REVIEW OF RELATED LITERATURE:

A Review of past research helps in recognizing the theoretical and practical problems related to the study. This will assist the researcher to collect appropriate data and subject them to sound thinking and meaningful explanation. Emotional intelligence is a fairly new concept. The researcher reviewed the literature in journals, books and on the internet in order to see what researchers have discovered about the concept. While reviewing literature the concentration was on development of emotional intelligence of school students. Keeping in view, the intentions of the study reviews are presented.

1. **Vamadevan S Ajay (2011)** undertook a study of mobile phones in Diabetes Management in developing countries. The research revealed that 60% of the end users use mobile which are smart phones and can be used to monitor day to day basis of patients glucose level with help of an external glucose monitoring tool as well as to Clinical guidelines and advice and alerts for physicians can be easily delivered through cell phones to stay informed about recent developments

2. **Boulos, M.** In his article “How smart phones are changing the face of mobile and participatory healthcare” The adoption of smart phones by older people and people with chronic disease will come with time, but also as the relative cost comes down, as apps become easier to use, as there is a greater awareness of what Smartphone can do, with the establishment of more ‘community knowledge’ to deal with the complexity of the new technology, and perhaps with apps moved to dedicated devices tailored for the specific needs of particular user groups and applications. These changes will almost certainly happen, but probably not as quickly as producers may predict. Producers may need patience and to put more effort into making the technology easier and cheaper to use for all.

3. **Vuda Sreenivasa Rao (2014)** in his Article “A design of Mobile Health for Android Application” has recommended health care support referring to excises on android
Smartphone; it is designed to provide exercise depending on BMI, BMR & Energy used in each activity or sports. Which includes guides for necessary health care application and general food tips based on weight of their BMI, it has also been designed for different kinds of patients and exercise (back pain), and the application is tailored only for android platform.

4. **Teuta Cata (2013)** undertook a study of “usability features of mobile applications and health care mobile application” to find out the usefulness of mobile application by mobile application users and to compare their perception and ranking to what meta-analysis studies are reporting as usability characters. The aim of the study was to find if any differences lies between the mobile application general purposes versus medical related purpose. The primary analysis on the survey and previous research it was found that usability, simplicity and understand ability were three characterise were rated higher than mobile application users.

5. **Geena Mary Scaria (2011)** in her article “health phones- a potential game changer in health information management” has reviewed few project successfully used mobile phone for health information delivery. Mobile technology plays a big role in detecting, mapping and responding to diseases. Methods include data extracted from various resources and studies conducted in different part of the world and with an intention to study the different possibility to use mobile phones in health information management. The significant benefit of mobile phones in health care industry is extending the ability of ministry of health to create national health care networks that reach all community.

6. **Suraj Singh (2014)** in his article “Health care services using Android devices” has mentioned an application iCare which runs on several android base devices with 3G and WIFI capabilities. This application accepts the symptom from the patients, process the data identifies the particular diseases and provides prescription using medical expert system by pattern matching techniques, the patients needs to register on iCare and can access the services from anywhere using different types of network.
using WIFI, GPRS, 3G. More the application is used by patients the better will be the expert system which increases the accuracy of iCare.

7. **Dr.P.Bhaskara Reddy (2014)** in his article “Mobile Health Care Systems” has analysed and discussed about the advantages and disadvantages of Mobiles and others multimedia services in Health Care, we have considered the Smartphone results and the analysis the advantage are Ubiquitous computing, Low power consumption, Very portable, Flexible Applications, data storage, accessories and disadvantages are Limited range. It requires pre-existing software to be installed.

8. **M V Ramana Murthy(2012)** in his article “ Mobile based Primary Health Care System for Rural India,” has discussed about Primary Health Care Services using Mobile Devices to ensures improved access to primary healthcare and its gate-keeping function leads to less hospitalisation, and less chance of patients being subjected to inappropriate health interventions. The research team is aiming to miniaturise the system, through designing sensors and mini-processors that are small enough to be carried by patients, and at the same time procure biomedical data. The network of sensors would be linked through a modem to mobile networks and the Internet, and to a hospital computer. Then, doctors can use this device to remotely monitor patients suffering from chronic diseases, like heart disease and diabetes, which plagues millions across the world

9. **Cipresso, P (2012)** in his article “Is your phone so smart to affect your states? An exploratory study based on psycho physiological measures” has discussed the role of mobile in health system is important for us and to make use of this rapid growing technology in improving the public health of Indian people. A systematic review of related studies and literature of last 10 years published till 31st March 2013 on role of m-Health in public health was done. A wide variety of m-health applications are available in mobile phone market, needing proper regulation from health care authorities and with a hope of better future results. Recommendations: We must use these applications weighing their benefits and utility in public health as well as
capitalizing the better prospect of m-health worldwide in the field of public health. This can give a greater access to larger segments of a rural and underserved population in developing countries like India with a hope of improving the capacity of health system to provide quality healthcare to Indian people.

10. **SANTOSH KUMAR (2013)** in his article has elaborated about the current trends in mobile technology and its potential to reduce the cost of health care and improve health research and outcomes. In this paper mobile technology is defined as wireless devices and sensors that are intended to be worn, carried or accessed by the person during the normal daily activities. MHealth applications are being developed and evaluated in different domains including diabetes, asthma, obesity, and stress management and depression treatment. Several concerns exists about hoe privacy, security and confidentiality in mHealth are handled.

11. **Leon et al. (2012)** in this article has qualitative reviewed the benefits and challenges of mHealth in community-based services in South Africa through interviews, site visits to local projects and document reviews. Using a frame work adopted from three approaches to reviewing sustainable information and communication technology (ICT), the lessons from local experiences etc, formed the basis of a wider consideration of scale up challenges in South Africa. Four key system dimensions were identified: government stewardship and the organisational, technological and financial systems. It was identified integrating the technological issues that need to be addressed; the paper proposed the framework that focused the attention on the broader health dimension system of stewardship, organisational, technological and financial systems.

12. **BONNIE SPRIND et al. (2013)** in his paper “Integrating Technology into Standard Weight Loss Treatment: A Randomized Controlled Trial” has presented a study on A challenge in the delivery of intensive obesity treatment is making care scalable. Little is known about whether the outcome of clinician-directed weight loss treatment can be improved by adding mobile technology. The addition of a PDA and telephone
coaching can enhance short-term weight loss in combination with an existing system of care. Mobile connective technology holds promise as a scalable delivery mechanism to augment the impact of clinician-delivered weight loss treatment. Strengths of this study include the demonstration that a technology-based intervention can be integrated into the VA, a large system of care, suggesting that the treatment approach is scalable.

13. **Yulin Hswen (2014)** in her paper “MOBILE TECHNOLOGIES AND OPPORTUNITIES TO ADDRESS HEALTH DISPARITIES” has explained the mHealth is an affordable technology by has its own drawbacks, Authors aim is not to question the promise of mHealth, but rather to emphasize that just as stated by Steinbuhl and colleagues in their concluding remarks, “much remains to be done”. Just as clearly defined government regulations, internationally recognized research guidelines, and robust clinical trial evidence are critically necessary for advancing this nascent field, consideration of how mHealth technologies can be adapted and strategically delivered to address the needs of the most vulnerable low-income patients is of equal value. The role of mHealth technologies for addressing health disparities has received less attention, though important opportunities exist.

14. **Disha Kumar (2014)** In her article “mHEALTH IS AN INNOVATIVE APPROACH TO ADDRESS HEALTH LITERACY AND IMPROVE PATIENT-PHYSICIAN COMMUNICATION” has explained Low health literacy is a barrier for many patients in the U.S. Patients with low health literacy have poor communication with their physicians, and thus face worse health outcomes. Several government agencies have highlighted strategies for improving and overcoming low health literacy. Mobile phone technology could be leveraged to implement these strategies to improve communication between patients and their physicians. Text messaging, in particular, is a simple and interactive platform that may be ideal for patients with low health literacy.
15. **Deepika Jasti (2015)** in her article “HEALTH CARE APPS- WILL THEY BE a FACELIFT FOR TODAY’S MEDICAL/DENTAL PRACTICE?” Has explained the study to assess the usage of health care apps among Medical and Dental doctors. The usage of medical apps is on rise. Smart phones are powerful devices that combine the conventional functions of a mobile phone with advanced computing capabilities enabling users to access software applications commonly termed as ‘‘apps’’. Health care applications (apps) that are downloadable on to smart phones are increasingly becoming popular among clinicians. There is a high usage rate of health care apps among both medical and dental doctors, with medical doctors using the apps for informational purposes, whereas dental doctors used the apps for patient education.

16. **Ahmad Fayaz-Bakhsh(2014)In His paper “MEDICAL STUDENTS’ PERCEPTIONS REGARDING THE IMPACT OF MOBILE MEDICAL APPLICATIONS ON THEIR CLINICAL PRACTICE” has explained Health professionals are beginning to recognise the positive impact Smartphone apps can have on patient safety, on outcomes, on equity, and on system efficiency. Medical apps have an enormous potential for improving our practice by providing a quick, comprehensive, and up to date overview of current clinical guidelines, which could help clinical decision making and change the way healthcare is delivered in the future. Comparing two studies mentioned several questions arise: How well do intentions predict usage? How well does TAM explain intentions to use a system? Do attitudes mediate the effect of beliefs on intentions? Is there some alternative theoretical formulation that better accounts for observed data? Both studies seem to be complimentary to one another in building confidence in using smart phone technology for medical educational purposes and healthcare. Both studies predict behaviour from behavioural intention (BI). We recognize that any model is an abstraction of reality and is likely to have its own particular strengths and weaknesses. Perhaps bringing together the best of both models, in our pursuit of a theoretical account of user acceptance is the best way to investigate the user behaviour.

17. **Carol E. Smith (2015)** in her Paper “mHEALTH CLINIC APPOINTMENT PC TABLET: IMPLEMENTATION, CHALLENGES AND SOLUTIONS” has
explained the mHealth clinic appointment can simultaneously connect multiple professionals and families on the iPad Mini screen. The data collected from patients’ provided important history and visual information for evaluating HPN patients’ clinical condition. And patients themselves transmitted photographs and videos for timely assessment of symptoms. This facilitated their care without increasing cost to the patient and saved them travel time. In their mHealth clinics technical issues were readily identified and solutions to resolve these were found. MHealth advantages include early detection of infection, accurate assessment of IV insertion sites and/or detection of fluid balance issues through visual and history assessment of patients requiring HPN. The long-term goals of this study are to gain new knowledge about mobile management of complex chronic conditions using PC tablets. Mobile technology gives professionals an important opportunity for assessment of early symptoms and signs of IV infection or bowel illness exacerbations.

18. **Nuananong Seal(2015)**, in his article “PERCEPTIONS OF USING SMARTPHONE TECHNOLOGY FOR DIETARY ASSESSMENT AMONG LOW-INCOME AFRICAN-AMERICAN MOTHERS” has concluded that the mothers in this study have a strong interest in using their Smartphone to assess their children’s diets and download mobile health apps i.e. healthy recipes, and receive nutritional feedback for their children’s diets via SMS. Smartphone technology appears to hold great potential in terms of accurate, efficient, user-friendly, and flexible features in helping these low-income African-American mothers and health care providers to assess children’s dietary intake. Further studies testing the acceptability of mobile-based health apps in low-income African-American mothers and its effects on their children’s healthy body weight and nutritional well-being are warranted.

19. **Sanjiv Kumar Gupta(2015)** In his paper “ANDROID SMARTPHONE AS AN ALTERNATIVE TO OPERATING MICROSCOPE CAMERA FOR RECORDING HIGH DEFINITION SURGICAL VIDEOS: SETUP AND RESULTS” has concluded this arrangement of using Android Smartphone to capture images and high definition video through the assistant scope of the operating microscope is compact, robust with easy storage, preview, sharing arrangements. The ease with which the exposure and
focus control can be adjusted for optimum image and video is additional feature not possible with conventional CCD camera arrangement presently used.

20. **de Jongh T(2012)** in his review of “Mobile phone messaging for facilitating self-management of long-term illnesses” has explained about Mobile phone messaging applications, such as Short Message Service (SMS) and Multimedia Message Service (MMS), may present convenient, cost-effective ways of supporting self-management and improving patients’ self-efficacy skills through, for instance, medication reminders, therapy adjustments or supportive messages.

21. **Tilly A. Gurman(2011)** in his article “Effectiveness of mHealth Behavior Change Communication Interventions in Developing Countries: A Systematic Review of the Literature” has explained mHealth is a promising field of study that may improve the effect of BCC programs, but more studies need to be conducted with a greater emphasis on formative research and long-term evaluation. This review offers 10 main recommendations to incorporate into mHealth interventions in low- and middle-income countries and provides a status update on the areas of success and limitations. As the field continues to develop, mHealth reviews of BCC should further segment studies by income level or topic area, which was not possible in this review due to lack of available information.

22. **Craig Lefebvre(2009)** in his article “Integrating Cell Phones and Mobile Technologies Into Public Health Practice: A Social Marketing Perspective” has explained As public health professionals, we need to adapt and change not only the technologies we use in our programs but our framework for looking at the world and thinking about what we do. In designing interventions that will effectively lead to behavior change, we have to ask ourselves as social marketers and public health professionals (a) do we harness the technology to educate people about issues and problems that are relevant and meaningful to them (not us), (b) is what we do engaging them in positive and meaningful ways with the technologies that they use, (c) is there an entertainment value to our offerings, (d) do people believe and feel
empowered as a result of their experiences with our programs (products and services),
and (e) do we take advantage of every opportunity to let our customers and clients
become our evangelists and leverage these new social and mobile media? If we fail to
do all five, we are failing them

23. ATANU GARAI(2011) in his paper” Role of mHealth in rural health in India and
opportunities for collaboration” studied the key application areas for mobile telephony
in health programs, popularly termed as mHealth, especially in primary healthcare in
rural India. Intervention studies and projects in developing countries have
demonstrated the applications and effectiveness of mHealth in various health areas in
resource-poor settings. Indigenous research and development in key technology areas,
as well as technology transfer from other countries, will help in solving technological
shortcomings. Investments in the form of aid, grant and capital can spur research and
innovation in this area. MHealth in its current form is exploiting the second
generation mobile telephony which will continue to dominate rural health for several
years to come.

24. Michelle Helena van Velthoven(2010)in her paper “New ideas for mHealth data
collection implementation in low–and middle–income countries “has described the
use of mobile devices in healthcare, or mHealth, has the potential to play an important
role in low–and middle–income countries in a wide range of areas. A particular area
with great potential to improve global health is using mHealth for data collection. We
propose three ideas: (i) to validate and conduct household surveys, (ii) to monitor
large–scale programs, and (iii) to measure the global burden of disease.

by Phone Points (RAPP): A Mobile Phone App for Postoperative Recovery
Monitoring and Assessment” has described day surgery is performed in almost 2
million patients per year. Patient satisfaction is closely related to potential adverse
events during the recovery process. A way to empower patients and give them the
opportunity to affect care delivery is to let them evaluate their recovery process. The
most common evaluation method is a follow-up telephone call by a nurse one or two
days after surgery. In recent years, mHealth apps have been used to evaluate the
nurse-patient relationship for self-management in chronic diseases or to evaluate pain
after surgery. To the best of our knowledge, no previous research has explored the
recovery process after day surgery via mobile phone in a Swedish cohort.

26. Willa Doswell (2013) In her article “Technology for nursing practice, education and
research” has described for the field of nursing the potential capabilities of mHealth
are not only for patient care but for delivery of nursing education to our future
practicing nurses, providing a means of communication between healthcare
professionals located close and at greater geographic distances, and provides access to
information and personal monitoring for geographically isolated clients. Although
mHealth capabilities’ value appears significant for training, and practice, there
remains a significant need for research and evaluation of the devices that now
appearing in the health care marketplace. The National Institute of Nursing
Research’s strategic plan includes supporting research to develop and test the flood of
health apps to assist clients in the management of their health. The purposes of this
paper are to: 1) discuss the importance of mHealth in nursing practice, education, and
research, and 2) describe the mHealth initiatives underway at the University Of
Pittsburgh School Of Nursing as exemplars to stimulate mHealth research and
promote nursing role in providing health care to patients in this age of information
technology.

27. Wendy Nilsen (2012) in her paper “Advancing the Science of mHealth” has
explained the science of mobile and wireless health (mHealth) is a nascent and rapidly
growing field. These technologies provide the potential to advance research, prevent
disease, enhance diagnostics, improve treatment, reduce disparities, and increase
access to health services and lower health care costs in ways previously unimaginable.
Real-time, continuous biological, behavioral, and environmental data collected by
wireless and mobile technologies should improve our understanding of the etiology of
health and disease, particularly when integrated with data from areas such as
genomics, biomarkers, and electronic medical records.
28. **Dr Rahul Chakrabarti (2012)** in his paper “Principles of m-Health survey design” has endeavored to cover the principles of designing and implementing a successful survey. There is no ‘gold-standard’ for what items or questions should be included in a survey related to m-Health. This is dependent on the independent objectives of the research. However, further guidance can be obtained from several excellent examples in this field. Readers are encouraged to read ‘Electronic health records in ambulatory care’ by DesRoches et al., ‘New horizons for health through mobile technologies’ a World Health Organization report, and ‘Smartphone App use among medical providers in ACGME training programs’. Hopefully this will stimulate ideas and facilitate high-quality surveys related to mobile technologies in medical practice.

29. **Yulin Hswen MPH (2013)** in his paper “VIRTUAL AVATARS, GAMING, AND SOCIAL MEDIA: DESIGNING A MOBILE HEALTH APP TO HELP CHILDREN CHOOSE HEALTHIER FOOD OPTIONS” has researched In this unconventional approach, evidence-based research was combined with information procured from a qualitative review of popular applications available on the Apple iTunes Store in order to design a potentially relevant and popular mobile health application for use among children.

30. **Chandrashan Perera (2013)** in his paper “THE UTILITY OF MHEALTH IN MEDICAL IMAGING” has researched that Mobile devices are uniquely positioned to make a significant contribution to medical imaging. Portability, computing power, accessibility and built in internet connectivity are well described advantages of mobile devices. There is a growing body of research which supports the use of mHealth technologies for imaging, and a number of novel uses are described in the literature.

31. **Asa Svensson (2015)** in his paper “A Mobile Phone App for Dietary Intake Assessment in Adolescents: An Evaluation Study” has evaluated the mobile phone food record app did not accurately assess EI of adolescents when compared with TEE from the SWA in this evaluation study. Having a weekend day in the record of EI
improved reporting accuracy, and BMI z-score was negatively associated with reporting accuracy. Furthermore, the mobile phone app was able to accurately rank adolescents’ TEE, as well as the physical activity level among boys by using only one question about physical activity at the end of the day. Further development of the mobile phone app method should focus on improved functions to search and record consumed foods, for example, by automatizing these steps as much as possible. Users could, for example, have the option of sending food photographs to the researcher. The app should also be developed for iPhone so that more participants will be able to use their own mobile phones.

32. **Juliana Chen (2015)** In her paper “The Most Popular Smartphone Apps for Weight Loss: A Quality Assessment” has studied the most popular commercial apps for weight management are suboptimal in quality, given the inadequate scientific coverage and accuracy of weight-related information, and the relative absence of BCTs across the apps reviewed. With the limited regulatory oversight around the quality of these types of apps, this evaluation provides clinicians and consumers an informed view of the highest-quality apps in the current popular app pool appropriate for recommendation and uptake. Further research is necessary to assess the effectiveness of apps for weight management.

33. **Adrian Carter (2015)** Mobile Phones in Research and Treatment: Ethical Guidelines and Future Directions has researched that Mobile phones and other remote monitoring devices have the potential to provide researchers with access to unprecedented volumes of clinically relevant data on patients’ quality of life and psychosocial functioning, movement at home, in the community, and social integration. Neurologists and other treating clinicians will get real-time measures of disease progression and the impact of medication over periods not previously possible. The promise of this technology—the ability to collect, analyze, and communicate vast amounts of personal data almost immediately to research and clinical teams—also poses new and unique ethical and technical challenges that need to be managed if we are to realize the promise while minimizing potential risks of harm. While the ethical issues of privacy, consent and equity are not unique to mHealth, specific solutions are
needed that address the particular ethical challenges raised my mobile phone technologies.

34. **Sanne van der Weegen** (2013) in his paper “The Development of a Mobile Monitoring and Feedback Tool to Stimulate Physical Activity of People With a Chronic Disease in Primary Care: A User-Centred Design” has study that demonstrates that a user-centred approach brings in valuable details (such as the requirements for feedback in activity minutes per day) to improve the fit between the user, technology, and the organization of care, which is important for the usability and acceptability of the tool. The tool embedded in primary care will be evaluated in a randomized controlled trial.

35. **Aino Ahtinen** (2013) in his paper “Mobile Mental Wellness Training for Stress Management: Feasibility and Design Implications Based on a One-Month Field Study” has a feasibility study of Oiva mobile mental wellness training app showed good acceptability, usefulness, and engagement among the working-age participants, and provided increased understanding on the essential features of mobile apps for stress management. Five design implications were derived based on the qualitative findings: (1) provide exercises for everyday life, (2) find proper place and time for challenging content, (3) focus on self-improvement and learning instead of external rewards, (4) guide gently but do not restrict choice, and (5) provide an easy and flexible tool for self-reflection.