CHAPTER – 3

REVIEW OF LITERATURE

3.1 INTRODUCTION:

Much has been written and published on information needs and information seeking behavior of users of health information. Health, being a multi-faceted idea, implies different meanings to different people depending on the context of its use. For example “health” in the context of doctors, nurses and other medical professionals implies “diseases or illness”. From the general public’s view, it refers to an overall physical and mental well-being. There has been an enormous growth of literature on various facets of health and dissemination of information about health from different communications channels at the national and international level. The research related to the topic in the Indian setting is very limited. An attempt has been made to collect and review the literature on the subject and related to it. For this purpose, following sources viz., Emerald Insight, Taylor & Francis, Springer Link, Web of Science, J-Gate, PubMed, Google Scholar, Google, databases of Oxford University Press, Cambridge University Press, were searched and identified articles related to the topic of research. Besides, a retrospective search was also carried out using Library and Information Science Abstracts (LISA), PsycINFO and ERIC database. All efforts were made to collect the full-text of most of the relevant articles on the subject, and where the full-texts were not available, the informative abstracts were used. Some of the keywords used for searching on the topic were perception, awareness, knowledge; health information needs, information seeking, use of mass media- TV, Radio, Newspapers, Magazines, Human and institutional sources, the general public, and citizens with particular reference to health
and health information. Appropriate search strategies keeping in view the requirements of a particular database were formulated to find the relevant literature.

The review organizes the literature into five sections:

- Perception, Awareness, and Knowledge of Health;
- Health Information Needs;
- Use of Health Information Sources; and
- User Group Studies

3.2 PERCEPTION, AWARENESS AND KNOWLEDGE OF HEALTH:

3.2.1 PERCEPTION OF HEALTH:

In general, the health of a person mostly depends on his perception and ideologies. While, the self-perceived health is a strong predictor of clinical outcomes; however, the self-perceived health and its connection with other psychological characteristics are unknown (Goodwin & Engstrom, 2002, p. 1). On the contrary, development of perceptions of mental health and health-seeking behavior are due to a deficit of awareness and a blend of conventional and contemporary views (Ham, Wright, Van, Doan, & Broerse, 2011). Jang, Kim and Chiriboga (2006) argues that the health perception or the subjective appraisal of one’s health be influenced by the dynamics of the physical and mental health of the individual. People evaluate their medical condition as poorer, due to limitations and interferences induced by chronic diseases and functional disability (Jang et al., 2006, p. 92). The psychoeducational programs in changing attitude and health perceptions in relatives of patients with schizophrenia were effective in modifying caregivers’ attitudes (Gutiérrez-Maldonado, Caqueo-Urízar, & Ferrer-García, 2008).
"Perception of health is somewhat complicated and is certainly a subjective phenomenon, that can be affected by several social, cultural, psychological and even economic factors" (Jarallah & Al-Shammari, 1999, p. 1). About health and diseases, people have many misconceptions. For example, (Sihavong et al., 2011) reported that male and female members had a variety of delusions of the causes and symptoms of Reproductive Tract Infections (RTI) /Sexually Transmitted Infections (STI) and their cure.; a hesitation to seek health care, which could cause a delay in appropriate diagnosis and treatment. In another study from France showed the relation between false beliefs on the communication of AIDS by accidental contact and willingness to agree with measures that carry a great danger of stigmatization for AIDS patients and HIV carriers (Moatti, Manesse, Le Galès, Pagès, & Fagnani, 1988). Agampodi, Agampodi, and Ukd, (2008) studied the perceived reproductive health puzzles, health seeking, knowledge of accessible services and limits to reach services among a group of adolescents in Sri Lanka. Problems regarding menstrual cycle and masturbation were the general health concerns reported due to Psychological distresses.

Jin et al., (2014) reported the public’s perception towards the role of the pharmacist in developing countries' healthcare system from Islamabad, Faisalabad, and Lahore, Pakistan. Further, they found that the quality of pharmaceutical services provided was very low in Pakistan. A gap between the people and the pharmacist can be filled by creating awareness among public regarding the pharmacist's role in the healthcare system and by focusing on how services provided by the pharmacologists can add improvement to general public health.
Peretti-Watel and Vergélys (2012) assessed the risk perception of living in next to a cell phone tower based on data from two nationwide telephone surveys from France in 2005 and 2010. The perception of risk of cancer due to exposure to cell phone tower radiation was correlated with gender, the level of income, the size of the town and sensitivity to other environmental causes of cancer. However, these correlations were weaker in 2010. Börner, Greinert, Schütz, and Wiedemann (2010) reported the ultraviolet risk perception of residents in Germany. The respondents thought it extremely probable that UV exposure would cause health damage such as skin cancer, photoaging or sun burns. The UV exposure did not influence the perceived personal risk; the participants' perception and evaluation of the several health risks of UV exposure seem to be realistic, but the UV risk assessment it is not related to the perception of personal risk.

People seek health information when they encounter with diseases and undergo treatment and perception of individuals when in diseases condition is different from other times. However, the public’s use of various sources of health information and their perceptions of the relevance and appropriateness of the information provided are poorly understood. Brodie, Kjellson, Hoff and Parker (1999) have explored the general public's perceptions of media as a health information resource, the nature and amount of health coverage by general market mass media. However, they observed less attention given to how well the media, among other sources, are meeting health information needs and preferences of minority populations”(p.148).

Cancer patients reported that people should have access to all available registered drugs. Financial status, age, gender, and residence are factors influencing the availability of cancer treatments (Jędrzejewski et al., 2015). When the association of socio-demographic
and self-rated health in the presence of cardiovascular diseases and the association of
perception with the type of illness were studied, it was found that the age range and self-
rated health were connected with heart disease. Self-rated regular health was correlated
with arterial hypertension, and self-rated poor health was related to heart failure, stroke,
and to heart attack (Arruda et al., 2015). Further, sex differences are reflected in social
conditions, lifestyles, health perception, and health care behaviors (Gil-Lacruz & Gil-
Lacruz, 2010).

Self-reported oral health perceptions of Somali adult living in Minnesota, USA was
significantly associated with marital status and self-rated general health. A large
proportion of Somali adults rated their oral health and access to dental care as poor/fair
(Okunseri, Hodges, & Born, 2008). Low perceptions of the environment and its perceived
relation to health were studied, and there were differences in perceptions of the
environment–health link between residents. Air pollution and proximity to industry were
associated in weak understandings of the general and neighborhood conditions. The home
environment was seen as comparably insulated and safe. Moreover, individual control
mechanisms (e.g. cleanliness) were believed to alleviate unfavorable health influences in
the house and yard while the general environment was seen to be outside of such control
(Eyles, Wilson, Mu, Keller-Olaman, & Elliott, 2009).

There were positive perceptions of health and emotional states among persons with
greater levels of social control, fewer recurring conditions, less disability, and a greater
sense of mastery among Older Korean Americans in Florida. Individuals who were more
satisfied with their relationships with adult children and who had more positive health
perception were less depressed (Jang et al., 2006).
Jarallah and Al-Shammari (1999) conducted a cross-sectional household survey of 6,139 elderly in Saudi Arabia. They found that the poor health perception was prevalent amongst women and also with old age (75 years and more) and among more social and economically underprivileged. A significant correlation was also found between hospital visits, the number of investigations and health perception. The socio-demographic and socio-medical factors found to be important determinants of health perception among Saudi elderly. Toci et al (2015) conducted a cross-sectional study to describe health literacy among the older population of Kosovo in the context of self-perceived health status and self-reported chronic morbidity. Participants were asked to assess, on a scale from 1 to 5, their level of difficulty about access, understanding, appraisal, and application of health information. Results showed evidence on the independent and inverse association between health literacy levels and self-perceived health and chronic morbidity.

Roelen, Koopmans, Graaf, Zandbergen and Groothoff (2007) studied the relationships between (physical and psychological) job demands, health perception and sickness absence. Job markets, particularly physical demands, correlated with perceived health. Poor health predicted long-term sickness absence. Early recognition of poor health should be the basis of a strategy that prevents long-term sickness absence. Chan and Kitzmann (2010) explored health perceptions of preschool teachers in Hong Kong and found that students placed less emphasis on psychosocial health, but teachers placed more emphasis on physical health.

According to Schwermer (2013), the vaccinated and non-vaccinated participants showed differences in risk perception. For example, the "perceived risk of disease" increased in
vaccinated persons while non-vaccinated participants developed a declining risk perception at the zenith of the influenza season. During the 2009 influenza An (H1N1) pandemic, studies were reported from Dutch general public (Bults et al., 2010) and Netherlands (van der Weerd, Timmermans, Beaujean, Oudhoff, & van Steenbergen, 2011). Dutch public have read the information leaflet 'Fight the flu,' which was sent to every home in the country. Governmental organizations, notably the Ministry of Health, Welfare and Sports and the National Institute for Public Health and the Environment, were the most important sources of information and more than half of the respondents trusted this information. The most significant reason for not wanting the vaccination was fear of serious side effects and doubts about the effectiveness of the vaccine. For public in Netherlands, perceived vulnerability and an intention to adopt protective measures increased during the pandemic.

Analysis of data from a representative survey of citizens from 130 countries on self-perceived health conditions and satisfaction with personal health gives three important conclusions. Firstly, individual perceptions of personal health state are remarkably consistent around the world. Secondly, the incidence of satisfaction with personal health in the United States is comparable to that in most countries. Thirdly, perceptions of personal health correlate strongly with respondents’ income level, both globally and regionally (Clifton & Gingrich, 2007).

3.2.2 AWARENESS OF HEALTH:

Awareness about general health is necessary for individuals to maintain good health. Information dissemination is an essential mechanism for creating awareness, a crucial factor in the early detection and prevention of diseases. Awareness campaigns about
different diseases are at the disposal of the general public in the society. Advertising campaign boosted public knowledge of diabetes symptoms without causing fear of diabetes or anxiety about symptoms (Singh et al., 1994). Awareness and understanding of glaucoma are relatively low in the average Swiss population across all segments of society (Mansouri, Orgül, Meier-Gibbons, & Mermoud, 2006).

Despite various initiatives, there is a lack of awareness of prostate cancer among the general population, and there is a need for health education campaigns focusing on the disease (Schulman, Kirby, & Fitzpatrick, 2003). People from three Arab countries, Saudi Arabia, Egypt and Jordan also had poor knowledge and fair attitude towards prostate cancer screening behavior. Participants' views depend mainly on the level of knowledge and quantity of information provided to the patients and their families (Arafa, Rabah, & Wahdan, 2012). The general public in Europe and the USA also were unaware of the use of simple tests to detect early prostate cancer, and awareness of hormone therapy for early prostate cancer was relatively low (Schulman et al., 2003). The lack of awareness of prostate carcinoma and other prostate-related issues has been identified as a condition of low survival and higher mortality rates among black African men in the main city of Burkina Faso (Ouagadougou). Men in the city of Ouagadougou have poor knowledge of Prostate Cancer. Educational interventions should target the entire populations to improve self-informed decision about first diagnostic possibilities of Prostate Cancer (Kabore, Kambou, Zango, & Ouédraogo, 2014).

There is a requirement to improve the awareness of skin cancer and safe sun practices (MacKie, 2004). Nonmelanoma skin cancer awareness and prevention behaviors differed significantly among the countries. Improved population-specific documentation of skin
cancer knowledge and prevention behaviors will facilitate the development and assessment of public health campaigns (Halpern & Kopp, 2005). Despite the robust outreach programs, which the government and other organizations had carried, many people had several misconceptions about HIV or people living with HIV/AIDS (Sudha, Vijay, & Lakshmi, 2005). People thought that one could get infected by merely touching an HIV positive individual and dropped their maiden on finding out her HIV positive status. Further, stigma amongst the general public was essentially due to the anxiety of getting the illness. Stigma does exist to notable degrees among the educated people. There is a need for greater attempts toward making information regarding HIV/AIDS available to every individual of the society (Unnikrishnan, Mithra, Rekha, & Reshmi, 2010) and Government and Health educators should provide tailor-made education programs for those at the lower education levels (Sudha et al., 2005).

Finally, there is a need for local, community-based investigations and obstacles hindering quick examination, as well as for sufficient educative interventions focused on these issues (Varela-Centelles et al., 2015). There is a need for greater public awareness and further study about an efficient method for enhancement of advance care planning (A. Arai & Arai, 2008).

To maintain good health people need to be aware of healthy eating habits and the good diet. In the UK, there is an increasing popularity of gluten-free diet and to determine whether there has been the change in awareness of gluten-related disorders (GRD) among the general public and chefs a study was studied by Aziz et al., (2014). A marked improvement in both the public's and servants' awareness of GRD.
Public’s knowledge, perception and attitudes toward epilepsy in Bosnia and Herzegovina (BH) were studied for the first time by Bagić, Bagić and Zivković, (2009). General awareness and attitudes toward epilepsy in BH approach those of developed countries. Results are somewhat more positive than expected and an encouraging foundation for a necessary public health awareness campaign. Further, in Cameroon, there is a high level of public awareness on epilepsy in the Akwaya Health District and may be due to high prevalence of the disease in the region, and there is a regional variation in the determinants of epilepsy stigma in Cameroon (Njamnshi, Angwafor, Tabah, Jallon, & Muna, 2009).

General public viewpoints about heart failure (HF) alone and in comparison with other chronic conditions are largely unknown. Lainscak et al., (2014) conducted a survey to evaluate general public awareness about HF and HF disease burden about the common chronic illness. Several participants stated to have understood regarding cardiac collapse, but the knowledge was poor and with many misbeliefs. Heart failure was perceived as less significant than several other chronic diseases, where cancer appears as a primary concern among the general public.

When it comes to the awareness of oral and maxillofacial surgery, the general public has low awareness, and therefore, much needs to be done (Farook, Rihal, Abdullakutty, & Coombes, 2013).

India has the highest incidence rates of oral cancer worldwide, and early detection is imperative as it results in lower morbidity and mortality. A study was undertaken by Agrawal, Pandey, Jain and Maitin (2012) to evaluate awareness of oral cancer and
knowledge of its first signs and risk factors in the general public of the semi-urban Gorakhpur area of Uttar Pradesh (India). The awareness of oral melanoma in the high-risk population of Gorakhpur was not satisfying, leading to a need for further dissemination of information on this issue and its associated risks. In Saudi Arabia, Al-Maweri et al., (2015) conducted a study to estimate the level of awareness and knowledge of signs and risk factors of oral cancer in the general population. Results demonstrated a widespread absence of awareness among the public of oral cancer and a lack of knowledge of its signs and risk factors. A clear need for informing and educating the people in concerns relating to the known risk factors connected with oral cancer. A media drive informing the public about oral cancer is apparently required.

3.2.3 KNOWLEDGE OF HEALTH:

Knowledge of the diseases is essential to deal with any illness condition as it helps in prevention or occurrence of the disease. The knowledge of cancer and individual's or the family story of cancer; young age and female sex showed the positive association with improved cancer awareness. On the whole, the public’s knowledge of cancer was found poor (Adlard & Hume, 2003). They noticed the breast cancer in females (p <0.005). The cell phones caused cancer (p <0.001) and it was found painful (p <0.001). A statistically significant difference was between the study groups and people who have false knowledge about cancer (Turhal et al., 2010).

A survey carried out to assess the knowledge of prostate cancer (PCa) among black African's aged 25 years, and older men in the general public, in the main city of Burkina Faso (Ouagadougou) by (Kabore et al., 2014). The majority were unaware of diagnosis tests for PCa, and the level of education correlated with PCa knowledge (p < 0.001). Men
in the city of Ouagadougou have poor knowledge of PCa. In other diseases situation like Andropause, the general public was knowledgeable of some aspects like low testosterone and have misconceptions about others (Anderson et al., 2002).

The study on the use of contraceptive from a perspective of males found that men were interested in getting information on family planning, but the lack knowledge of information sources hampered the capacity to make choices about family planning. Service providers and program planners of family need to be aware of males' knowledge and perceptions about family planning and make appropriate modifications to communication strategies (Char, Saavala, & Kulmala, 2009).

In the United States, Genital human papillomavirus (HPV) infection was the most common sexually transmitted virus causing cervical cancer in women. As an HPV education efforts, 35 focus groups were formed with members of the general public and stratified by gender, race/ethnicity, and urban/rural location. Focus groups explored participants' knowledge, attitudes, and beliefs about HPV. The awareness and knowledge of HPV were low across all groups (Friedman & Shepeard, 2007).

In the case of cardiopulmonary resuscitation, general public considered advanced technology and physician communication to be the most important actions during attempted resuscitation. Incorrect perceptions regarding resuscitation and survival rates existed among the lay public and indicated strong preferences regarding resuscitation and advance directives (Marco & Larkin, 2008). A surprisingly comprehensive knowledge base was revealed, together with apparently appropriate ideas about the management of myocardial infarction and its risk factors (Bury et al., 1992).
A survey in Japan regarding knowledge of 'general' information, 'symptoms', and 'biomedical' issues related to dementia was carried to determine the understanding of dementia among people. Delays often occur between the recognition of signs or symptoms and a decision by the patient or family to seek professional help due to lack of knowledge. A gap in knowledge on dementia among the general public was reported, preventing caregivers from planning upcoming social and financial challenges. Health professionals and care staff need to provide correct information. Educational initiatives for the general public could be useful, and should target those groups, men and non-middle aged women (Y. Arai, Arai, & Zarit, 2008). Conclusions from the dementia module of the 2010 Northern Ireland Life and Times (NILT) survey in Northern Ireland indicated a reasonably good level of knowledge about dementia. However, attitudinal measures indicate the stereotyping and infantilization of people with dementia (McParland, Devine, Innes, & Gayle, 2012).

A telephone study of 1,358 adults randomly sampled throughout Michigan in 1997-1998, explored the mental health benefits, and preferences of providers among the general public. A large proportion of them were uninformed about mental health benefits. They lack information about important mental health benefits, and this acted as a barrier to their seeking care. According to Mickus, Colenda, and Hogan (2000) given the dominant preference for primary care providers to treat mental health problems, especially elderly, mental health issues should be given more attention at all levels of primary care education (Mickus et al., 2000).

An information campaign in Germany to inform public about depressive illness and preventing suicidality, an opinion survey of public attitudes and knowledge towards
symptoms, etiology, and treatment of depression was carried out. Depression was observed as a serious illness, and people appeared to be more conscious as opposed to the conclusions of earlier surveys, but there were still important information deficits (Althaus, Stefanek, Hasford, & Hegerl, 2002).

Huang, Liu, Tsai, and Lin (1997) explored the genetic knowledge of different health professional and non-professionals following ten years of implementation of genetic health program in Taiwan. The college students had lower scores in prenatal diagnosis and identification of common genetic disorders when compared to other groups. Therefore, college curricula in genetics required emphasis more on these subjects. The general public should strengthen their knowledge of prenatal diagnosis and common genetic disorders. Prenatal diagnosis should be added to the school curriculum of college students to expand their knowledge.

A review of public knowledge of genetic risk factors of multifactorial genetic diseases showed that the public had limited knowledge. The knowledge structure may be a valuable tool for evaluating different types of public knowledge and pinpointing defects or caveats in general knowledge with more precision and subsequently develop public health campaigns to remedy such defects (Smerecnik, Mesters, de Vries, & de Vries, 2008).

Halpem and Kopp (2005) in a study of two thousand and one hundred individuals in the UK, Italy, Germany, Spain, France, the USA and Australia found that significant variation among countries studied about the awareness and prevention behaviors of Nonmelanoma skin cancer. Improved population-specific documentation of skin cancer
knowledge and prevention behaviors will facilitate the development and assessment of public health campaigns.

In Chicago, the study was initiated to assess the knowledge of food allergy, attitudes, and beliefs among parents of food-allergic children, pediatricians, family physicians, and adult members of the general public a study was carried out. They designed and developed tools to assess food allergy knowledge and perceptions among three distinct populations: a forty-two item parent tool, a fifty item physician tool, and a thirty-five item general public tool because no such tools were previously available (Gupta et al., 2008).

In the Quebec City region, a telephone survey of people living in two municipalities where tap water was fluoridated and two municipalities where there was no fluoridation was carried out to assess the knowledge of the use of fluoride (prevention of tooth decay) in drinking water. Knowledge of the main benefits associated with the use of fluoride (prevention of tooth decay) in drinking water was not different in fluorated versus non-fluoridated municipalities (20.4% vs. 19.4%, p = 0.57). Knowledge of its main disadvantage (an increase of dental fluorosis) was very low and similar in both groups (3.1% vs. 2.0%, p = 0.11). This study demonstrates that there is still need for public health education on the uses of fluorides (Levallois, Grondin, & Gingras, 1998).

After examining the general public knowledge and behavior towards pharmaceutical advertisements in the Western part of Kingdom of Saudi Arabia, it was found that Television and Internet showed the highest effect on consumers. Pharmaceutical advertisements harmed the doctor-patient relationship as evidenced by one-third of the
investigated sample. Moreover, the majority mentioned that they would consult a different physician or even replace the current doctor if he/she refused to prescribe an advertised medication (Al-Haddad, Hamam, & Al-Shakhshir, 2014). There was a need to improve public knowledge and beliefs toward medicines as well as utilizing public preferred dosage forms. Also, pharmacists should play a major role in these programs since they are experts on drugs and perform a more active role in patient education and counseling (Al-Haddad et al., 2014).

A study which assessed the public knowledge and attitudes towards antibiotic use in a government hospital setting in Malaysia showed that poor level of knowledge in less than one-third whereas more than one-third of them wrongly self-medicated themselves with antibiotics once they have a cold (Ling Oh et al., 2011). There was a relation between frequency of antibiotic use and knowledge among the general public (Islahudin, Tamezi, & Shah, 2014). (Elkalmi et al., 2013) reported inadequate knowledge on Adverse Drug Reaction on the use of medicines in any disease situation.

In a study designed to investigate the levels of anatomical knowledge of different patient groups, and the general public found that many patients and people do not know the location of the major body organs. These results indicated that healthcare professionals still need to take care in providing organ accurate data to patients and should not believe that patients have this information, even for those organs in which their medical problem was involved (Weinman, Yusuf, Berks, Rayner, & Petrie, 2009).

In the United Kingdom, a study was done to explore the state of knowledge and attitudes toward electroconvulsive therapy (ECT) among British general public, medical students,
and MRCPsych students. General public’s knowledge was less and had less positive attitudes and greater fear of ECT than the medical students (McFarquhar & Thompson, 2008). In Turkey, medical students were the most knowledgeable about ECT, and also had a more positive attitude toward ECT than the other two groups. More psychology students had negative attitudes on some aspects than the general public sample, despite being more knowledgeable. The theoretical and practical training in ECT of Medical School's played a significant function in raising the level of knowledge of and reducing the prevalence of negative attitudes toward ECT among the medical students; similar training for psychology students was advocated to achieve similar results (Aki, Ak, Sonmez, & Demir, 2013).

On the harmful effects of ultraviolet (UV) exposure and the benefits of photoprotection, the general public has long been educated, and these efforts have not resulted in meaningful changes in the public behavior notwithstanding providing seemingly adequate knowledge. Behaviors are often hard to change on a societal, personal, and biological level. So, to achieve excellent results, it was proposed to create interventions focused on demographic subsets of the population. Goulart and Wang (2010) suggested that photoprotection messages should shift from purely promoting knowledge to inspiring improvements in behavior with targeted strategies (Goulart & Wang, 2010).

As a part of the stroke awareness campaign, a study to gain a wider understanding of the knowledge of Blood Pressure (BP) in a selected London population was carried out by Slark, Khan, Bentley, and Sharma (2014). They found that there was a lack of understanding of BP among the general public. Hypertensive patients demonstrated a poor understanding of BP.
In India, a cross-sectional study was carried out to explore the awareness among general public and health care providers about tetanus about injuries, and their knowledge about tetanus schedules in children, pregnant females, and adults. The knowledge of tetanus immunization was notably poor among the public as well as healthcare providers. For example, a substantial proportion of them indicated tetanus injection after every injury. The knowledge of tetanus immunization schedule for adults was poor among all categories of respondents. There is a requirement to improve the level of awareness of health care providers (Dabas et al., 2005).

In Japan, the data was collected from four hundred and thirty-six people who have attended the seminar of respiratory diseases on "Cigarette smoking and lung cancer; prevention and treatment of asthma; aged care and prevention of pneumonia". After the symposium, unsigned questionnaires were filled out by 403 of those in attendance. Three hundred eighty-nine (165 males and 224 females) respondents correctly answered the questionnaires. On the whole, lower number of attendants responded that smoking was causally linked to other illnesses: pulmonary emphysema; chronic bronchitis, 68%; laryngeal cancer, 77%; myocardial infarction, 53%; and atherosclerosis, 49%. Of the 39 current smokers, 27 answered that they would stop smoking after the seminar. While many people partly understood the dangers of smoking, and they lack a clear knowledge of the risks of diseases besides lung cancer. Education about the hazards of tobacco use and requiring smoking cessation (Takano, Kohrogi, Matsumoto, Suga, & Ando, 2001).

A literature review from 1998 to November 2014 was conducted to know the most relevant gaps of knowledge about periodontal diseases amongst the general public and to know whether these deficiencies are culturally consistent. Databases like EMBASE,
PubMed and SciELO using the different search strategies. The studies on periodontal knowledge were limited and restricted to areas with a very high level of human development. Gaps in knowledge exist in every geographic scope, being the most relevant a low awareness, poor knowledge of the etiology of periodontal diseases and their relationship to systemic diseases. It highlighted the demand for local, community-based investigations.

The pattern of use, awareness, and attitude towards consumption of multivitamin supplements among the general public was conducted using a predesigned structured questionnaire. Findings from this study suggested that multivitamin usage was highly prevalent, and the majority of the participants were ignorant of possible harm or drug interactions. Need to adopt certain educational interventions to minimize self-directed supplement use and increase awareness regarding their correct usage (Sekhri & Kaur, 2014). Findings indicated that provided palliative care information via small media and lectures in the community was found effective in enhancing perceptions of palliative care and knowledge about opioids among the community dwellers, particularly for caregivers of the patients. The acquisition of sufficient knowledge about palliative care from various information sources may improve people's sense of security regarding cancer (Akiyama et al., 2015).

About the type of treatment and medical procedures, people have inaccurate knowledge. Incorrect perceptions regarding resuscitation and survival rates exist among the lay public (Marco & Larkin, 2008). Educational initiatives are needed, and greater attempts should be made to raise perception, awareness, and knowledge of general public.
3.3 HEALTH INFORMATION NEEDS:

Health information needs refer to wants or requirements for information about health care and diseases. To maintain good health, people need information on diseases and their symptoms, preventive measures, knowledge of good doctors and hospitals, kind of treatment and cost. People's health needs vary depending on the circumstances, and different people have different needs.

Given the public-private mix of the health system, input was obtained from a representative sample (N = 1426) of residents in the broader Athens area to evaluate if differences in the use of health services associated with medical needs and/or various socio-economic factors or not. Healthcare demand was the factor most strongly related to all dimensions of health care usage, except for visits to public practitioners. Women, aged, less well-off and persons of lower physical health status visited doctors. Women, well educated and those belong to lower physical health status were more expected to visit private providers. There was a positive relationship between health care need and utilization of health services within a mixed public-private health care system (Pappa & Niakas, 2006).

Unmet health needs posed a significant challenge to the health care system. According to Pappa, Kontodimopoulos, Papadopoulos, Tountas and Niakas (2013), unmet health demands would continue to rise, which would broaden disparities in health and health care access. Homeless persons experience a high burden of health problems, and they face significant barriers to accessing health care. A study was conducted to investigate the factors associated with unmet needs of health care in a population consisting of homeless and vulnerably housed adults in three major cities within a universal health
insurance system. Of the 1,181 participants, 445 (37%) reported unmet needs. Homeless and vulnerably housed adults have a similar possibility of encountering unmet health care needs. Argintaru et al. (2013) based on the study suggested approaches to increase access to primary care and reduce obstacles to accessing care in these populations.

To compare the number and type of unmet needs of people with and without dementia in residential care in the Netherlands, individuals in residents care or their relatives were interviewed to identify their care needs. Individuals with probable dementia reported more needs in total and more unmet needs in comparison with persons without the diagnosis of dementia. The variation in healthcare needs between people with and without dementia was due to actual differences in physical and cognitive functioning. (van der Ploeg, Bax, Boorsma, Nijpels, & van Hout, 2013)

Jejeebhoy (1997) reported a gap in women’s health information needs on reproductive health and the constraints faced by them in accessing quality health care. Rural elderly people expressed the need for and attention to health information. "Health service information" and "prevention of healthcare information" were the most crucial and vital for them. People with higher education were more aware of their health information needs and more attentive to information disseminated via mass media (Wei-Chun Liao, Li-An Chiu, & Hsiu-Ping Yueh, 2012).

Health care need was the factor most strongly associated with all measures of health care utilization. The healthcare need and use of health services showed the positive relationship between healthcare need and use of health services (Pappa & Niakas, 2006).
Community health information needs evaluation showed that older than 60 and less educated (fewer than 12 years) African Americans in Charleston and Georgetown counties lack skills to access Internet and library services and suffer disparities in health information. Carlson et al. (2006) gave a proposal to increase the dissemination of diabetes information. A systematic review of published randomized controlled trials targeting help-seeking attitudes, intentions or behaviors for depression, anxiety, and general psychological distress was studied. In the study, six published studies of randomized controlled trials investigating eight different interventions for help-seeking were included. The majority of trials targeted young adults and where mental health literacy content was effective in increasing help-seeking attitudes in the majority of studies at post-intervention but had no impact on help-seeking behavior. Mental health literacy interruptions were deemed as a promising approach for promoting positive help-seeking attitudes; there was no evidence that it lead to help-seeking behavior. Further research investigating the effects of interventions on attitudes, intentions, and behavior is required.

Analysis based on the data collected from seventeen patients diagnosed with cancer in previous six months in Outpatient oncology clinics at a London cancer center showed that all patients wanted basic information on diagnosis and treatment. The attitude of Cancer patients to cancer and their strategies to cope with their illness constrained their desire for information and their efforts to obtain it. In developing recommendations, the government's cancer information strategy should attend to differences in patients' desires for information and the reasons for them (Leydon, 2000). In Spain, before and during the economic crisis, access to health care and its determinants in the immigrant and native-
born populations was analyzed. The comparative analysis of two repetitions of the Spanish National Health Survey of 2006 and 2012 showed that unmet needs of health care declined in 2012 when compared to 2006 though the use of health services remained constant. Access to healthcare did not worsen, possibly because, till 2012, the national health system might have rested the deterioration of social determinants as a consequence of the financial crisis. Further studies are necessary to evaluate the effects of health policy responses to the crisis after 2012 (Garcia-Subirats et al., 2014).

Khalil (2001) provided a brief review of consumer health information needs and information-seeking behavior by way of a literature review of earlier studies focusing on needs, sources and consumer health information seeking. Based on 100 unsolicited e-mails and 100 discussion messages of users of the UK-based Web site MedicDirect between 2000 - 2003 have been studied to know how consumers use these services, especially general health discussion boards. Analysis of the e-mails disclosed that high proportion of inappropriate e-mails (up to 62 percent) were reported, and one-third of users failed to obtain the information they sought on the Web site. Over one-third of electronic mail, senders misspelled search key terms (Janet Homewood, 2004).

Guo, Li and Dai (2015) investigated the information needs of health consumers based on 2,000 questions randomly selected from 100 thousand hypertension reported messages posted by consumers on a Chinese health website. The comparison of the questions asked by customers and physicians revealed that their health information needs were significantly different (Guo, Li, & Dai, 2015).
Information requirements and services of health consumers in Nigeria were studied using cluster quota sampling with the questionnaire as data collection tool. Observed a significant association between the education levels of the health consumers and use of information sources. The health information needs and service areas were health institutions; service quality, child and maternal care, drugs administration, and family planning. The health information systems failed to meet the demands made of them (Popoola, 2000). Cavalieri (2013) compared the self-perceived unmet needs of people across Italian regions and evaluated how the stated reasons - classified into the categories of availability, accessibility, and acceptability – vary geographically. Overall, 6.9% of the Italian people stated to have experienced at least one unmet medical need during the last 12 months. The principal reason was the difficulties of approachability reported to cost or transport (45.5%), accompanied by acceptability (26.4%) and availability owing to the presence of too much time waiting lists (21.4%). Strategies to address unmet health care needs should adopt a multidimensional approach and be tailored so as to consider such geographical heterogeneities (Cavalieri, 2013).

NetWellness - a Web-based consumer health information service was set up to address rural well-being and information needs of the residents of Ohio. It has grown from a regional demonstration project in 1995 to a key statewide service. Collaboration with public libraries, complemented by alliances with kindergarten through twelfth-grade agencies, makes NetWellness Ohio's essential health information resource (Guard et al., 2000). (Daphne Pringle & Karin Wiseman, 1981) prepared a list of books on the most requested topics in the library to cater to health information needs of users of the libraries. It included topics like alcoholism, arthritis, anatomy, birth control, cancer,
cardiovascular, children diseases, diabetes, diet and nutrition, dentistry, directories, drug abuse, ear, nose and throat, encyclopedias and dictionaries, eye, gastrointestinal disorders, genetics, holistic medicine, pain, patients, physical examination and tests and other topics.

Investigated the health information needs and their association with health-related quality of life (HRQOL) in a diverse, population-based sample of long-term cancer survivors in California. Survivors reported a high prevalence of unmet information needs in the following categories: side effects & symptoms, tests & treatment, health promotion, interpersonal and emotional, insurance, sexual functioning and fertility. Observed disparities in access to vital health information in long-term survivors and that affect HRQOL (Kent et al., 2012).

Content analysis of six upmarket magazines (Cosmopolitan, Elle, Esquire, GQ, Marie-Claire, and Maxim) was done to analyze the health information contained in them to compare the coverage in men's and women's magazines. Interviews with four health editors from the sample were conducted to elucidate some of the main findings. Differences in health information coverage were greater between the individual magazines than between the total women's and men's groups. Overall, men's magazines seem to treat health information in a more informative way than women's, though both groups give remarkably high levels of information required to change their readers' health behavior. With this level of information provision, it is remarkable that several of these publications have no clear policy on health information, and that their editors have no qualifications or training in either health or science (Graham, Bawden, & Nicholas, 1997). Health information seeking behavior of low socioeconomic status Hispanic adults
using smartphones was investigated by Henna Kim and Yan Zhang (2015). They explored a broad variety of health topics, mostly using the mobile web, although they lacked knowledge and skills to use apps effectively by assessing the quality of health information, and comprehend information in the Spanish language.

Using the data from the Health Information National Trends Survey, Cutrona et al, (2015) described behaviors of online surrogate seekers. They were inquired about the usage of the Internet for surrogate-seeking over the prior 12 months. Compared to those who solicited health information online for only themselves, surrogate seekers were more likely to live in households with others. Found no notable variations in gender, race, income or education. Surrogate seekers were more inclined to report activities requiring user-generated content: email contact with health care providers; visited social networking sites to read and shared about medical topics and participated in online health support groups. Apart from seeking health information, surrogate seekers generated and communicated the messages that might affect medical care decisions. A cross-sectional study was conducted to evaluate and compare health information required and received from doctors/nurses by cancer patients and family caregivers in a general hospital in Sichuan, China. Participants wanted a broad array of health information, including but not limited to information about diagnosis or therapy. Across all types of information, participants received from doctors/nurses significantly less than what they needed. The difference between information wanted and obtained differed across different types of information. There is a great need for providing more details to both patients and their families, particularly information about CAM and psychosocial aspects (Xie, Su, Liu, Wang, & Zhang, 2015).
Information needs of rural health professionals are analyzed and compares it to the broader information needs literature to confirm whether the information needs of rural health professionals differ from those of other health practitioners. The review of these studies showed that rural health professionals seem to have the similar fundamental needs for patient care information as their city counterparts and that both groups rely on co-workers and personal libraries as their chief sources of information. Outreach efforts to this group of underserved health professionals must be sustained to achieve equity in information access and to change information-seeking behaviours (Dorsch, 2000). Breast cancer patients have a high need for information on a broad range of topics. Data from newly-diagnosed breast cancer patients treated in 111 breast center hospitals in Germany was collected and analyzed combined with hospital characteristics. Younger subjects, those receiving a mastectomy, having statutory health insurance, not living with a partner and having a native foreign language reported higher unmet information needs. The data demonstrate small between-hospital variation in unmet information needs. They found differences in proportions of patients with unmet information needs among hospitals and but the hospitals' structure and process-related attributes of the hospitals correlated with those differences to some extent (Kowalski, Lee, Ansmann, Wesselmann, & Pfaff, 2014).

By feedback from twenty-two Prostate cancer (PCA) patients who used web-based service in the cancer hospital for six months, a personal health record (phr) was created to support their needs for health information, care, and decision-making. Of the seventeen subjects who completed the study, 29% encountered some minor difficulties using the provider. The two regularly accessed medical records were laboratory test results and transcription of doctor's notes. Of survey respondents, 94% were satisfied with the access
to their medical records, 65% said that provider helped to answer their questions (Pai, Lau, Barnett, & Jones, 2013).

3.4 USE OF HEALTH INFORMATION SOURCES:

3.4.1 USE OF MASS MEDIA:

Mass media supports to inform and educate the general public on various health concerns and provide health information that may produce healthy living among people. The mass media perform several important functions in society. These include the provision of information, entertainment, articulating and creating the meaning of information, setting agendas for individual and social discourse and influencing behavior. Over the years, mass media have been a major component of human society. The information, education and entertainment uses of mass media, in particular, necessitate the coverage of a wide range of human endeavours and subject areas. The topics cover health, politics, education, sports, science and technology, environment, arts and culture, business and economy, life and style and religion (Bello, 2015).

The widespread use of mass media has had a profound influence on societies across the world. Access and exposure to these different kinds of media have enabled people not only to obtain information but share this information more than ever before. As a result, modern societies are becoming increasingly more dynamic, complex, less isolated and more interconnected (Niekerk, 2012).

African Americans, Latinos, and Whites usage of sources of health information and the role of mass media was studied Brodie, Kjellson, Hoff, & Parker (1999). Further, they found, on the whole, the majority relied heavily on the media for information about
health and health care, took individual action as a consequence of media health coverage, and would like the media to increase its coverage of health issues. Notwithstanding the high reliance on the mass media, the trust of media as a health information source was average to low across groups. While reporting the critical role of mass media in informing the public on health and healthcare issues, this study suggested dissimilar access for African Americans and Latinos, compared with Whites, while examining health data and news of personal and community relevance. Those differences indicate the need for enhanced and augmented coverage of minority health concerns as well as more comprehensive treatment of racially diverse audiences in general (Brodie et al., 1999).

Lee (2005) conducted an exploratory study of Older Chinese people living alone in an urban area of Hong Kong about their quality of life. Mental health status, the number of days staying in the hospital, life satisfaction, age, and self-esteem were significant factors in predicting the life quality of older Chinese respondents living alone. The results were compatible with earlier findings reported in the West and Hong Kong. Older Chinese respondents living singly who have offspring also residing in Hong Kong showed that belief in children's' support in old age, good walking ability, and better self-reported health status via life satisfaction as the mediating variable. Moreover, better self-reported health status and satisfactory self-reported financial position via self-esteem as the mediating variable were significant predictors of quality of life.

A literature review which was conducted to know the impact of the mass media on public information drive effectiveness and suggests approaches to successful information campaigns. Campaign strategists should choose message sources that were considered
credible by the intended audience. Choice of the channel depends on the configuration of source, message, and target audience factors, but television is superior for most purposes. Further, the role of precampaign audience analysis and pilot testing of alternative sources, appeals, and styles should be considered. The best method for assuring maximum response was pre-testing with small samples of the intended audience (Atkin & Wallack, 1990).

Tian and Robinson (2014) conducted a study to know the media complementarity and health information use in Puerto Rico. Education and gender showed association with individual-level media complementarity of health information seeking, which, in turn, was positively related to awareness of health concepts and organizations, and this knowledge was positively associated with a particular health behavior: fruit and vegetable consumption.

A study on consumer mobile health information seeking and use action based on information quality, perceived value, personal health value, and trust was reported by Zhaohua Deng, Shan Liu and Oliver Hinz (2015). The health information use behaviour was closely related to the seeking behaviour plan in the mobile context. Furthermore, the study highlighted the impact of information quality, perceived value, and trust on the intention to seek, and the effects of information quality and confidence on the purpose to use (Zhaohua Deng, Shan Liu, & Oliver Hinz, 2015).

Brashers, Goldsmith and Hsieh (2002) in their paper discussed information seeking and avoiding in health context with a specific aim of proposing normative recommendations for information management in health settings. Difficulties and dilemmas of data
management include relational demands and contextual features. Issues that require attention in a normative approach were: (a) how information management goals to be achieved; (b) what roles interpreters can play to facilitate effective cross-cultural information exchange, and (c) how information seekers can best manage conflicting or overwhelm information when confronted with messages from multiple channels.

Jones (2003) discussed the accessibility and retrievability of health information by patients and family members. Touch-screen and public access kiosks were available after the 1990s. Some evidence from a study of NHS Directs kiosks that they could improve physical access to health information. Most health centers have little space for longer use of computers by patients. Further issues like physical availability, personal retrievability, Information use, satisfaction with information.

Chin et al., (2015) conducted a study to identify the unique effects of memory and comprehension for health information among older adults.

Ham, Wright, Van, Doan, & Broerse (2011) studied about the perception of mental health and help-seeking attitude of adults in Vietnam. They were often helpless to name specific mental illnesses. Largest respondents showed a preference for medical treatment options, often in combination with family care. Perceptions of mental health and help-seeking behavior were affected by the lack of knowledge and a mix of traditional and modern views.

3.4.2 USE OF TELEVISION:

TV was the most popular source of health information for middle-aged adults. The most frequently mentioned sources of health information were TV specials, news stories,
magazines, news articles, publications, medical books, and physicians. The conclusions indicate that persons disseminating health information should target their efforts through printed materials, TV, and informal networks (Connell & Crawford, 1988). Health information seekers in Iran were passive information seekers rather than active ones and most shared sources for seeking health information were “TV” and “discussions with others” (Gavgani, Qeisari, & Jafarabadi, 2013). People in society are not merely passive recipients of media information and messages. They respond to content provided by the media based on their personal backgrounds, interests, the level of education and interpersonal relationships. People indicated that they obtained most of their health information from written materials, television, and informal network members, in that order, with a small difference between rural and urban respondents. The amount of information received from TV declined with age, particularly for urban dwellers. The youngest and oldest groups said receiving the most health information from printed materials. TV was the most common source of health information for middle-aged adults.

Women in Turkey used media sources for soliciting health information. TV/radio was the more reliable media sources. To obtain accurate health information, feel confidence, assume health responsibility for self and their families and to increase community awareness, it was recommended that health promotion in televisions and radios have a broad range of audiences and dissemination of health-related public spots in these programs in county-wide (Yilmazel, Akbulut, & Duman, 2013).

Elkamel (1995) reviewed the evidence of the impact which television generally, and drama series, in particular, had on health beliefs, attitudes, and behaviors. There is a meaningful relationship between education level and use of the internet for obtaining
health information among age, job and “discussions with family, relatives or close friends” for receiving health information (Gavgani et al., 2013).

Knowing the reasons behind individual differences in health information behavior was essential for the further development of tailored information services that could assist people with managing their health and lifestyle in a more positive way. Use of media for health purposes as well as their health needs not only improve knowledge on this population sub-group but also provide direction for action and social change about health issues within this group. About how people use media products to meet their needs and interests vary and health information can be transmitted through different means and instigated by various intentions of the health information-seeker.

3.4.3 USE OF RADIO:

The process of active and passive gathering of health information through a complex network of sources have become a vital process initiated by people, to achieve good health, elude health threats, avoid illness, and when necessary, navigate diagnosis, prognosis, and treatment on the way to recovery. Garcia-Cosavalente, Wood, & Obregon, (2010) carried out a study in four different areas of Peru during the period November 2006 through January 2007 to determine health information seeking behavior of urban and rural Peruvians. Urban Peruvians were more inclined to get the advantage of the Internet for acquiring health information. While, rural Peruvians still largely prefer radio as a source of health information.

TV/radio was the more reliable media sources among participants. To obtain accurate information on health, feel more confident, consider health responsibility for self and
their families, and raise community awareness, it was found useful to give emphasis on health promotion in televisions and radio. They have a broad range of audiences and dissemination of health-related public spots in these programs in county-wide (Yilmazel et al., 2013).

Familusi and Owoeye (2014) assessed the use of radio and other means of information dissemination among the residents of Ado-Ekiti, in Nigeria. Radio was the most important instrument in information dissemination because it reached the higher percentage of the people irrespective of their place; it increases the level of awareness of the people on socio-political and economic issues, and it also enables people to be adequately informed about programs and projects of the state. The expense of obtaining information through radio, television, and use of mobile phone were not high. Radio was mostly used to access information. These were supplanted by cell phone, television, newspaper, social network, satellite, cable television, and the internet.

Radio broadcasting for health by Skuse, Butler, Power and Woods (2004) provided an overview of the role radio broadcasting in promotion for better health for poor people. It was conceptualized in the global context efforts needs to be put lessen the burden of disease and illness on poor individuals and advocates a people-centered and rights-based approach to health communications that emphasize working with poor communities to gain an understanding of the full range of epidemiological, behavioural and risk taking factors that drive disease and ill health (Skuse et al., 2004).
3.4.4 USE OF NEWSPAPERS AND MAGAZINES:

Newspapers are potential communication resources as they often report health issues in a more comprehensive way. Precisely, for this, the reason individuals, families and organizations use health information in newspapers to meet their crucial health needs. They are primary sources from which individuals learn about health risks and other health related matters. Because of diverse media sources, today people have increasing opportunities to choose which media and aspects of media they will attend to and which they decide to learn from various media sources available for learning about health (Brown & Witherspoon, 2002).

The dissemination of information on various health issues by newspapers make people, particularly literate, to seek health information from newspapers. According to Catalán Matamoros, Axelsson and Strid (2007), argued that the dissemination of health information through newspapers be a very effective way of reaching the general public.

Gasher et al., (2007) assert that health has a prominent topic in Canadian daily newspaper reportage. On a daily basis, Canadian newspapers report health-related stories on subjects such as a breakthrough in medical research, a study on the quality of drinking water, or government spending on the health care system. Research also shows that modern Americans seek information about health information from a variety of media sources and the primary sources for individual Americans who self-identify as health-conscious and health-oriented include print publications (Dutta-Bergman, 2004).

In Sweden, described as a nation of newspaper and magazine readers (Roberts & Bachen, 1981), newspapers were regarded as the most believable news media and noted for
conveying health news and scientific findings more completely than television or radio and more quickly than magazines.

Content analysis of Turkish Newspapers to review the health information related articles on Physical Activity (PA) was conducted by (Koksal, Subasi, Luleci, & Hey, 2012). Four daily Turkish newspapers were identified as having archived documents on Web pages (Koksal et al., 2012).

Analyze the space related to health found in the Swedish newspapers and to discuss what readers consume about health. Three major Swedish newspapers selected during one month—Svenska Dagbladet, Dagens Nyheter, and Göteborgs-Posten. Health Content used to be published within the first pages (median in page 13, the main mode in 4). Journalists wrote 81.3% of all contents, and writers used sources of information in 73.6%. Most common topics were about cancer, alcohol, euthanasia and sick leave at work. “Svenska Dagbladet” is the newspaper publishing more HC and also has more specialized health writers. Different sources were used in the contents like health professionals, professors, and politicians (Catalán Matamoros et al., 2007).

Bello, (2015) in the thesis examined the coverage of health issues by Nigerian newspapers, emphasizing the level of attention given to HIV/AIDS, malaria, polio, and the northern region. The study further examined the relationship between dissemination of health information by Nigerian newspapers and the health behaviors of newspaper readers and the challenges encountered by health reporters in the field of health reporting in Nigeria. Findings suggest that Nigerian newspapers appear to give outstanding attention to other issues which, as noted by health reporters interviewed, include politics
and economy, over health issues. The study also showed that dissemination of health information by Nigerian newspapers correlates with an improvement in the health behaviors of newspaper readers in the country.

3.4.5 USE OF INTERNET:

The rise of electronic texts has lead to fundamental changes in the way information is communicated, retrieved and disseminated, as well as in the way people approach the task of reading and writing and the way people become media literate, in future (Pailliotet & Mosenthal, 2000). The media serve as the technological and informational instruments like the Internet through which interactivity and communication processes in the modern world take place, and the commercialization of the media have created the outlets that send out the messages via various mass media sources to which people increasingly have access. The Internet gives easy and anonymous access to information on health and medicines. Rains (2007) examined the use of the WWW to seek health information in a contemporary information-media situation. Draws from uses and gratifications theory and the modeling of health information seeking, perceptions of traditional sources of information were used to predict use of the Web to utilize for health information and perceptions of information obtained from searches. Further, utilizing the uncertainty management theory, a study was conducted to propose one technical answer for how persons use the World Wide Web to obtain health information which helped for the better understanding of the implications of the Web for information seeking. The results offer evidence that respondents who used the Web to search for cancer information were amply able than were respondents who did not request information to
achieve a level of uncertainty commensurate with the degree of uncertainty they desired (Rains, 2014).

Calabretta (2002) discussed the issues of health care information in the electronic age. It includes the influence of the internet on the lifestyle of Americans including health conditions. They are using the Internet in growing numbers for their health related information. Gray, Klein, Cantrill and Noyce (2002) explored the school students perceptions of the internet as a health information source in the United Kingdom. For example, less than one-third of the students had looked for health information online. They used online to find information about a family member's illness as their health concerns. Most of them used a search engine for their query. They determined the success rate by their skill at evaluating the search results that they received. Suggested opportunities for educational interventions through schools and pharmacies to help young adults to optimize their usage of the Internet for health information (Gray et al., 2002).

Urban Peruvians are more likely to take advantage of the Internet as a means of acquiring health information (Garcia-Cosavalente et al., 2010). Besides, people were more apt to seek health-related information online if they or their close family or friends have a chronic disease situation (Feng & Xie, 2015). Nicola J., Klein, Cantrill and Noyce (2002) explored the qualitative study of adolescents' use of the Internet for information about health and medicine. They explained if the Internet can be truly valuable during acute illness episodes and the interplay of active and passive information seeking challenges.
Ayers & Kronenfeld (2007) described the relationship between chronic disease and retrieving health information from the Internet and changing health behavior among United States population. They found that the Internet use was not merely because of the presence chronic illness, but rather by the number of chronic conditions. Further, "the more often a person uses the Internet as a source of health information, the more likely results in the change in their health behavior". Patricia E. Gallagher (1999) critically examined the criteria for evaluation of health information available on the Internet, websites, based on their domain, and on their publisher. Edejer (2000) has given the account of the potential advancements in information and communication technologies to disseminate health information. Further, states that the "Information and communication technologies had not been harnessed systematically to improve the health of the populations in developing countries."

Wagner, Bundorf, Singer and Baker (2005) studied the digital divide in US population and use of health information on the internet. They surveyed 12,878 individuals 21 years of age and older on the research panel regarding the utilization of the Internet for health in 2001-02. Those who got Internet access for the first time by joining the panel utilized the Internet for health. Though access helped to explain the digital divide, most people provided with free access do not use the Internet for health information. Marshall and Williams (2006) explored health information literacy of consumers by evaluation of the nature and characteristic of health information on the Internet and in printed formats. Participants lack confidence in their skill to select quality health information and relied on preselection by authoritative sources.
Maceviciute and Klusovskiene (2001) evaluated the Lithuanian health information on the internet. Employs the analysis of documentation and literature; interviews with the persons who created health information resources and work at implementing of health information programs; and survey of existing Lithuanian health information sites on the Internet. Lithuanian health information sources on the WWW have become a part of the Internet health information resources worldwide. The absence of an overall information strategy for healthcare was one of the problems that have to be addressed by the government officials and leaders of the medical profession as soon as possible. Escoffery et al. (2005) studied the Internet use, health-seeking behaviors, and attitudes related to the utilization of the Internet to obtain health information of students. Overall, 74% of the students reported having ever received health information online, and more than 40% stated that they regularly searched the Internet for information. They used various search engines and multiple Web sites to find health information. They found differences in Internet use for health information by gender and by the level of Internet experience.

Diviani, van den Putte, Giani, and van Weert (2015) examined the relationship between low health literacy and (a) people’s capacity to evaluate; (b) perception of quality; (c) trust in online health information including the use of evaluation guidelines for online health information. Yilmazel, Akbulut and Duman (2013) conducted a descriptive study to determine the role of media sources for seeking health information by women. Internet was the most preferred media sources of health information, and TV/radio was the more reliable media sources among students.

Miller and Bell (2012) found the age variations in the role of confidence and ease of search in the prediction of whether or not individuals use (adopters) or do not use
(nonadopters) the Internet to search for health information. Kommalage and Thabrew (2008) investigated the use of websites as a health education medium in Sri Lanka. About 87.2% of the websites contained less than 100 WebPages. The quality score was higher on the websites owned by local non-business organizations compared to the websites owned by business organizations. Just 8.1% of the websites gave health education content for the general public as their main content. The number of websites has not increased compared to the growth in internet usage in Sri Lanka. They noticed underutilization of internet as the health education tool notwithstanding the increase of internet usage in Sri Lanka. Fallis and Frické (2002) used the checklist for evaluating the quality of health information to assist Internet users developed by information professionals. Many recommended indicators of accuracy failed to correlate with accuracy. Scott, Scott, & Auld (2005) studied the characteristics information sought, how respondents use it, how they perceive the information, and the self-assessed value of health information got from the Internet.

Cullen (2005) outlined new approaches to information literacy instruction for health librarians and other information professionals. Describe the criteria for evaluation of health information sources and applied to four well-known health websites. Infers that all provide valuable and reliable consumer health information, though that none meets all the criteria advocated. Raban, Dandona and Dandona (2009) reviewed the basic health information accessible easily in the public domain on the Internet for India. Highlights the significant gaps related to non-communicable diseases and injuries, private health sector and district level information must be addressed to develop an effective health information system in India. Yoon and Kim (2014) explored international graduate
students’ Internet use in the context of seeking health information. Despite an increasing number of international students in the USA, there was a dearth of study on the health information seeking behavior of international students. Zhang, Sun and Xie (2015) carried a systematic review of indicators, criteria, tools, and to obtain an understanding of how the quality of online health information for consumers on the web. Suggests for further research to examine the quality of user-generated content and to examine possibilities offered by emerging new media that can promote the consumer evaluation of health information.

3.4.6 USE OF INSTITUTIONS:

Sharma & Sundar (2002) examined patterns of morbidity and health care utilization among urban poor residing in slum versus non-slum dwellers in Delhi and Chennai and studied the health status of these two segments. The findings indicated that people dwelling in resettlement colonies have a normal health situation than the slum dwellers. The incidence of sickness was much lower for the inhabitants in the resettlement colonies of Delhi and Chennai compared with the slum population. Cristancho, Peters and Garces (2014) investigated whether the period of residency and other socio-demographic factors influence how rural Hispanic/Latino immigrants in the United States of America favor getting general health information. Findings imply that rural health organizations and practitioners should implement not only culturally-appropriate but acculturation sensitive approaches to address Hispanic/Latino immigrants’ specific health information needs.
3.4.7 USE OF LIBRARIES:

Librarians as “information gatekeepers” concerned with controlling the flow of health information, in and out of a library’s resources. They could also use their traditional skills (information retrieval, assessment, selection, processing, and storage), to provide for services in the health communication sphere as advisors, consultants, and trainers within organizations, to improve health communication.

The importance of library engagement in the delivery of consumer health information was emphasized based on the user survey at a large medical center library and a municipal public library. Librarians were asked to determine a role for themselves and to struggle hard at knowing the library profession to all others in the delivery of consumer health information stated Eakin, Jackson and Hannigan, (1980).

Dalton and Gartenfeld (1981) reported the proceeding of the meeting of participants of the public libraries under Community Health Information Network (CHIN), a cooperative library network created in 1977 by Mount Auburn Hospital (MAH) in Cambridge. Eight major selection criteria for printed materials accuracy, currency, the point of view, audience, level, the scope of coverage, organization, style, and format were considered.

In this context, the health information provision in the two cooperative library systems, one with a Consumer Health Information Center (CHIC) and another without CHIC, that serve primarily rural populations in New York State was examined by Flaherty (2013). Print sources were provided more often than online resources in both systems and utilization of the Community Health Information Center (CHIC) as a health information resource was inconsistent among libraries.
Brawn (2005) conducted a study based on the experiences at Methodist Hospital of Dallas (MHD) about health information needs of the patrons of the library to know whether information needs of health consumers and the needs that information professionals perceive matched the requirements and needs of the clients. Professionals naturally feel qualified to decide their patrons’ information needs and ways best to meet them.

Gillaspy (2000) in the article outlines a step-by-step guide for planning and implementing consumer health service at public libraries. More people sought information about health topics than ever before. Many of them turn to public libraries and librarians to assist them with their inquiries. Most public librarians do not have a specialization in medical information, so establishing a consumer health service was considered a daunting task.

3.5 USER GROUP STUDIES:

The general public is the lay person including men, women, adolescents, teenagers and seniors. All individuals in the community use health information irrespective of their age. There are studies reported on different user groups such as students, women, and elderly.

Balagopal (2009) examined the morbidity among poor elderly in an urban slum in South India. The low literacy, low participation in paid employment, reduced access to assets, poor nutrition, and ill health converge among elderly women who belong to low-income families and communities, and these render them poorly equipped to deal with a multitude of deprivations. These deprivations were a reflection of different social and economic structures. The onset of chronic illnesses at old age adversely affects the
quality of life of those elderly who enter old age with overlapping and chronic socio-economic deprivations.

Manafo and Wong (2012) explored older adults’ health information-seeking behaviors based on grounded theory. The data was collected using interviews. Members were community-living, older adults in Toronto, Canada, who independently sought nutrition and health information. Interview transcripts were analyzed using a qualitative thematic coding framework. Three themes of older adults’ health information-seeking behaviors emerged. The article focused on one issue - the enabling and disabling action of seeking nutrition and health information to support an perception of successful aging in this population. These findings were explained within the context of promoting older adults’ information-seeking practices to contribute to their health and well-being. It is a relevant issue to public health professionals given the global emphasis on successful aging strategies. Chaudhuri, Le, White, Thompson, & Demiris, (2013) examined the resources older adults utilize for their health information needs. How trustworthy and reliable they found these resources, and the difficulties they faced in obtaining health information.

Prybutok and Ryan (2015) analyzed the health information source choices, motives for seeking health information on the Internet, and message design factors that enhance the perception of site and message credibility of 18 to 30-year-old college students. Chang's (2014) study contributed to a better understanding of young adult’s sexual health information behavior in Singapore. A study of Korean student’s use of the Internet for seeking health information in the USA revealed that Korean resources were preferred because of the language problem, and Internet was the primary source of health information. The findings of the study demonstrated the need for health education
materials and guidelines that introduce reliable health information sources and medical
information for Korean graduate students and their families in the USA (Yoon & Kim,
2014). For college students, the four most trustworthy health information sources were
health center medical staff, health educators, faculty or coursework, and parents (Vader,
Walters, Roudsari, & Nguyen, 2011).

Women use information sources during pregnancy to meet their information needs.
Discussion with midwives was the source of information utilized by the greatest number
of women during pregnancy (Grimes, Forster, & Newton, 2014). They also solicited
maternity information from friends and neighbors and perceived informal sources as
approachable and providing an opportunity for further information (Davies & Bath,
2002). Women also used the Internet for getting information about health and followed
the media to get information about illnesses and treatment (Akbulut, Duman, & Yılmazel,
2013). Further, the Internet was considered as the most traditional media, and TV/radio
was the more reliable media source for women. Yılmazel, Akbulut, and Duman (2013)
emphasized the health promotion and dissemination of health-related information through
television and radio, which have a broad range of audiences (Yılmazel et al., 2013).
Women repeatedly focused on the nature of their association with those to whom they
turn for help, although the actual roles of helpers, whether physicians, friends, librarians,
or staff in health food stores, often appeared to be incidental (R. Harris & Wathen,
2007). Murphy, Murphy, and Kanost (2003) reviewed the literature on women’s
preferred channels, the critical times and barriers for accessing health information. Mass
media and the popular press, especially TV, newspapers, and magazines were the
commonly cited sources of health information for them. They also used the Internet,
which surpassed the other active sources of health information. Besides, newsletter remains suitable for isolated groups, particularly women living in remote and rural areas, and for those with a chronic health condition (Murphy et al., 2003). Nasrabadi, Jaberi, and Bonabi (2015) conducted a qualitative inquiry to understand Iranian women’s motivation for health information seeking. Five motivations for health information seeking are dealing with fear or uncertainty, understanding the nature of the disease and diagnostic/therapeutic procedures, performing parental duties, promoting a healthy lifestyle, and receiving a safer healthcare. Olorunda (2004) study on information needs of women in Africa found that forty-five percent considered the television, radio, and newspapers as useful tools for information. Additionally, they also relied on information passed on by business associates, friends, and relatives; 20% obtained their information from the internet. They rarely sought information from governmental agencies, libraries and information centers.

Elderly people use various sources of health information. They face many issues like barriers to meeting information needs, sources of health information – health professionals, organization providing information and advice, family and friends, television and radio and the internet. For elderly people, discussion with the doctor was the most preferred source of health information supplemented by printed or electronic media (M. Harris, Bayer, & Tadd, 2002). Older people had a proactive approach to obtaining health information and identified the importance of taking responsibility for managing their needs. Despite this, gathering necessary information about community health and social services was a challenging and time-consuming process (Mc Grath, Clancy, & Kenny, 2015).
3.6 CONCLUSION:

Many studies reported on perception, awareness, and knowledge of health. Few researchers have argued the influence of perception on the physical and mental health of individuals. Prominent among them include Jang et al. (2006), Goodwin and Engstrom (2002) and Jarallah and Al-Shammari (1999). Studies reported on awareness of health are diseases specific like glaucoma (Mansouri et al., 2006), Cancer (Schulman et al., 2003; MacKie, 2004), HIV/AIDS (Sudha et al., 2005; Unnikrishnan et al., 2010). Similarly, knowledge related studies are also disease particular Turhal et al. (2010), Kabore et al. (2014) and Anderson et al. (2002). Some of the few studies on health care needs were by Pappa and Niakas (2006) and Khalil (2001). On the use of health information sources, studies are scattered among different mass media like TV and radio. More studies are reported on the utilization of the internet while very few studies are on the use of newspapers, magazines, institutions, libraries and other sources.

From India, few studies are reported on diseases. For example, Malaria (Lwin, Vijaykumar, Leng, Foo, & Lim, 2012); HIV/AIDS (Reddy et al., 2011; Sudha et al., 2005; Unnikrishnan et al., 2010; Yadav, Makwana, Vadera, Dhaduk, & Gandha, 2011) and Maternal health (Sankar & Kathuria, 2004; Vora et al., 2009). There are no in-depth and explicit studies reported from India about perception, awareness, knowledge, information needs, and source use behavior of the general public with a particular reference to health information.
REFERENCES:


Mc Grath, M., Clancy, K., & Kenny, A. (2015). An exploration of strategies used by older people to obtain information about health- and social care services in the community. *Health Expectations, n/a-n/a*. http://doi.org/10.1111/hex.12408


78


