Depression.

4.2.1 Ebola Virus Disease
When the search queries are applied for research articles on Ebola virus disease Up to march 2015 in the last two years, so we were found that this disease have total research articles are 72 in four journals(29h2), (htt12), (htt15), (htt18), In which 18 articles include from the New England journal of medicine, while the 47 are found in the NCBI (PMC) research journal, whereas 2 articles are searched from the MMR (Military Medical Research) journal and the remaining 5 articles are found on Ebola virus disease in the American journal of medicine.
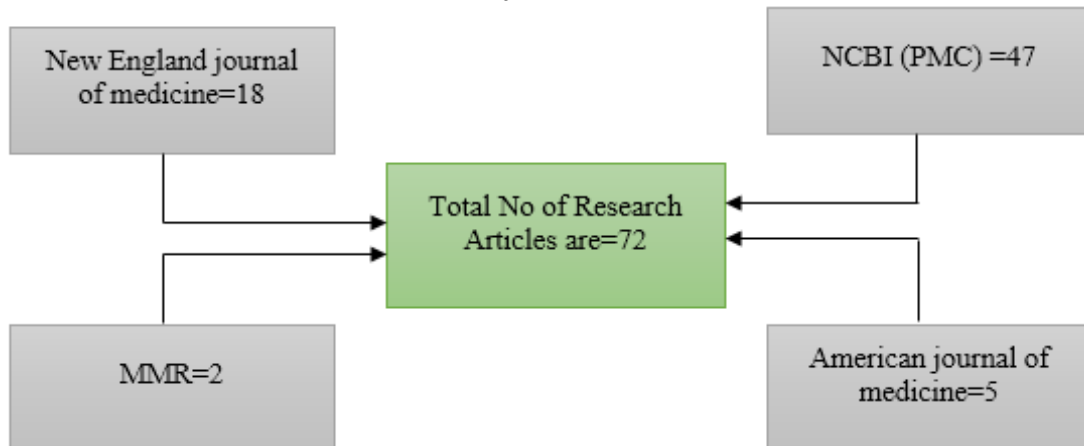

Figure. 6 Flow diagram illustrating research articles in various journals

4.2.2 Alzheimer's Disease
The search queries are applied on the Alzheimer's diseases in the last two years Up to march 2015, we were found total of 8165 articles in various four journals(29h1),(htt11),(htt14), (htt17)such as: The New England journal of medicine

displaying 19 articles, the journal of Military medical research showing 2 research articles, while in NCBI (PMC) journal have found 423 articles and the American journal of medicine display 7721 research articles.

Figure.7 Flow diagram illustrating research articles in various journals

4.2.3 Depression Disease

The search analyses are applied on the depression diseases in the last two years Up to march 2015, So we were found total number of 20603 articles in various four journals(29h),(htt10), (htt13), (htt16)such as: The New England journal of medicine displaying92 articles, the journal of Military medical research showing 4 research articles, while in NCBI (PMC) journal have found 7617 articles and the American journal of medicine showing 12890 research articles.

Figure.8 Flow diagram illustrating research articles in various journals

5. COMPARISON OF MOBILE APPS AND RESEARCH ARTICLES

In last two years Up to March 2015, we compared the overall results of mHealth apps in different apps stores and research articles in various journals related to selected death causing diseases. We found that the work done in research field on these deaths causing diseases are more as compared to the commercial field.

Figure. 9 mHealth Apps vs Reseach Articles

6. CONCLUSIONS

In mobile computing the health apps in various mobile apps stores and research articles are the most important part of the death causing diseases. Regarding mobile apps, there is less work done in commercial field as compared to research field. This paper has presented an overview of existing death causing diseases and there study according to various apps stores and research literature. We have selected certain diseases associated with mortality and find the estimate these in various apps stores and research literature. In scenario A, the overall discussion is about apps in different apps stores related to the death causing diseases. While in scenario B, the complete discussion is about research literature related to the selected diseases. This research paper will be cooperative for researchers and scholars involved in the area of mobile computing. Also, it will assist them in having brief and concise information provided.

Future work may contain the evaluation of apps in different apps stores and the number of research articles in various research journals for the numerous diseases which are the major causes of death.

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