



**IMPACT OF SOCIAL MEDIA ON ADOLESCENTS
IN KARNATAKA STATE : AN EMPIRICAL STUDY**
(2174-MRP/15-16/KAMY008/UGC-SWRO Dated: 25-04-2016)

**A Minor Research Project Report submitted
To
University Grants Commission,
South Western Regional Office,
PK Block, Palace Road, Gandhinagar,
Bangalore-560009**

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CERTIFICATE

This is to certify that the minor research project entitled “IMPACT OF SOCIAL MEDIA ON ADOLESCENTS IN KARNATAKA STATE : AN EMPIRICAL STUDY (2174-MRP/15-16/KAMY008/UGC-SWRO Dated: 25-04-2016) submitted by Dr. Bhargavi D. Hemmige, Assistant Professor, Department of Journalism & Mass Communication, SBRR Mahajana First Grade College, Mysore – 12 to University Grants Commission, South Western Regional Office, PK Block, Palace Road, Gandhinagar, Bangalore-560009, during 2016-2018.

I further certify that the present embodied work here presented is original and carried out according to the plan in the proposal and guidelines of the University Grants Commission.

Dr. S. Venkataramu

DECLARATION

I, **Dr. Bhargavi D. Hemmige**, Assistant Professor, Department of Journalism & Mass Communication, SBRR Mahajana First Grade College, Mysore – 12 hereby declare that the Minor Research Project Report entitled “IMPACT OF SOCIAL MEDIA ON ADOLESCENTS IN KARNATAKA STATE : AN EMPIRICAL STUDY (2174-MRP/15-16/KAMY008/UGC-SWRO Dated: 25-04-2016) submitted by me to University Grants Commission, South Western Regional Office, PK Block, Palace Road, Gandhinagar, Bangalore-560009, during 2016-2018 is the result of the bonafied research work.

I further declare that the results here presented are original and carried out according to the plan in the proposal and guidelines of the University Grants Commission.

(Dr. Bhargavi D. Hemmige)

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EXECUTIVE SUMMARY

Adolescence is a period of human life between childhood and adulthood which is characterized by rapid growth and development at psychological, physiological and social levels. The formal and informal centers of education play an important role in molding the personality of the adolescents especially at this crucial stage of human development. Adolescents constitute about 25% of the national population in India and other countries. The social media have the capacity to overcome many of the obstacles to participatory communication and development in modern times. The social media can enhance the knowledge of adolescents and change their attitude. The social media have proved resilient in view of their strengths and opportunities from human development and social development points of view. The present investigation is carried out in Karnataka state to assess the impact of social media on the academic and social development of adolescents.

The Social media of various kind and nature are an emerging and powerful medium of communication. The Social media has created the fourth wave of communication after print, radio, television and Theatre art It brought ripples among the people's lifestyles world over. —To reach an audience of 50 million homes; it took the radio 38 years, it took the television 13 years, it took cable 10 years but the Social/digital media did it in 4 years (Madhusudhan, 1999.176a). The emerging social media have brought about the death of distance due to its distinctive technology of surpassing time and geographical boundaries but at the same time various phenomenal changes among the social behaviours of the users especially of the age group 13-19 years. The convergence of technology with the connection of Internet has altered the one to many model of traditional mass communication with the prospect of many to many Communication networks both the means and purpose of using internet communication. The emerging dimensions of the internet industry are altering the cultural landscape all over the globe. This further has a bearing on socioeconomic behavioral dimensions of the younger generations. A host of neo-cultural elements are influencing the daily lives of the people globally such as food habits, mind-set, fashion and life styles, thought patterns, means of social and psychological associations.etc. Computer and smart phones are inevitable gadgets amidst urban and rural Environment. The digital connectivity may lead in reducing the digital divide and means of communication among the rural and urban adolescent users of social media.

Features of Adolescence

Adolescence itself is derived from the Latin verb *adolescere* meaning 'to grow into maturity'. This denotation suggests a stage of human growth instead of a definite time period indicating its transitional nature between childhood and adulthood. As a stage in the life span, adolescence refers to the period from puberty until maturity and includes all the psychological, physical and social trait characteristics of persons during this time. Adolescence is commonly defined as the transition period from childhood to adulthood, a period that brings sometimes tumultuous physical, social, and emotional changes. Adolescence begins with the onset of puberty and extends to adulthood, usually spanning the years between 12 and 20.

According to WORLD HEALTH ORGANISATION the Key points in adolescence development are as under;

- Adolescence is one of the most rapid phases of human development.
- Biological maturity precedes psychosocial maturity. This has implications for policy and programme responses to the exploration and experimentation that takes place during adolescence.
- The characteristics of both the individual and the environment influence the changes taking place during adolescence.
- Younger adolescents may be particularly vulnerable when their capacities are still developing and they are beginning to move outside the confines of their families.
- The changes in adolescence have health consequence not only in adolescence but also over the life-course.
- The unique nature and importance of adolescence mandates explicit and specific attention in health policy and programmes.

According to Cole (1965), "Adolescence ends when an individual attains emotional and social maturity, and has acquired the requisite experience, ability and willingness to play consistently the role of an adult". Adolescence normally ends in the twenties for

most people. It may be broadly defined as a period spanning the second decade and part of the third decade of human life.

Arnett (2001) observes: “Adolescents – influential, frustrated, confused, ever changing and paradoxical demand new attention and understanding. These transitional beings are the shapers of the future who are molded and varying belittled or praised by adults and who in turn both defend and downgraded themselves”.

Significance of the Study

The subject of adolescent development is widely discussed and debated by the scholars and researchers. The community of behavioral scientists is constantly engaged in the development of suitable media and methods for the development of mankind. Adolescent development is not uni-dimensional approach but it demands integrated approaches in the present times. The review of literature clearly indicates that adequate scientific investigations are not carried out in Karnataka state on the role of social media in the lives of adolescents. Hence, the study assumes profound academic and social significance.

Objectives of the Study

1. To understand the primary sources and attractions of Social media among the Adolescents
2. To assess the access to social media among the adolescents in Karnataka state.
3. To analyze the social media use patterns among the adolescents in Karnataka state.
4. To examine the uses and gratifications of social media among the adolescents in Karnataka state.
5. To evaluate the impact of social media on adolescents of Karnataka state.

Hypotheses of the Study

The investigation is carried out on the basis of the following set of null hypotheses.

H1: The adolescents of Karnataka state have not gained adequate social media exposure.

- H2: The social media access and use patterns are not common across Karnataka state among the adolescents.
- H3: The social media are not useful for the development of adolescents of Karnataka state.
- H4: The social media services have not satisfied the needs of adolescents of Karnataka state.
- H5: The social media have not impacted the lives of adolescents of Karnataka state.

Research Design

The investigation was carried out in Karnataka state on the basis of systematic survey research methodology. Interview schedule and non-participant observation methods were used for primary data collection from about 300 respondents. Appropriate statistical tests were carried out to understand the significance between the independent and dependent variables. Inferences were drawn on the basis of scientific data analysis techniques

METHODOLOGY OF THE STUDY:

Research Design: Descriptive and Explorative research methods are used to design the methodology of the research. Data is collected among the adolescents of the state, divided into six zones. The systematic sample method is used to select 300 adolescents of 50 each from the zones. i.e. Mangalore, Mysore, Bangalore, Hubli, Davanagere and Tumkur respectively. Convenient sampling technique is administered to collect the required sample of 300 adolescents. The study was during the period of September 2017-December 2017. To analyze the data collected various statistical tools like Descriptive Statistics-Mean, SD, T test, one way Anova and Chi square techniques are used.

Findings and conclusion

The primary data for the study of Impact of Social Media on Adolescents in Karnataka State was collected from a sample of 300 adolescents across the six major cities of karnataka state that includes Mangalore, Mysore, Bangalore, Hubli, Davanagere and Tumkur respectively. The data was collected with the help of a structured questionnaire that was administered to the adolescents at their school/ college premises as well as nearby places with the density of private coaching centres.

The summary of the findings is presented in this chapter based on the objectives set for the study.

- The respondents of the study consist of 65% of male and 35% of female adolescents.
- The respondents of the study consist of 71.3 % of the adolescents of the age group 15-19 years.
- The respondents of the study consist of 80.6 % of the adolescents whose parent's income lies in the range of 3 lacs to 5 lacs.

Findings with respect to the objective to understand the relationship between the social media and adolescent development in Karnataka state.

- From the study it is found that the usage of Smart phone among the adolescents is a regular and routine phenomenon.
- From the study it is found that 62.3% of the adolescents are attracted towards social media through the means of Cell/Smart Phone. The phenomenon is largely prevalent among the respondents of female adolescents (63.8%), than the male (61.5%) adolescent students. At the microscopic perspective the male (43%) and the female respondents of the age group 13-17 (45.8%)
- From the study it is found that 40.7 % of the adolescents are attracted towards social media through the means of iPod or Tablet. The phenomenon is largely prevalent among the respondents of female adolescents (47.6%), than the male (36.9%) adolescent students. At the microscopic perspective the female (34.2%) and the male (25.7%) respondents of the age group 13-17 years accepts that the adolescents are more prone to wards iPod or Tablet as a means of primary source of accessing Social media.
- The phenomenon of attraction towards the social media is largely prevalent among the respondents of male adolescents (40.5 %), than the female (35.2%) adolescent students. At the microscopic perspective the male (29.7%) and the female (25.7%) respondents of the age group 13-17 years accepts that the adolescents are more prone to wards Library or public computer as a means of primary source of accessing Social media.
- From the study it is found that 92.7 % of the adolescents are attracted towards social media because of games. The phenomenon is largely prevalent among the

respondents of male adolescents (95.4 %), than the female (87.6%) adolescent students. At the microscopic perspective the male (62%) and the female (72.4 %) respondents of the age group 13-17 years accepts that the adolescents are more prone to wards social media because of Games.

- From the study it is found that 72.3 % of the adolescents are attracted towards social media because of Pictures. The phenomenon is largely prevalent among the respondents of male adolescents (69.2 %), than the female (78.1%) adolescent students. At the microscopic perspective the male (46.7%) and the female (54.3 %) respondents of the age group 13-17 years accepts that the adolescents are more prone to wards social media because of Pictures.
- From the table it is found that 74.3% of the adolescents are attracted towards social media because of Instant access to information. The phenomenon is largely prevalent among the respondents of male adolescents (74.9 %), than the female (73.3%) adolescent students. At the microscopic perspective the male (46.1 %) and the female (45.7 %) respondents of the age group 13-17 years accepts that the adolescents are more prone to wards social media because of Instant access to information.
- From the table it is found that 85.3% of the adolescents are attracted towards social media because of Videos. The phenomenon is largely prevalent among the respondents of male adolescents (90.3 %), than the female (76.2%) adolescent students. At the microscopic perspective the male (56.9 %) and the female (60.9 %) respondents of the age group 13-17 years are attracted by social media because of videos.
- The phenomenon of viewing others status is largely prevalent among the respondents of male adolescents (70.8 %), than the female (78.1%) adolescent students. At the microscopic perspective the male (39.5 %) and the female (60.2 %) respondents of the age group 13-17 years accepts that the adolescents are more prone to wards social media with the intentions of viewing others' status.
- From the study it is found that the male (50.8 %) and the female (63.8 %) respondents of the age group 13-17 years accepts that the adolescents are more prone to wards social media because of Sharing/Posting links.

Findings with respect to the objective to assess the access to social media among the adolescents in Karnataka state

- From the study it is found that the Facebook (Mean>4.00) is largely accessed by using cell phones, iPad or Tablet and Personal Computer (Laptop, Desktop) among the adolescents followed by twitter, you tube, Google+ and Instagrams and Whatsapp.
- From the study it is found that the Whatsapp (Mean-5.00) is largely accessed by using Library/Public Computer among the adolescents followed by Face book, You tube, Facebook, Instagrams and Google +

Findings with respect to the objective to analyze the social media use patterns among the adolescents in Karnataka state.

The study it is found that General opinions on using of Social Media among the adolescents of the age group 13-19 years the major general opinions of favorable reflections are

- Love watching videos whenever I am connected to the internet
- Download music videos and movies from the internet a lot.
- enjoy browsing/surfing the internet
- With regard to the age group 15-17 years of adolescents
- Download music videos and movies from the internet a lot
- Online games are addictive and I play them whenever I have an opportunity
- Love watching videos whenever I am connected to the internet
- Always looped to get to know almost everything that happens and almost instantly, thanks to technology.
- With regard to the age group 17-19 years of adolescents
- feel am always looped because I get to know almost everything that happens and almost instantly, thanks to technology
- Social networks enable me to remain connected with my family and friends
- Online games are addictive and I play them whenever I have an opportunity

Findings with respect to the objective to examine the uses and gratifications of social media among the adolescents in Karnataka state.

From the study it is found that with respect to the Awareness of Risks of Using Social Media of favorable reflections are identified and reported as,

- Social media has brought high levels of insecurity as it makes it easier for terrorist to communicate through social media.
- Social media have increased cyber bullying.
- Takes a lot of money buying data bundles and better phones that can browse faster and that have wider screens
- Leads to break ups in relationships and marriages

With regard to the age group of 15-17 years

- Many young people end up wasting a lot of their time on games and chatting on social networks
- Leads to diseases such as Tennis elbow Social media have increased cyber bullying

From the table it is found that among the adolescents of the age group 13-19 years the major gratifications observed are identified as,

- In social media a reply is received almost immediately as opposed to old traditional methods.
- Prefer social media because the message is received in real time.
- Sending an e-mail is a lot faster than writing a letter.
- Social media are less expensive as opposed to old traditional methods
- Social media are convenient since individuals are always connected thanks to mobile phones.
- Internet has made things easier because school assignments after completing them can be shared via e-mail.
- Prefer social media because my message is received in real time.
- Sending an e-mail is a lot faster than writing a letter.
- In social media a reply is received almost immediately as opposed to old traditional methods.

- Social media enables individuals to know if their messages have reached their recipient or not.
- Social media are convenient since individuals are always connected thanks to mobile phones.
- Social media are less expensive as opposed to old traditional methods.
- Social media are insecure as compared to old traditional methods.
- With social media I feel independent as in I don't need an adult to supervise me when am using for instance my mobile phone.
- Social media elevates my social status and earns me respect among my peers, since I have many followers both in Face book and Twitter.
- Social media helps to relieve stress
- Social networks help to maintain contacts with old friends and create new friends

Findings with respect to the objective to evaluate the impact of social media on adolescents of Karnataka state.

The impact is studied with regard to the perspectives to wards

- Compulsive behaviour
- Functional Impairment
- With drawl Behaviour
- Tolerance thresh hold Behavior

From the study it is found that, With regard to the compulsive behaviour it is found that the adolescents of the age group 17-19 years recreational activities of the adolescents of the age group 17-19 are reduced due to the usage of Smartphone and feel very vigorous upon Smartphone use regardless of the fatigues experienced, followed by using Smartphone has brought negative effects on interpersonal relationships and the amount of time spent on Internet remains unreduced (13-15 years), felt distressed or down once the adolescents cease using Smartphone for a certain period of time.

With regard to the Functional Impairment the adolescents of the age group 17-19 years make it a habit to use Smartphone and the sleep quality and total sleep time decreased, followed by the interaction with family members is decreased on account of usage of Smartphones.

With reference to the withdrawal Behaviour among the adolescents of the age group 17-19 years' opinions that they cannot have meal without Smartphone use, feel

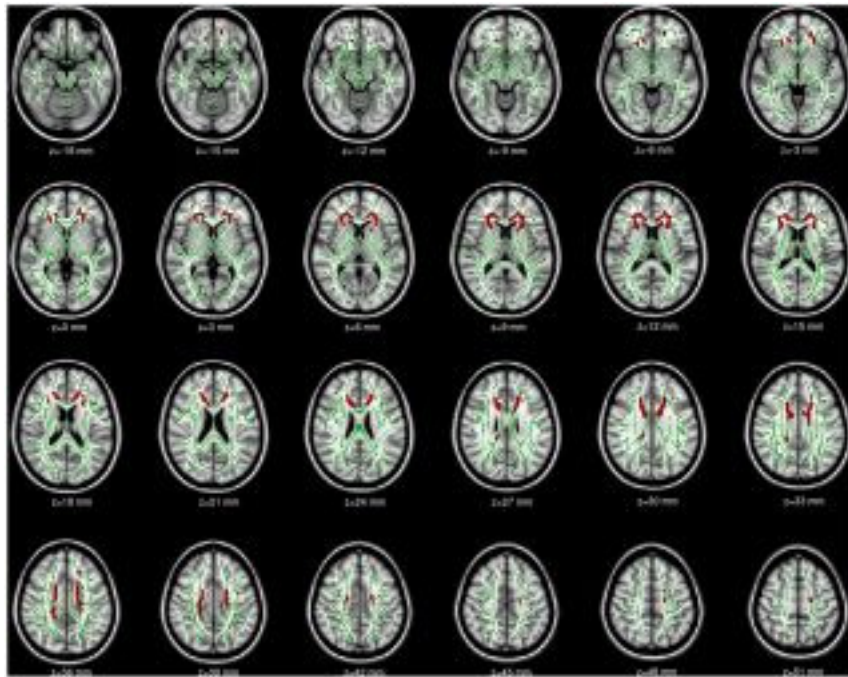
uneasy once they stop Smartphone for a certain period. Among the adolescents of the age group 13-17 years the withdrawal behaviour is witnessed in the form of uneasy feeling.

From the study it is found that the tolerance threshold behaviour the adolescents of the age group 17-19 years accept the fact that they have increased substantial amount of time using Smartphone per week.

Conclusion

We are all aware about Apple founder Steve Jobs who never allowed access to any electronic gadgets to his children. I am sure this explains the negative impact. The Social media in the aggregate sense are found to be having a profound impact on the social and psychological well-being of the adolescents. The current findings of the research may help fill the knowledge gap amongst the educationists, policy makers, psychologists, communication researchers and others associated with the social media studies to spread the awareness of the ill effects of being addicted to social media and internet usage in the long-term. The findings further pose a serious threat for the future decades of population as the current adolescents are being stressed both socially and psychologically. The Social media has given a new understanding to friendship, the respondents seem to like online friends to the real ones. Many newspapers have reported about the serious consequences of online games like “Pokémon” and “Blue whale”, many kids even ended their lives. Some global solution to this epidemic is Media Literacy, media literacy has been introduced in schools in the USA, Canada and Australia and some countries in Europe, the idea here is critical thinking skills is required before engaging with media and through digital and media literacy intervention programmes the students may be made aware of the consequences.

As stated by Tennyson in the last line of his poem *Ulysses*, media educators should lead their students with the mission, “to strive, to seek, to find, and not to yield”.



Source: Lin, Zhou, L ei, et al.

Red areas designate abnormal white matter in internet addicted kids.

In a welcome move, it is reported that several private schools in Bengaluru have started issuing advisories to parents asking them to restrict the time their children spend on mobile phones and electronic gadgets. It is the start of the academic year and schools are making early efforts to stop children from getting addicted. Many schools have instructed parents to set time limits on their wards' phone usage. This is after the classification of “gaming addiction” as a mental disorder by World Health Organisation (WHO). The WHO gave a public declaration that “a pattern of persistent or recurrent gaming behaviour” that becomes so extensive that it “takes precedence over other life interests”. Gaming disorder is defined in the WHO draft’s 11th Revision of the International Classification of Diseases (ICD-11) as a pattern of gaming behavior (“digital-gaming” or “video-gaming”) characterized by impaired control over gaming, increasing priority given to gaming over other activities to the extent that gaming takes precedence over other interests and daily activities, and the continuation or escalation of gaming despite the occurrence of negative consequences.

It further states that this gaming disorder results in significant impairment in personal, family, social, educational, occupational or other important areas of functioning. This declaration by WHO is in line with the research findings which is finding a definite

relation to online activity and adolescent mental health. However, The Society for Media Psychology and Technology, a division of the Association American Psychiatric Association stuck to its previous stand explaining lack of research evidence to categorize gaming addiction as a "unique mental disorder." Major research in this area, cut across different geography should be encouraged which in turn could possibly reveal significant evidence for all these agencies to come to a consensus. As such disagreement only creates confusion over how to approach many innocent deaths over the last decade. As Gianfranco Polizzi, PhD Researcher in the Department of Media at Communications at London School of Economics says, "Parents have a responsibility to find a balance between protecting their children from online risks and allowing them to pursue online opportunities. They also need critical digital literacy themselves to benefit from engaging reflectively with digital media and to be better educators at home".

Hence, there is a need of collaborative approach from teachers, parents and policy makers to tackle this challenge. Hence it is concluded that the stakeholders need to understand first the nature scope and impact of the social media in order to design effective ways and means to address the complex problems and threats generated through the use and abuse of new media. Accurate understandings of the impact help practitioners such as Parents, Policymakers, Psychiatrists, Doctors and Counselors to reform the behavioral problems of the adolescents so that the wellness of the society is protected from the ill effects and impact of social media on the young population of the country.

CHAPTER 1

Introduction

Chapter - 1

Introduction:

Adolescence is a period of human life between childhood and adulthood which is characterized by rapid growth and development at psychological, physiological and social levels. The formal and informal centers of education play an important role in molding the personality of the adolescents especially at this crucial stage of human development. Adolescents constitute about 25% of the national population in India and other countries. The social media have the capacity to overcome many of the obstacles to participatory communication and development in modern times. The social media can enhance the knowledge of adolescents and change their attitude. The social media have proved resilient in view of their strengths and opportunities from human development and social development points of view. The present investigation is carried out in Karnataka state to assess the impact of social media on the academic and social development of adolescents.

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rural Environment. The digital connectivity may lead in reducing the digital divide and means of communication among the rural and urban adolescent users of social media.

Features of Adolescence

Adolescence itself is derived from the Latin verb *adolescere* meaning 'to grow into maturity'. This denotation suggests a stage of human growth instead of a definite time period indicating its transitional nature between childhood and adulthood. As a stage in the life span, adolescence refers to the period from puberty until maturity and includes all the psychological, physical and social trait characteristics of persons during this time. Adolescence is commonly defined as the transition period from childhood to adulthood, a period that brings sometimes tumultuous physical, social, and emotional changes. Adolescence begins with the onset of puberty and extends to adulthood, usually spanning the years between 12 and 20.

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Significance of the Study

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Hypotheses of the Study

The investigation is carried out on the basis of the following set of null hypotheses.

- H1: The adolescents of Karnataka state have not gained adequate social media exposure.
- H2: The social media access and use patterns are not common across Karnataka state among the adolescents.
- H3: The social media are not useful for the development of adolescents of Karnataka state.
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Research Design

The investigation was carried out in Karnataka state on the basis of systematic survey research methodology. Interview schedule and non-participant observation methods were used for primary data collection from about 300 respondents. Appropriate statistical tests were carried out to understand the significance between the independent and dependent variables. Inferences were drawn on the basis of scientific data analysis techniques

METHODOLOGY OF THE STUDY:

Research Design: Descriptive and Explorative research methods are used to design the methodology of the research. Data is collected among the adolescents of the state, divided into six zones. The systematic sample method is used to select 300 adolescents of 50 each from the zones. i.e. Mangalore, Mysore, Bangalore, Hubli, Davanagere and Tumkur respectively. Convenient sampling technique is administered to collect the required sample of 300 adolescents. The study was during the period of September 2017- December 2017. To analyze the data collected various statistical tools like Descriptive Statistics-Mean, SD, T test, one way Anova and Chi square techniques are used.

Chapter 2

Literature Review

Chapter - 2

Literature Review

For the purpose of analyzing the concept of Impact of Social media on adolescents the relevant literature reviewed has been presented in this chapter under different headings.

Salient Features of Social Media

The mainstream social networking sites place the individual user at the centre of his/her own universe. These 'horizontal' networks enable individuals to maintain and to develop connections with friends and colleagues. With their large subscriber bases, mainstream social networking sites such as Facebook, Orkut and LinkedIn invariably attract some members with sustainable development interests. By linking together individual members, groups, events and pages, SNSs enable individuals to learn about new ideas and social movements as their friends and colleagues become involved in them. SNSs empower viral marketing of ideas, events and organizations by enabling the rapid sharing of information received from one contact to all others.

The online Social Networking enables people to maintain and to extend their personal and professional networks, as well as to facilitate the flow of information through these networks. The mobile communications and social media have gained a great deal of attention and research for their ability to raise awareness of issues, improve monitoring of environmental and social realities, and as social networking for better and governance and development. The role of social media in the process of development has become a prominent subject of research over a period of time. The blogs play a crucial role in attracting people to marches and sharing information. The social networks have gained the power to sensitize the various stakeholders of development.

Nielsen (2011) highlights the utility of weblogs thus: "Weblogs, often simply called blogs, allow individuals or small organizations to easily create their web pages to publish opinions, disseminate updated information, or post materials. Blog users are often provided with user-friendly templates so that they can upload their contents without special technical expertise".

Guardian (2011) reports the advantage of Facebook thus: “Facebook has many features, including post messages, disseminate personal information, upload and share photos, chat, as well as invite friends to an event. Facebook users to take advantage of smart phone-like applications on simpler phones”.

Telegraph (2011) reveals that twitter is sometimes regarded as social news, among social media categories. Site visitors can quickly obtain other or updated information in a specific topic, using hash tags. Hash tags can be embedded in any Tweets. Twitter is sometimes regarded as social news, among social media categories. Site visitors can quickly obtain other or updated information in a specific topic, using hash tags.

YouTube (2011) identifies that one of the best examples of social sharing is arguably YouTube. YouTube is a video-sharing site where people can discover, watch, and share originally-created videos. Although YouTube is relatively a new web service, founded in February 2005, it already became a hugely popular website. YouTube reached over 700 billion playbacks in 2010. More than 13 million hours of video were uploaded during 2010 and 48 hours of video are uploaded every minute (YouTube, 2011). YouTube has been committed to the localization of the service.

Scientific Study of Adolescence

Adolescence is also a stage when young people extend relationships beyond their parents and family. It is a time of intense influence of peers, and the outside world in the society. A desire to experiment and explore can manifest in a range of behaviors-exploring sexual relationships, alcohol, tobacco and other substances abuse. The anxiety and stress associated with achievement failure, lack of confidence etc are likely to lead to depression, anger, violence and other mental health problems. Adolescents as they mature cognitively, the mental functioning process becomes analytic, capable of abstract thinking leading to articulation and independent ideology. These are truly the years of creativity, empathy, idealism and with bountiful spirit of adventure. Thus, if nurtured properly youth can be mobilized to contribute significantly to national development.

Brown and Witherspoon (2002) provided an overview of the history of the research on adolescence. In reality, the history of the scientific study of adolescence

had two overlapping phases and is now on the cusp of a third phase. The first phase began early in the 20th Century and lasted for about 70 years. G. Stanley Hall began an innings of scientific study of adolescent's in 1904 by publishing two volumes on Adolescence. He provided a nativist view of development of adolescents. He sought to translate the ideas of Earnest Haeckel, an early contributor to embryology into a theory of life-span human development. Haeckel advanced the idea of recapitulation – that the adult stages of the ancestors comprising a species' evolutionary histories were repeated in compressed form of as the embryonic stages of organism's ontogeny.

Hall and Lindzey (1970) found that adolescence was a period of storms and stresses. They have propounded a developmental theory of cognition which involved a more integrative view of nature and stimulated considerable amount of empirical research on adolescence. Basic theoretical and empirical advances in several areas have facilitated the advance of research on adolescence all over the world. The second phase of the scientific study of adolescence began in the mid 1970s. A new generation of developmental scientists began the second innings of the scientific study in order to make use of empirical evidence on adolescents in elucidating developmental issues of interest across the entire life span of the people all over the world. The second phase of the study of adolescents is characterized by an interest in developmental plasticity in general and application of scientific solutions to real-life problems. This phase of research has also facilitated the use of more nuanced and powerful developmental research methods.

The decade of 1990s witnessed the flood of interest in adolescence. Numerous professional journals also came into existence and devoted considerable space for the publication of theoretical and empirical writings on the problems and prospects of adolescents. A new discipline called Developmental Psychology also came into existence. The Society for Research on Adolescence was established as a prominent international forum of social and behavioral scientists interested in the development of adolescence. Plenty of empirical studies were encouraged by this forum and that many publications were brought out on various aspects of the development of the adolescents all over the world.

A remarkable rise of interest was witnessed in the 1990s especially in the field of developmental psychology in general and scientific study of adolescence in particular. Prominent champions of research on adolescence include- Ellen Thornburg, John P Hill, Anne C Peterson, E Mavis Hetherington, Sanford M Dombusch, Jeanne Brooks-Gunn, Stuart T Hauser, Laurence Steinberg, W Andrew Collins, Jacquelynne Eccles, Elizabeth Susman and others. These scholars heralded a new era of scientific study on adolescence on a sound footing of theory and practice in developmental psychology.

Cole observes (1965): “One scientific concern that arguably was most significant in transforming the field of adolescent development beyond a focus on this single developmental period into an exemplar for understanding the breath of the human life span was the emerging focus with in developmental science on the ecology of human development.”

The dawn of 21st century witnessed the emergence of a third phase in the history of the scientific study of adolescence. Behavioral scientists have stated that this phase involved the emergence of the field of adolescence development as an exemplar of the sort of developmental sciences which has benefited the policy makers, bureaucrats, practitioners and others interested in the advancement of civil society. The field of adolescence has entered a crucial phase of its development in the present times wherein scientist-policy maker-practitioner-activist collaboration has become the order of the day. Today, advanced scientific studies are carried out all over the world on adolescence ranging from historical to human development aspects of adolescence. Professional organizations are also established to facilitate debates, discussions, seminars, conferences, longitudinal studies, publications and allied activities associated with the integrated and sustainable development of adolescents

Bell (1956) analyzed the processes involved in the identity style, human values, cross-lagged relations and intrinsic vs. extrinsic and openness to change vs. conservation in a 3-wave adolescent sample. The study revealed that the informational and diffuse-avoidant style predicted decreases in conservation goals, and the normative style predicted increases in conservation and extrinsic goals. As for content effects, conservation goals increased the normative style, and extrinsic goals

decreased the informational and increased the diffuse avoidant style, according to the study.

Verma (1980) carried out a study on the relationship between the socioeconomic

status and development of aggression in children and reported that adolescents who represented well to do sections of society were highly aggressive when compared to the adolescents of poor sections of society. The scholar also stated that the findings of research on aggressive behavior in children will contribute to the development of a serious commitment to the implementation and refinement of programs that address the issues identified in the study.

Siegel (1982) define: “Adolescence is a phase with the life span when most of a person’ biological, cognitive, psychological and social characteristics are changing from what is typically considered childlike to what is considered adult like”. The adults also face a number of crises and challenges on account of these changes and characteristics.

Leelavathi (1987) assessed the factors influencing the self-perceived adjustment pattern of adolescent students of Karnataka and observed that for both boys and girls, changes in perceptions of teachers ‘support reliably predicted changes in both self-esteem and depression and mal adoptive behaviours among the teenagers. The study revealed certain gender differences for the initial levels of both perceptions of teacher support and general self-esteem.

Kubey and Larson (1990) conducted a study on the use and experience of the new video among children and young adolescents and delineated that the audiences were greatly influenced by the videography. The researchers also noted that videography attracted the young minds on account of creative and colorful contents which were perceived as practically more gratifying by the audiences. There searchers also investigated certain related variables which facilitated the identification of gratification typologies.

Patil (1993) examined the problems of female adolescent students from rural and urban areas and pointed out that the normal age for beginning puberty had decreased, which has important clinical, educational and social implications. The scholar suggested that the health care provider should be aware of the broad range of potential sexual behaviors involving adolescents, as well as the teen's acceptance of such behaviors, often dictated by age, gender, culture, education and the factors of the social approval of the society.

Dunn et.al (1994) explored the state of childhood and adolescence and stated that the behavior of the other sibling in the preschool period related to both older and younger siblings' behavior at the last time point. The study revealed that 32 life events were associated with increased warmth between the children. The scholars suggested that better social and economic status of adolescents would enhance their capacity for adjustment and development.

Field et.al (1995) studied the adolescents' intimacy with parents and friends and amplified that demographic features had a bearing on parent-adolescent Relationship. The study revealed that students with same-sex friends and greater interest in school reported greater intimacy with their mothers. The scholars also noted that students with higher self-esteem, lower depression, and lower risk-taking scores reported greater intimacy with their mothers and fathers.

Razick and Zakariah (1995) carried out a study on the interests of adolescents with reference to demographic features and enumerated that sex related problems had contributed greatly to the creation of gender crisis by providing unequal opportunities for males and females. The scholars suggested that better civic amenities, infrastructural facilities and economic opportunities would improve the status of adolescents.

Arnett, Larson and Offer (1995) studied the relationship between the adolescents and media services and amplified that adolescents were active media users in modern society. The researchers made systematic efforts to explain (i) the psychological needs that help shape (ii) why people use the media and what motivates people to (iii) engage in media use behaviors to (iv) derive gratification to (v) fulfill those intrinsic needs, within the confines of a particular socio cultural environment.

The study revealed that the audience who were exposed to the media contents responded to them differently based on the socio-demographic and psychological attributes.

Pramnick (1996) assessed the socio-economic status and personality of Adolescents and observed that socio-economic status defined the personality of Adolescents and other people. The study revealed that throughout history philosophers, politicians, physicians, jurists, and psychologists have developed theories to explain how and why the differences among people occur. The scholar suggested that assessment of personality is essential to understanding the individual and the ability to make generalizations about adolescents and other people.

Gibson (1996) explored the access to Internet among the young generation of users and stated that users enjoyed the benefit of access to Internet in order to strategically satisfy their motivations and to gain the desired gratification. The study revealed that college students continued to be the early adopters and heavy users of the Internet in order to seek various gratifications.

Norberg (1996) assessed the Internet affinity among the users and observed that extensive use of Internet led to reduced communication in the household, smaller social circles and increased a sense of depression and loneliness. The study revealed that high exposure to Internet resulted in decline in interaction with family members and a reduction in their circle of friends that corresponded to the amount of time they spent online.

Turrow (1999) carried out a study on the relationship between Internet and the parents and children and enumerated that the majority of American parents with computers at home juggled the dream and the nightmare of the Internet. The study revealed that as young generation spent more time on the Internet, many parents were worried about the impact of the Internet on their children. The researcher suggested that parents, teachers and students should be protected against the ill effects of Internet exposure in modern society.

Zimmerman and Christakis (2000) state: “Adolescence is not necessarily as was believed at one time a period of stress and strain. Young people may be helped to experience a gradual relatively peaceful and successful continuance of development

from childhood to adulthood by giving attention to two areas of influence namely, nutrition influencing physical and environment influencing emotional developments”.

Peterson et.al. (1991) comments: “Adolescence is a phase of life beginning in biology and ending in society”. The adolescence represents a testing period of individual’s life and that there is likely to be a struggle within the individuals according to behavioral scientists. The age of onset of these changes ranges from 10 – 15 years with an average of 12 years for males and 1 – 2 years earlier for females.

The WHO’s definition of adolescents as those between the age of 10-19 years is the definition that was adopted at the South Asia conference on adolescents in 1998, and followed by most other UN Organizations. The evidence in literature from cross-cultural studies both supports and challenges the hypothesis that adolescence is a difficult period in development. Globally, the focus on adolescents can be traced back to the 1980s, with the Fourth World Health Assembly (1987) which selected ‘Health of Youth’ as the subject for discussions at the 42nd World Health Programme, and approving the commencement of an Adolescent Health Programme in 1990. Member states and WHO were urged to strengthen programmes relating to youth and adolescents at all levels, placing it as a policy priority for WHO. Adolescents account for one fifth of the world’s population and have been on an increasing trend. In India, they account for about 25% of the population according to the Planning Commission’s Population projections (2000). This implies that about 230 million Indians are adolescents in the age group of 10 to 19 years.

Calvert and Jordan (2001) evaluated the Internet exposure among the students who studied from primary to pre-university levels and reported that the girls used the Internet as much as boys in the study area. The researchers also noted that young students used the Internet in different ways. The girls reported that they used the Internet for education, schoolwork, e-mail and chat rooms whereas the boys used the Internet for entertainment and games. The researchers emphasized that the Internet was a primary educational and developmental tool for many parents and teachers.

Rice and Katz (2002) assessed the social consequences of Internet use: access, involvement and interaction and observed that three main issues to focus the work access (in light of the extensive discussions of the digital divide), involvement (in the

general community or social capital sense, as well as in the more specific political engagement sense), and social interaction (relative to offline social Interaction, and the extent of online social interaction. The scholars called upon the state to check the cybercrime and safeguard the interest of new media users including the school children.

Patel and Melkote (2003) analyzed the diffusion of new communication technologies in modern society by following online survey method and noted that Internet exposure was high among the respondents in view of its multi-faceted characteristics and advantages. The researchers also noted that the respondents had positive attitude towards Internet and earned better gratification through regular Exposure and utility.

Bryant (2004) evaluated the Internet based resources and services in U.K. by following a case study method. The findings revealed that the high school and pre-university level students sought information from the Internet sources and preferred both print and electronic information resources. The respondents also stated increasing the use of Internet based information resources and services for academic purpose. The study also indicated the importance of outreach work in the Field of new media management.

Doreswamy (2004) studied the Internet exposure among high school and college students of Andhra Pradesh, India by following survey research method. The researcher analyzed the various types of information needs of students and found that the respondents were aware of the Internet based information resources and services. The study offered several suggestions for the betterment of Internet based information resources and services in Andhra Pradesh.

O'Brien (2010) studied the relationship between the youth culture and Mobile phone and indicated that youth culture is identified in terms of consumption patterns, lifestyles and other aspects. The study revealed that youth culture was a site of corporate-driven commoditization. The scholar further observed that the mobile phone allowed young people to perform and maintain peer group associations, through which forms of solidarity, identification and differentiation are created.

Bartlett and Miller (2011) studied the impact of Internet on youth and Amplified that Internet had become the greatest source of information to the young73people. the study revealed that the information resources and services were central to forming the attitudes of people about the world around them. The scholars suggested that young generation should be properly guided about positive use of Internet and other new media in modern times.

Gasser et.al (2012) explored the youth and digital media from credibility to information quality and stated that the intersection of digital media, youth, and information quality—primarily works from library and information science, sociology, education, and selected ethnographic studies— reveals patterns in youth’s Information-seeking behavior. The study also highlighted the importance of contextual and demographic factors both for search and evaluation of adoptive behaviours among the adolescents.

The State of Adolescents in India

India is the second most populous country in the world with total population of over 1081 million. There are about 225 million adolescents (10-19 years) who constitute a large section of population (22.5%) according to Census, 2001. Adolescents are living in diverse circumstances and have diverse health needs. Adolescence is a crucial period in the life cycle of human development, marked by rapid physical and psychological developments. The Constitution of India has guaranteed several safeguards and provisions for the development of human resources in general and young generation in particular. The Directive Principles of State Policy and series of Articles (14, 15, 21, 23, 24, 39, 42, 45, 46, 47 etc) guarantee certain rights and privileges for the educational and economic progress of the young population of the country.

Besides these, the Government of India has formulated several legislative norms and guidelines before and after national independence with a view to protect and promote the interest of adolescents in India. Prominent among the legislative provisions include - The Guardian and Wards Act 1890, The Child Marriage Restraint Act 1929 (Amended in 1979), The Factories Act 1948 (Amended in 1979), Hindu Adoption and Maintenance Act 1956, Probation of Offenders Act 1958, The

Orphanage and Other Charitable Homes (Supervision & Control) Act 1960, Medical Termination of Pregnancy Act 1971, Juvenile Justice Act 1986 (Amended in 2000), Immoral Traffic Prevention Act 1986, The Child Labour (Prohibition and Regulations Act) 1986, The Pre-natal Diagnostic Technique (Regulation, Prevention and Misuse) Act 1994, The Persons with Disabilities (Equal Opportunities, Protection of Rights and Full Participation) Act 1996, Juvenile Justice Act 2000 and so on. These acts uphold the human rights of adolescents and ensure their peaceful co-existence in India.

In the post - independence era, the central and state governments have also implemented series of programmes for the empowerment of adolescents. They include - National Nutrition Policy (1983), National Policy on Education 1986 (modified in 1992), National Health Policy (1999), Draft National AIDS Policy (2000), National Population Policy (2000) Draft National Youth Policy (2001), National Policy for the Empowerment of Women (2001), The Adolescent Girls Scheme (Kishori Shakthi Yojana- 2003), Training of Rural Youth for Self Employment (TRYSEM), Jawahar Rozgar Yojana (JRY), Prime Minister's Rozgar Yojana (PMRY), Swarna Jayanti Swarozgar Yojana (SGSY), etc., to provide basic amenities, vocational training and employment oriented programmes for the benefit of adolescents in the country. The welfare and development of adolescents in India should be viewed at not merely in terms of material needs but equally or even more so in relation to non-material needs such as the right to live with human dignity, self respect, equality and freedom.

There is a good deal of scientific investigations dealing with the development of adolescents in India and abroad. Few researchers in India have assessed the impact of social media on people including adolescents. Prominent among them include - Siegel (1982), Dusek (1987), Wresch(1996), Mundaragi (1999), Zimmerman and Christakis (2000), American Academy of Pediatrics, (2001), Arnett (2001), Norris(2001),UNDP (2001), Committee on Public Education (2001), Brown and Witherspoon (2002), Chermin and Linebarger (2005), Gilbert et.al. (2009), Moni (2010), Willard (2009) and Yamamichi (2011).The review of literature clearly reveals that there is not even a single study conducted by any researcher on the impact of social media on adolescents in Karnataka state.

Chapter 3:

Data Analysis and Interpretation

Chapter -3

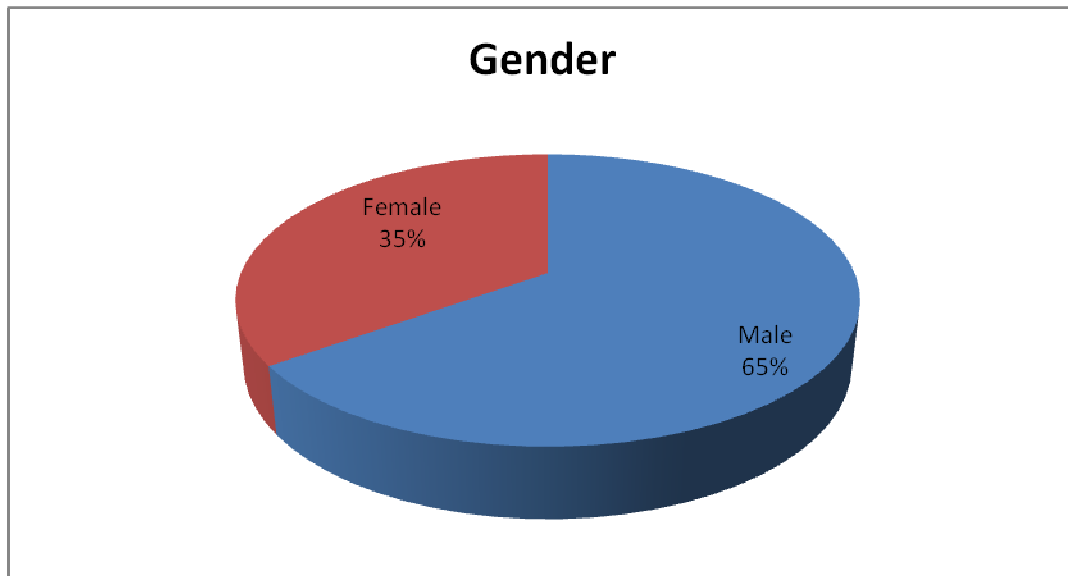
Data Analysis and Interpretation

This chapter gives the analysis and interpretation of the data collected for the study. Opinions of the adolescents the six major cities in karnataka of the age group 13-19 years.

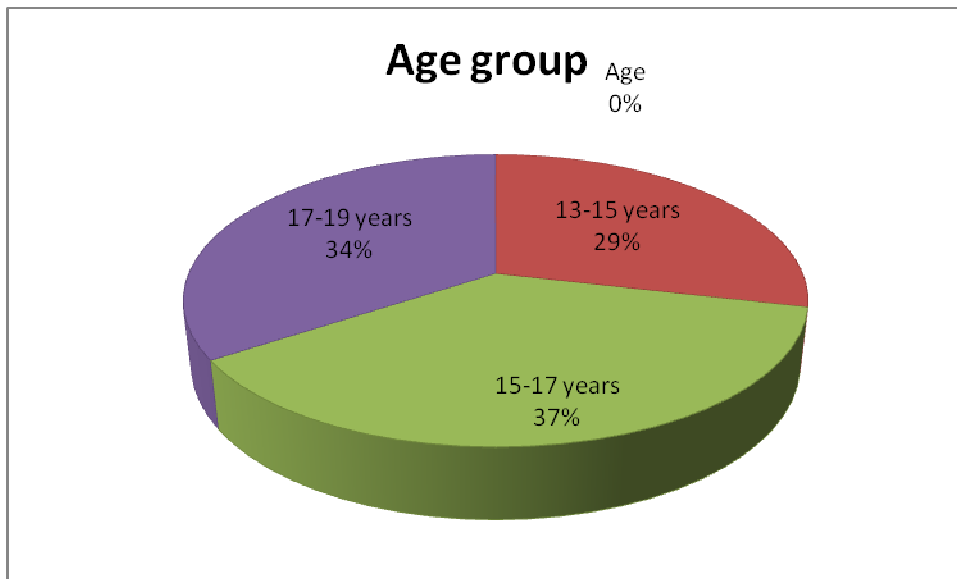
Section A-Demographic profile

The section presents demographic profile of the adolescents in brief, The demographic variables of Gender, age and Income of the parents of the respective adolescent participants is summarized and presented in the form of charts of self-explanatory in nature.

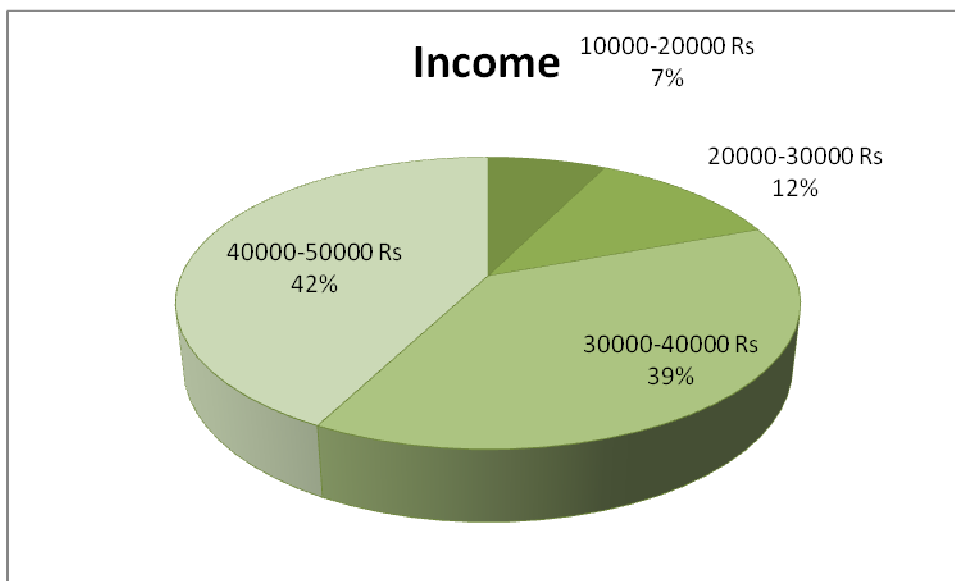
Gender	F	%
Male	195	65.0
Female	105	35.0
Total	300	100.0



Age	F	%
13-15 years	86	28.7
15-17 years	111	37.0
17-19 years	103	34.3
Total	300	100.0



Income	F	%
10000-20000 Rs	22	7.3
20000-30000 Rs	36	12.0
30000-40000 Rs	115	38.3
40000-50000 Rs	127	42.3
Total	300	100.0



Section –B: Objectives and testing of Hypothesis

Objective 1: To understand the primary sources and attractions of Social media among the Adolescents

The above objective is designed to have the specific understanding of the primary sources and attractions of Social media among the Adolescents. The primary sources like

- Cell/Smart Phone
- iPad or Tablet
- Personal Computer (Laptop, Desktop)
- Library or public computer
- And the attractions of social media i.e.
- Games
- Applications for smart phones
- Pictures
- Discussion boards
- Instant access to information
- Videos
- Communicating with family and friends
- Viewing others' status
- Sharing/Posting links

Are considered for the study. The Chi square analysis at 5 level of significance among the Adolescent respondents of 300 sample size is represented in the table 1-Table 13, for the hypothesis stated below

H (0): There is no significant association among primary sources and attractions of Social media among the Adolescents

H (1): There is a significant association among primary sources and attractions of Social media among the Adolescents

Gender	Table 1					CC	P Value
	Cell/Smart Phone				Total		
	Age in years		yes	no			
Male	13-15 years	F	42	8	50	0.278	0.000
		%	21.5	4.1	25.6		
	15-17 years	F	42	29	71		
		%	21.5	14.9	36.4		
	17-19 years	F	36	38	74		
		%	18.5	19.5	37.9		
Total	F	120	75	195			
%	61.5	38.5	100.0				
Female	13-15 years	F	22	14	36	0.041	0.916
		%	21.0	13.3	34.3		
	15-17 years	F	26	14	40		
		%	24.8	13.3	38.1		
	17-19 years	F	19	10	29		
		%	18.1	9.5	27.6		
Total	F	67	38	105			
%	63.8	36.2	100.0				
Total	13-15 years	F	64	22	86	0.170	0.012
		%	21.3	7.3	28.7		
	15-17 years	F	68	43	111		
		%	22.7	14.3	37.0		
	17-19 years	F	55	48	103		
		%	18.3	16.0	34.3		
Total	F	187	113	300			
%	62.3	37.7	100.0				

The above table-1 shows the opinions of the adolescents with regard to the primary source of Cell/Smart Phone attractions towards the social media. The demographic parameters like gender and age groups are cross tabulated with respect to the electronic gadget Cell/Smart Phone and the attractions towards social media. The opinions are measured on the dichotomous scale of positive and negative opinions.

From the table it is found that 62.3% of the adolescents are attracted towards social media through the means of Cell/Smart Phone. The phenomenon is largely prevalent among the respondents of female adolescents (63.8%), than the male (61.5%) adolescent students. At the microscopic perspective the male (43%) and the female respondents of the age group 13-17 (45.8%) years accepts that the adolescents are more prone to wards Cell/Smart Phone as a means of primary source of accessing Social media.

In aggregate the null hypothesis is rejected and alternative hypothesis is accepted. Hence there is a significant association among primary sources (Cell/Smart Phone) and attractions of Social media among the Adolescents. (CC=0.172, P=0.012)

Gender	Table 2					CC	P Value
	Age in Years		iPod or Tablet		Total		
			yes	no			
Male	13-15 years	F	37	13	50	0.225	0.006
		%	19.0	6.7	25.6		
	15-17 years	F	13	58	71		
		%	6.7	29.7	36.4		
	17-19 years	F	22	52	74		
		%	11.3	26.7	37.9		
Total	F	72	123	195			
	%	36.9	63.1	100.0			
Female	13-15 years	F	18	18	36	0.120	0.463
		%	17.1	17.1	34.3		
	15-17 years	F	18	22	40		
		%	17.1	21.0	38.1		
	17-19 years	F	14	15	29		
		%	13.3	14.3	27.6		
Total	F	50	55	105			
	%	47.6	52.4	100.0			
Total	13-15 years	F	55	31	86	0.134	0.065
		%	18.3	10.3	28.7		
	15-17 years	F	31	80	111		
		%	10.3	26.7	37.0		
	17-19 years	F	36	67	103		
		%	12.0	22.3	34.3		
Total	F	122	178	300			
	%	40.7	59.3	100.0			

The above table-2 shows the opinions of the adolescents with regard to the primary source of Cell/Smart Phone attractions towards the social media. The demographic parameters like gender and age groups are cross tabulated with respect to the electronic gadget iPod or Tablet and the attractions towards social media. The opinions are measured on the dichotomous scale of positive and negative opinions.

From the table it is found that 40.7 % of the adolescents are attracted towards social media through the means of iPod or Tablet. The phenomenon is largely prevalent among the respondents of female adolescents (47.6%), than the male (36.9%) adolescent students. At the microscopic perspective the female (34.2%) and

the male (25.7%) respondents of the age group 13-17 years accepts that the adolescents are more prone to wards iPod or Tablet as a means of primary source of accessing Social media.

In aggregate the null hypothesis is accepted and alternative hypothesis is rejected. Hence there is no significant association among primary sources (**iPod or Tablet**) and attractions of Social media among the Adolescents (CC=0.134, P=0.065).

Gender	Table 3					CC	P Value
	Age in Years		Personal Computer (Laptop, Desktop)		Total		
			yes	no			
Male	13-15 years	F	34	16	50	0.372	0.000
		%	17.4	8.2	25.6		
	15-17 years	F	17	54	71		
		%	8.7	27.7	36.4		
	17-19 years	F	18	56	74		
		%	9.2	28.7	37.9		
Total	F	69	126	195			
	%	35.4	64.6	100.0			
Female	13-15 years	F	36	0	36	0.335	0.001
		%	34.3	0.0	34.3		
	15-17 years	F	28	12	40		
		%	26.7	11.4	38.1		
	17-19 years	F	25	4	29		
		%	23.8	3.8	27.6		
Total	F	89	16	105			
	%	84.8	15.2	100.0			
Total	13-15 years	F	70	16	86	0.343	0.000
		%	23.3	5.3	28.7		
	15-17 years	F	45	66	111		
		%	15.0	22.0	37.0		
	17-19 years	F	43	60	103		
		%	14.3	20.0	34.3		
Total	F	158	142	300			
	%	52.7	47.3	100.0			

The above table-3 shows the opinions of the adolescents with regard to the primary source of Cell/Smart Phone attractions towards the social media. The demographic parameters like gender and age groups are cross tabulated with respect to the electronic gadget Personal Computer (Laptop, Desktop) and the attractions towards social media. The opinions are measured on the dichotomous scale of positive and negative opinions.

From the table it is found that 52.7 % of the adolescents are attracted towards social media through the means of Personal Computer (Laptop, Desktop). The phenomenon is largely prevalent among the respondents of female adolescents (84.8 %), than the male (35.4 %) adolescent students. At the microscopic perspective the female (60.1%) and the male (25.9%) respondents of the age group 13-17 years accepts that the adolescents are more prone to wards Personal Computer (Laptop, Desktop) as a means of primary source of accessing Social media.

In aggregate the null hypothesis is rejected and alternative hypothesis is accepted. Hence there is a significant association among primary sources (Personal Computer (Laptop, Desktop) and attractions of Social media among the Adolescents. (CC=0.343, P=0.000)

Gender	Table 4						
	Age in Years		Library or public computer		Total	CC	P Value
			yes	no			
Male	13-15 years	F	24	26	50	0.190	0.026
		%	12.3	13.3	25.6		
	15-17 years	F	34	37	71		
		%	17.4	19.0	36.4		
	17-19 years	F	21	53	74		
		%	10.8	27.2	37.9		
Total	F	79	116	195			
	%	40.5	59.5	100.0			
Female	13-15 years	F	18	18	36	0.238	0.030
		%	17.1	17.1	34.3		
	15-17 years	F	9	31	40		
		%	8.6	29.5	38.1		
	17-19 years	F	10	19	29		
		%	9.5	18.1	27.6		
Total	F	37	68	105			
	%	35.2	64.8	100.0			
Total	13-15 years	F	42	44	86	0.150	0.031
		%	14.0	14.7	28.7		
	15-17 years	F	43	68	111		
		%	14.3	22.7	37.0		
	17-19 years	F	31	72	103		
		%	10.3	24.0	34.3		
Total	F	116	184	300			
	%	38.7	61.3	100.0			

The above table-4 shows the opinions of the adolescents with regard to the primary source of Library or public computer attractions towards the social media. The demographic parameters like gender and age groups are cross tabulated with respect to the electronic gadget Library or public computer and the attractions towards social media. The opinions are measured on the dichotomous scale of positive and negative opinions. From the table it is found that 38.7% of the adolescents are attracted towards social media through the means of Library or public computer. The phenomenon is largely prevalent among the respondents of male adolescents (40.5%), than the female (35.2%) adolescent students. At the microscopic perspective the male (29.7%) and the female (25.7%) respondents of the age group 13-17 years accepts that the adolescents are more prone towards Library or public computer as a means of primary source of accessing Social media.

In aggregate the null hypothesis is rejected and alternative hypothesis is accepted. Hence there is a significant association among primary sources Library or public computer and attractions of Social media among the Adolescents. (CC=0.150, P=0.031)

Gender	Table 5				CC	P Value	
	Age in Years	Games		Total			
		yes	no				
Male	13-15 years	F	50	0	50	0.2 71	0.000
		%	25.6	0.0	25.6		
	15-17 years	F	71	0	71		
		%	36.4	0.0	36.4		
	17-19 years	F	65	9	74		
		%	33.3	4.6	37.9		
Total	F	186	9	195			
	%	95.4	4.6	100.0			
Female	13-15 years	F	36	0	36	0.5 20	0.000
		%	34.3	0.0	34.3		
	15-17 years	F	40	0	40		
		%	38.1	0.0	38.1		
	17-19 years	F	16	13	29		
		%	15.2	12.4	27.6		
Total	F	92	13	105			
	%	87.6	12.4	100.0			
Total	13-15 years	F	86	0	86	0.3 63	0.000
		%	28.7	0.0	28.7		
	15-17 years	F	111	0	111		
		%	37.0	0.0	37.0		

	17-19 years	F	81	22	103		
		%	27.0	7.3	34.3		
	Total	F	278	22	300		
		%	92.7	7.3	100.0		

The above table-5 shows the opinions of the adolescents with regard to the primary source of Games attracting towards the social media. The demographic parameters like gender and age groups are cross tabulated with respect to the Games attracting towards social media. The opinions are measured on the dichotomous scale of positive and negative opinions. From the table it is found that 92.7 % of the adolescents are attracted towards social media because of games. The phenomenon is largely prevalent among the respondents of male adolescents (95.4 %), than the female (87.6%) adolescent students. At the microscopic perspective the male (62%) and the female (72.4 %) respondents of the age group 13-17 years accepts that the adolescents are more prone to wards social media because of Games.

In aggregate the null hypothesis is rejected and alternative hypothesis is accepted. Hence there is a significant association among primary sources of Social media due to games among the Adolescents. (CC=0.363, P=0.000)

Gender	Table 6					CC	P Value
	Age in Years	Applications for smart phones		Total			
		yes	no				
Male	13-15 years	F	38	12	50	0.313	0.000
		%	19.5	6.2	25.6		
	15-17 years	F	24	47	71		
		%	12.3	24.1	36.4		
	17-19 years	F	35	39	74		
		%	17.9	20.0	37.9		
Total	F	97	98	195			
	%	49.7	50.3	100.0			
Female	13-15 years	F	27	9	36	0.352	0.001
		%	25.7	8.6	34.3		
	15-17 years	F	24	16	40		
		%	22.9	15.2	38.1		
	17-19 years	F	29	0	29		
		%	27.6	0.0	27.6		
Total	F	80	25	105			
	%	76.2	23.8	100.0			

Total	13-15 years	F	65	21	86	0.259	0.000
		%	21.7	7.0	28.7		
	15-17 years	F	48	63	111		
		%	16.0	21.0	37.0		
	17-19 years	F	64	39	103		
		%	21.3	13.0	34.3		
Total	F	177	123	300			
	%	59.0	41.0	100.0			

The above table-6 shows the opinions of the adolescents with regard to the primary source of Applications for smart phones attracting towards the social media. The demographic parameters like gender and age groups are cross tabulated with respect to the Games attracting towards social media. The opinions are measured on the dichotomous scale of positive and negative opinions. From the table it is found that 59 % of the adolescents are attracted towards social media because of Applications for smart phones. The phenomenon is largely prevalent among the respondents of male adolescents (49.7 %), than the female (76.2%) adolescent students. At the microscopic perspective the male (31.8%) and the female (48.6 %) respondents of the age group 13-17 years accepts that the adolescents are more prone to wards social media because of Applications for smart phones.

In aggregate the null hypothesis is rejected and alternative hypothesis is accepted. Hence there is a significant association among primary sources of Social media due to Applications for smart phones among the Adolescents. (CC=0.259, P=0.000)

Gender	Table 7				CC	P Value	
	Age in Years	Pictures		Total			
		yes	no				
Male	13-15 years	F	32	18	50	0.225	0.006
		%	16.4	9.2	25.6		
	15-17 years	F	59	12	71		
		%	30.3	6.2	36.4		
	17-19 years	F	44	30	74		
		%	22.6	15.4	37.9		
Total	F	135	60	195			
	%	69.2	30.8	100.0			
Female	13-15 years	F	27	9	36	0.120	0.463
		%	25.7	8.6	34.3		
	15-17 years	F	30	10	40		
		%	28.6	9.5	38.1		

	17-19 years	F	25	4	29		
		%	23.8	3.8	27.6		
	Total	F	82	23	105		
		%	78.1	21.9	100.0		
Total	13-15 years	F	59	27	86	0.134	0.065
		%	19.7	9.0	28.7		
	15-17 years	F	89	22	111		
		%	29.7	7.3	37.0		
	17-19 years	F	69	34	103		
		%	23.0	11.3	34.3		
Total	F	217	83	300			
	%	72.3	27.7	100.0			

The above table-7 shows the opinions of the adolescents with regard to the primary source of Pictures attracting towards the social media. The demographic parameters like gender and age groups are cross tabulated with respect to the Games attracting towards social media. The opinions are measured on the dichotomous scale of positive and negative opinions. From the table it is found that 72.3 % of the adolescents are attracted towards social media because of Pictures. The phenomenon is largely prevalent among the respondents of male adolescents (69.2 %), than the female (78.1%) adolescent students. At the microscopic perspective the male (46.7%) and the female (54.3 %) respondents of the age group 13-17 years accepts that the adolescents are more prone to wards social media because of Pictures.

In aggregate the null hypothesis is accepted and alternative hypothesis is rejected. Hence there is no significant association among primary sources of Social media due to Pictures among the Adolescents. (CC=0.134, P=0.065)

Table 8							CC	P Value
Gender	Age in Years		Discussion boards		Total			
			yes	no				
Male	13-15 years	F	37	13	50	0.187	0.030	
		%	19.0	6.7	25.6			
	15-17 years	F	41	30	71			
		%	21.0	15.4	36.4			
	17-19 years	F	57	17	74			
		%	29.2	8.7	37.9			
Total	F	135	60	195				
	%	69.2	30.8	100.0				
Female	13-15 years	F	27	9	36	0.225	0.060	
		%	25.7	8.6	34.3			
	15-17 years	F	28	12	40			

		%	26.7	11.4	38.1		
	17-19 years	F	14	15	29		
		%	13.3	14.3	27.6		
	Total	F	69	36	105		
		%	65.7	34.3	100.0		
Total	13-15 years	F	64	22	86	0.106	0.182
		%	21.3	7.3	28.7		
	15-17 years	F	69	42	111		
		%	23.0	14.0	37.0		
	17-19 years	F	71	32	103		
		%	23.7	10.7	34.3		
	Total	F	204	96	300		
		%	68.0	32.0	100.0		

The above table-8 shows the opinions of the adolescents with regard to the primary source of Discussion boards attracting towards the social media. The demographic parameters like gender and age groups are cross tabulated with respect to the Discussion boards attracting towards social media. The opinions are measured on the dichotomous scale of positive and negative opinions. From the table it is found that 68 % of the adolescents are attracted towards social media because of Discussion boards. The phenomenon is largely prevalent among the respondents of male adolescents (69.2 %), than the female (65.7%) adolescent students. At the microscopic perspective the male (40.0 %) and the female (52.4 %) respondents of the age group 13-17 years accepts that the adolescents are more prone to wards social media because of Discussion boards.

In aggregate the null hypothesis is accepted and alternative hypothesis is rejected. Hence there is no significant association among primary sources of Social media due to Discussion boards among the Adolescents. (CC=0.106, P=0.182).

Table 9							CC	P Value
Gender	Age in Years		Instant access to information		Total			
			yes	no				
Male	13-15 years	F	46	4	50	0.260	0.001	
		%	23.6	2.1	25.6			
	15-17 years	F	44	27	71			
		%	22.6	13.8	36.4			
	17-19 years	F	56	18	74			
		%	28.7	9.2	37.9			

	Total	F	146	49	195		
		%	74.9	25.1	100.0		
Female	13-15 years	F	31	5	36	0.489	0.000
		%	29.5	4.8	34.3		
	15-17 years	F	17	23	40		
		%	16.2	21.9	38.1		
	17-19 years	F	29	0	29		
		%	27.6	0.0	27.6		
	Total	F	77	28	105		
		%	73.3	26.7	100.0		
Total	13-15 years	F	77	9	86	0.327	0.000
		%	25.7	3.0	28.7		
	15-17 years	F	61	50	111		
		%	20.3	16.7	37.0		
	17-19 years	F	85	18	103		
		%	28.3	6.0	34.3		
	Total	F	223	77	300		
		%	74.3	25.7	100.0		

The above table-9 shows the opinions of the adolescents with regard to the primary source of Instant access to information attracting towards the social media. The demographic parameters like gender and age groups are cross tabulated with respect to the Instant access to information attracting towards social media. The opinions are measured on the dichotomous scale of positive and negative opinions. From the table it is found that 74.3% of the adolescents are attracted towards social media because of Instant access to information. The phenomenon is largely prevalent among the respondents of male adolescents (74.9 %), than the female (73.3%) adolescent students. At the microscopic perspective the male (46.1 %) and the female (45.7 %) respondents of the age group 13-17 years accepts that the adolescents are more prone to wards social media because of Instant access to information.

In aggregate the null hypothesis is rejected and alternative hypothesis is accepted. Hence there is a significant association among primary sources of Social media due to Instant access to information among the Adolescents. (CC=0.327, P=0.000).

Gender	Table 10					CC	P Value
	Age in Years		Videos		Total		
			yes	no			
Male	13-15 years	F	46	4	50	0.064	0.670
		%	23.6	2.1	25.6		
	15-17 years	F	65	6	71		
		%	33.3	3.1	36.4		
	17-19 years	F	65	9	74		
		%	33.3	4.6	37.9		
Total	F	176	19	195			
	%	90.3	9.7	100.0			
Female	13-15 years	F	27	9	36	0.331	0.002
		%	25.7	8.6	34.3		
	15-17 years	F	37	3	40		
		%	35.2	2.9	38.1		
	17-19 years	F	16	13	29		
		%	15.2	12.4	27.6		
Total	F	80	25	105			
	%	76.2	23.8	100.0			
Total	13-15 years	F	73	13	86	0.156	0.023
		%	24.3	4.3	28.7		
	15-17 years	F	102	9	111		
		%	34.0	3.0	37.0		
	17-19 years	F	81	22	103		
		%	27.0	7.3	34.3		
Total	F	256	44	300			
	%	85.3	14.7	100.0			

The above table-10 shows the opinions of the adolescents with regard to the primary source of Videos attracting towards the social media. The demographic parameters like gender and age groups are cross tabulated with respect to the Videos attracting towards social media. The opinions are measured on the dichotomous scale of positive and negative opinions. From the table it is found that 85.3% of the adolescents are attracted towards social media because of Videos. The phenomenon is largely prevalent among the respondents of male adolescents (90.3 %), than the female (76.2%) adolescent students. At the microscopic perspective the male (56.9 %) and the female (60.9 %) respondents of the age group 13-17 years accepts that the adolescents are more prone to wards social media because of Videos.

In aggregate the null hypothesis is rejected and alternative hypothesis is accepted. Hence there is a significant association among primary sources of Social media due to videos among the Adolescents. (CC=0.156, P=0.023).

Table 11							CC	P value
Gender	Age in Years		Communicating with family and friends		Total			
			yes	no				
Male	13-15 years	F	36	14	50	0.280	0.000	
		%	18.5	7.2	25.6			
	15-17 years	F	41	30	71			
		%	21.0	15.4	36.4			
	17-19 years	F	65	9	74			
		%	33.3	4.6	37.9			
Total	F	142	53	195				
	%	72.8	27.2	100.0				
Female	13-15 years	F	32	4	36	0.190	0.139	
		%	30.5	3.8	34.3			
	15-17 years	F	31	9	40			
		%	29.5	8.6	38.1			
	17-19 years	F	20	9	29			
		%	19.0	8.6	27.6			
Total	F	83	22	105				
	%	79.0	21.0	100.0				
Total	13-15 years	F	68	18	86	0.179	0.007	
		%	22.7	6.0	28.7			
	15-17 years	F	72	39	111			
		%	24.0	13.0	37.0			
	17-19 years	F	85	18	103			
		%	28.3	6.0	34.3			
Total	F	225	75	300				
	%	75.0	25.0	100.0				

The above table-11 shows the opinions of the adolescents with regard to the primary source of Communicating with family and friends attracting towards the social media. The demographic parameters like gender and age groups are cross tabulated with respect to the Communicating with family and friends attracting towards social media. The opinions are measured on the dichotomous scale of positive and negative opinions. From the table it is found that 75% of the adolescents are attracted towards social media because of Communicating with family and friends. The phenomenon is largely prevalent among the respondents of male adolescents (72.8 %), than the female (79.0%) adolescent students. At the microscopic perspective the male (39.5 %) and the female (60.0 %) respondents of the age group 13-17 years accepts that the adolescents are more prone to wards social media because of Communicating with family and friends.

In aggregate the null hypothesis is rejected and alternative hypothesis is accepted. Hence there is a significant association among primary sources of Social media due to Communicating with family and friends among the Adolescents. (CC=0.179, P=0.007).

Gender	Table 12					CC	P Value
	Age in Years	Viewing others' status		Total			
		yes	no				
Male	13-15 years	F	36	14	50	0.228	0.005
		%	18.5	7.2	25.6		
	15-17 years	F	41	30	71		
		%	21.0	15.4	36.4		
	17-19 years	F	61	13	74		
		%	31.3	6.7	37.9		
Total	F	138	57	195			
	%	70.8	29.2	100.0			
Female	13-15 years	F	27	9	36	0.054	0.856
		%	25.7	8.6	34.3		
	15-17 years	F	32	8	40		
		%	30.5	7.6	38.1		
	17-19 years	F	23	6	29		
		%	21.9	5.7	27.6		
Total	F	82	23	105			
	%	78.1	21.9	100.0			
Total	13-15 years	F	63	23	86	0.149	0.033
		%	21.0	7.7	28.7		
	15-17 years	F	73	38	111		
		%	24.3	12.7	37.0		
	17-19 years	F	84	19	103		
		%	28.0	6.3	34.3		
Total	F	220	80	300			
	%	73.3	26.7	100.0			

The above table-12 shows the opinions of the adolescents with regard to the primary source of Viewing others' status attracting towards the social media. The demographic parameters like gender and age groups are cross tabulated with respect to the Communicating with family and friends attracting towards social media. The opinions are measured on the dichotomous scale of positive and negative opinions. From the table it is found that 73.3 % of the adolescents are attracted towards social media because of viewing others' status. The phenomenon is largely prevalent among the respondents of male adolescents (70.8 %), than the female (78.1%) adolescent

students. At the microscopic perspective the male (39.5 %) and the female (60.2 %) respondents of the age group 13-17 years accepts that the adolescents are more prone to wards social media because of viewing others' status

In aggregate the null hypothesis is rejected and alternative hypothesis is accepted. Hence there is a significant association among primary sources of Social media due to viewing others' status among the Adolescents. (CC=0.149, P=0.033).

Table 13							
Gender	Age in Years		Sharing/Posting links		Total	CC	P Value
			yes	no			
Male	13-15 years	F	37	13	50	0.160	0.077
		%	19.0	6.7	25.6		
	15-17 years	F	62	9	71		
		%	31.8	4.6	36.4		
	17-19 years	F	65	9	74		
		%	33.3	4.6	37.9		
Total	F	164	31	195			
	%	84.1	15.9	100.0			
Female	13-15 years	F	27	9	36	0.390	0.000
		%	25.7	8.6	34.3		
	15-17 years	F	40	0	40		
		%	38.1	0.0	38.1		
	17-19 years	F	29	0	29		
		%	27.6	0.0	27.6		
Total	F	96	9	105			
	%	91.4	8.6	100.0			
Total	13-15 years	F	64	22	86	0.223	0.000
		%	21.3	7.3	28.7		
	15-17 years	F	102	9	111		
		%	34.0	3.0	37.0		
	17-19 years	F	94	9	103		
		%	31.3	3.0	34.3		
Total	F	260	40	300			
	%	86.7	13.3	100.0			

The above table-13 shows the opinions of the adolescents with regard to the primary source of Sharing/Posting links attracting towards the social media. The demographic parameters like gender and age groups are cross tabulated with respect

to the Sharing/Posting links attracting towards social media. The opinions are measured on the dichotomous scale of positive and negative opinions. From the table it is found that 86.7 % of the adolescents are attracted towards social media because of Sharing/Posting links. The phenomenon is largely prevalent among the respondents of male adolescents (84.1 %), than the female (91.4%) adolescent students. At the microscopic perspective the male (50.8 %) and the female (63.8 %) respondents of the age group 13-17 years accept that the adolescents are more prone towards social media because of Sharing/Posting links.

In aggregate the null hypothesis is rejected and alternative hypothesis is accepted. Hence there is a significant association among primary sources of Social media due to Sharing/Posting links among the Adolescents. (CC=0.223, P=0.000).

Objective 2: To assess the access to social media among the adolescents in Karnataka state

The above objective is designed to assess the access to social media among the adolescents in Karnataka state. The primary sources like

- Cell/Smart Phone
- iPad or Tablet
- Personal Computer (Laptop, Desktop)
- Library or public computer

And the social media sites like

- Face book
- Twitter
- MySpace
- YouTube
- Google +
- Blogs
- Instagrams
- Linked In
- What Sapp

Are considered for the study. The mean and SD descriptive statistics are computed to measure the level of access to social media among the adolescents with respect to different social media sites. The One way ANOVA at 5% level of significance among the Adolescent respondents of 300 sample size is represented in the table 1- Table 4, for the hypothesis stated below

H (0): There is no significant difference among the means to assess the access to social media among the adolescents in Karnataka state.

H (1): There is a significant difference among the means to assess the access to social media among the adolescents in Karnataka state.

Social Media		Table 1-Cell phone		
		13-15 Yrs	15-17 Yrs	17-19 Yrs.
Face book	Mean	4.11	4.9265	4.1636
	SD	1.67	0.26294	1.46267
Twitter	Mean	3.4762	3.8824	4.0182
	SD	1.85661	0.8899	0.91269
MySpace	Mean	3.4762	1.8382	2.4727
	SD	1.85661	1.2046	1.61995
YouTube	Mean	3.4762	4.1765	4.5818
	SD	1.85661	1.14528	0.49781
Google +	Mean	3.4762	3.1912	4.5091
	SD	1.85661	1.52841	0.63458
Blogs	Mean	3.4762	3.2206	3.8545
	SD	1.85661	1.63767	0.7798
Instagrams	Mean	3.4762	4.3382	4.5636
	SD	1.85661	1.42064	0.5005
Linked In	Mean	3.4762	1.9559	2.2
	SD	1.85661	1.5105	1.09545
Whatsapp	Mean	3.4762	4.2353	4.8364
	SD	1.85661	1.32842	0.37335

Cell phone					
Source	SS	df	MS	F -Ratio	P Value
Between-treatments	0.8365	2	0.4182	F = 0.6005	0.556
Within-treatments	16.7152	24	0.6965		
Total	17.5517	26			

The *f*-ratio value is 0.6005. The *p*-value is .556574. The result is *not* significant at $p < .05$.

The above table describes the access to different social media sites by using Cell phone/smart phones among the adolescents. From the table it is found that the Facebook (Mean-4.92) is largely accessed by using cell phones among the adolescents followed by twitter, you tube, Google+ and Instagrams and Whatsapp.

The null hypothesis is accepted and alternative hypothesis is rejected.

Social Media		Table 2-iPad or Tablet		
		13-15 Yrs	15-17 Yrs	17-19 Yrs
Face book	Mean	4.6364	5	4.3611
	SD	1.16052	0	0.48714
Twitter	Mean	3.6909	4.3548	3.8333
	SD	1.70916	1.14159	1.18322
MySpace	Mean	1.9455	2.3548	1.7222
	SD	1.35289	1.37957	0.8489
YouTube	Mean	4.7091	5	4.5
	SD	0.45837	0	0.50709
Google +	Mean	4.7091	4.6129	4.1667
	SD	0.45837	0.71542	0.7746
Blogs	Mean	3.2545	4	3.5556
	SD	0.84327	0.84327	0.84327
Instagrams	Mean	5	4.6129	4.4722
	SD	0	0.71542	0.50631
Linked In	Mean	1.6545	1.5161	2.3056
	SD	1.41707	1.02862	1.43067
What Sapp	Mean	4.4909	4.871	4.6389
	SD	1.16861	0.34078	0.48714

($p=0.556$). Hence there is a significant difference among the means to assess the access to social media among the adolescents in Karnataka state. The means of access to access the social media sites is not similar and differ significantly.

iPad or Tablet					
<i>Source</i>	<i>SS</i>	<i>df</i>	<i>MS</i>	F-Ratio	P Value
Between-treatments	0.4786	2	0.2393	F=0.17	0.8446
Within-treatments	33.7811	24	1.4075		
Total	34.2597	26			

The *f*-ratio value is 0.17001. The *p*-value is .84466. The result is *not* significant at $p < .05$.

The above table describes the access to different social media sites by using iPad or Tablet among the adolescents. From the table it is found that the Facebook (Mean-5.00) is largely accessed by using iPad or Tablet among the adolescents followed by You tube and Whatsapp.

The null hypothesis is accepted and alternative hypothesis is rejected. ($p=0.8446$). Hence there is a significant difference among the means to assess the access to social media among the adolescents in Karnataka state. The means of access to access the social media sites is not similar and differ significantly.

Social Media		Table 3-Personal Computer (Laptop, Desktop)		
		13-15 Yrs	15-17 Yrs	17-19 Yrs
Face book	Mean	3.9143	4.7778	3.6744
	SD	1.79163	0.42044	1.4593
Twitter	Mean	3.6286	4.2	3.7907
	SD	1.81915	0.89443	1.0132
MySpace	Mean	2.2143	2.2444	1.6977
	SD	1.43348	1.35102	0.96449
YouTube	Mean	4.6	4.6444	4.4186
	SD	1.05501	1.1512	0.49917
Google +	Mean	4.7429	4.2667	4.4419
	SD	0.58199	1.05313	0.66556

Blogs	Mean	3.1286	3.5778	3.8605
	SD	1.36117	1.43794	0.91499
Instagrams	Mean	4.6286	4.7778	4.1628
	SD	1.03799	0.42044	0.65211
Linked In	Mean	1.8571	1.4444	1.9535
	SD	1.38612	1.27128	1.43018
What Sapp	Mean	3.9429	5	4.7907
	SD	1.58696	0	0.41163

Result Details					
<i>Source</i>	<i>SS</i>	<i>df</i>	<i>MS</i>	F-Ratio	P value
Between-treatments	0.3625	2	0.1813	<i>F</i> = 0.14	0.142
Within-treatments	30.6914	24	1.2788		
Total	31.054	26			

The *f*-ratio value is 0.14175. The *p*-value is .868564. The result is *not* significant at $p < .05$.

The above table describes the access to different social media sites by using Personal Computer (Laptop, Desktop) among the adolescents. From the table it is found that the Whatsapp (Mean-5.00) is largely accessed by using Personal Computer (Laptop, Desktop) among the adolescents followed by Face book, Instagrams and Facebook.

The null hypothesis is accepted and alternative hypothesis is rejected. ($p=0.142$). Hence there is a significant difference among the means to assess the access to social media among the adolescents in Karnataka state. The means of access to access the social media sites is not similar and differ significantly.

Social Media		Table 4-Library/Public Computer		
		13-15 Yrs	15-17 Yrs	17-19 Yrs.
Face book	Mean	5	4.814	4.6774
	SD	0	0.39375	0.47519
Twitter	Mean	4.0476	4.2093	4.1613
	SD	1.54529	0.98942	0.37388
MySpace	Mean	2.1429	3.1628	2.5484
	SD	1.47452	1.63198	1.68994
YouTube	Mean	4.8095	4.6279	4.1613
	SD	0.39744	0.7875	0.37388
Google +	Mean	4.8095	4.3953	4.6774
	SD	0.39744	0.82056	0.47519
Blogs	Mean	3.6667	3.7674	4
	SD	1.05152	1.19198	0
Instagrams	Mean	5	4.3953	4.5161
	SD	0	0.82056	0.508
Linked In	Mean	1.7619	2.186	1.5161
	SD	1.58975	1.20031	0.508
What Sapp	Mean	4.8095	5	4.8387
	SD	0.39744	0	0.37388

Result Details					
Source	SS	df	MS	F-Ratio	P value
Between-treatments	0.1222	2	0.0611	$F = 0.05043$	0.951
Within-treatments	29.0869	24	1.212		
Total	29.2091	26			

The *f*-ratio value is 0.05043. The *p*-value is .950925. The result is *not* significant at $p < .05$.

The above table describes the access to different social media sites by using Library/Public Computer among the adolescents. From the table it is found that the Whatsapp (Mean-5.00) is largely accessed by using Library/Public Computer among the adolescents followed by Face book, YouTube, Facebook, Instagrams and Google +.

The null hypothesis is accepted and alternative hypothesis is rejected. ($p=0.951$). Hence there is a significant difference among the means to assess the access to social media among the adolescents in Karnataka state. The means of access to access the social media sites is not similar and differ significantly.

Objective 3: To analyze the social media use patterns among the adolescents in Karnataka state

The above objective is designed to analyze the social media use patterns among the adolescents regarding

- General opinions on Using of Social Media
and
- Awareness of Risks of Using Social Media

The general opinions are listed as

- I love watching videos whenever I am connected to the internet.
- Online games are addictive and I play them whenever I have an opportunity.
- I download music videos and movies from the internet a lot.
- I frequently upload and share videos and photographs in social networks such as, in Face book, Twitter, Instagrams, Whatsapp etc.
- I always enjoy browsing/surfing the internet.
- I love visiting social networks because I get to meet new people
- Social networks enable me to remain connected with my family and friends.
- Am always on the phone/computer chatting with online friends.
- My friends and I have forums/groups where we post messages to each other or the whole group.
- I use my mobile phone for texting and I text a lot.
- Social networks make it easy for me to talk to someone I have never met before.
- I use the internet for doing my assignments and enriching class notes.
- I feel am always looped because I get to know almost everything that happens and almost instantly, thanks to technology.
- Social media have made access to class notes and other relevant information easier because of tools like Drop box and Google Drive
- Skype and other video conferencing tools enable me to have discussion with my lecturers and group members from anywhere in the world.

The awareness of risks is listed as

- Social media have increased cyber bullying.
- Due to social media, many young people have been accidentally introduced to pornographic web content.
- Social have made many youths lazier.
- The youth today are physically antisocial due to social media.
- Many adolescents are having sex due to early exposure from social media and through peer influence.
- As a result of social media many unsuspecting youths and adolescents have fallen for sex predators.
- Many young people end up wasting a lot of their time on games and chatting on social networks.
- Mobile phones and computers have become very addictive such that it is very hard for people to live without.
- Takes a lot of money buying data bundles and better phones that can browse faster and that have wider screens.
- Leads to break ups in relationships and marriages
- Leads to brainwashing of individuals
- Leads to diseases such as Tennis elbow
- Has brought high levels of insecurity as it makes it easier for terrorist to communicate through social media
- Leads to time wastage at the expense of other things
- It has given a viable platform for hate speech
- Has facilitated negative ethnicity.

The variables of the respective social media use patterns are measured analyzed by using the descriptive statistics Mean and SD. The one sample t tests are further administered to examine the significant difference among the opinions among the adolescents of the age group 13-15 years, 15-17 years and 17-19 years respectively to verify the stated hypothesis.

H (0): There is no significant difference in the use patterns of among the adolescents in Karnataka state

H (1): There is a significant difference in the use patterns of among the adolescents in Karnataka state

Table 1		13-15 Yrs		15-17 Yrs		17-19 yrs	
		N=86		N=111		N=103	
General opinions on Using of Social Media		Mean	SD	Mean	SD	Mean	SD
1	I love watching videos whenever I am connected to the internet.	4.45	0.81	4.28	0.80	4.49	0.50
2	Online games are addictive and I play them whenever I have an opportunity.	4.25	0.77	4.35	0.81	4.68	0.46
3	I download music videos and movies from the internet a lot.	4.46	0.81	4.48	0.83	4.37	0.49
4	I frequently upload and share videos and photographs in social networks such as, in Face book, Twitter, Instagram, Whatsapp e.t.c.	4.29	0.70	4.18	0.76	4.18	0.39
5	I always enjoy browsing/surfing the internet.	4.5	0.73	4.20	1.05	4.52	0.50
6	I love visiting social networks because I get to meet new people	4.15	0.64	4.09	0.85	4.24	0.61
7	Social networks enable me to remain connected with my family and friends.	4.16	0.73	4.15	0.88	4.66	0.48
8	Am always on the phone/computer chatting with online friends.	3.75	1.03	3.44	1.29	4.22	0.81
9	My friends and I have forums/groups where we post messages to each other or the whole group.	4.39	0.67	3.79	0.98	4.33	0.47
10	I use my mobile phone for texting and I text a lot.	4.19	0.50	3.96	0.63	4.49	0.66
11	Social networks make it easy for me to talk to someone I have never met before.	4.32	0.71	4.09	0.72	4.51	0.50
12	I use the internet for doing my assignments	4.10	0.70	4.13	0.84	4.51	0.50

	and enriching class notes.						
13	I feel am always looped because I get to know almost everything that happens and almost instantly, thanks to technology.	4.29	0.85	4.44	0.99	4.82	0.39
14	Social media have made access to class notes and other relevant information easier because of tools like Drop box and Google Drive	3.76	0.97	3.79	0.97	4.36	0.55
15	Skype and other video conferencing tools enable me to have discussion with my lecturers and group members from anywhere in the world.	3.73	1.01	3.81	1.02	4.20	0.49
	Aggregate Mean SD	4.18	0.77	4.10	0.89	4.44	0.52

Table 1(a)-One sample *t* test results-13-15 Years

<p>P value and statistical significance: The two-tailed P value is less than 0.0001 By conventional criteria; this difference is considered to be extremely statistically significant.</p> <p>Confidence interval: The hypothetical mean is 0.0000 The actual mean is 4.1860 The difference between these two values is 4.1860 The 95% confidence interval of this difference: From 4.0442 to 4.3278</p> <p>Intermediate values used in calculations: $t = 63.3274$ $DF = 14$ standard error of difference = 0.066</p>

Table 1 (b) -One sample t test results-15-17 Years

P value and statistical significance:

The two-tailed P value is less than 0.0001

By conventional criteria; this difference is considered to be extremely statistically significant.

Confidence interval:

The hypothetical mean is 0.0000

The actual mean is 4.0787

The difference between these two values is 4.0787

The 95% confidence interval of this difference:

From 3.9235 to 4.2339

Intermediate values used in calculations:

$t = 56.3658$

DF = 14

standard error of difference = 0.072

Table 1 (c)-One sample *t* test results 17-19 years

<p>P value and statistical significance:</p> <p>The two-tailed P value is less than 0.0001</p> <p>By conventional criteria; this difference is considered to be extremely statistically significant.</p> <p>Confidence interval:</p> <p>The hypothetical mean is 0.0000</p> <p>The actual mean is 4.4387</p> <p>The difference between these two values is 4.4387</p> <p>The 95% confidence interval of this difference: From 4.3331 to 4.5442</p> <p>Intermediate values used in calculations:</p> <p>$t = 90.1956$</p> <p>$df = 14$</p> <p>standard error of difference = 0.049</p>
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The above table 1 describes the **General opinions on using of Social Media among the adolescents. From the table it is found that among the adolescents of the age group 13-15 years the major general opinions of favorable reflections are**

- Love watching videos whenever I am connected to the internet
- Download music videos and movies from the internet a lot.
- enjoy browsing/surfing the internet

With regard to the age group 15-17 years of adolescents

- Download music videos and movies from the internet a lot
- Online games are addictive and I play them whenever I have an opportunity
- Love watching videos whenever I am connected to the internet
- Always looped to get to know almost everything that happens and almost instantly, thanks to technology.

With regard to the age group 17-19 years of adolescents

- feel am always looped because I get to know almost everything that happens and almost instantly, thanks to technology
- Social networks enable me to remain connected with my family and friends
- Online games are addictive and I play them whenever I have an opportunity are found to be of higher order positive opinions regarding the use patterns of Social media.

The null hypothesis is rejected for the age groups 17-19 years and it is accepted for the age groups 13-15 and 15- 17 years respectively. Therefore, the Difference of opinions are significant for the age group 17- 19 years of adolescents, whereas the differences of opinions are not significant for the rest of the age group of the adolescents 13-17 years.

H (0): There is no significant difference in the awareness of risks of use patterns among the adolescents in Karnataka state.

H (1): There is a significant difference in the awareness of risks of use patterns among the adolescents in Karnataka state.

Table 2		13-15 Yrs N=86		15-17 Yrs N=111		17-19 Yrs N=103	
Awareness of Risks of Using Social Media		Mean	SD	Mean	SD	Mean	SD
1	Social media have increased cyber bullying.	4.22	1.01	3.77	0.80	4.21	0.41
2	Due to social media, many young people have been accidentally introduced to pornographic web content.	3.90	1.01	3.62	0.79	4.54	0.57
3	Social have made many youth lazier.	3.79	1.24	3.35	1.17	4.33	0.67
4	The youth today are physically antisocial due to social media.	3.56	1.06	3.50	1.27	4.48	0.69
5	Many adolescents are having sex due to early exposure from social media and through peer influence.	3.88	1.06	3.40	1.35	4.35	0.73

6	As a result of social media many unsuspecting youths and adolescents have fallen for sex predators.	3.98	0.74	3.79	1.11	4.70	0.53
7	Many young people end up wasting a lot of their time on games and chatting on social networks.	3.86	0.65	4	1.00	4.58	0.49
8	Mobile phones and computers have become very addictive such that it is very hard for people to live without.	3.87	1.06	3.91	0.96	4.21	0.41185
9	Takes a lot of money buying data bundles and better phones that can browse faster and that have wider screens.	4.03	0.65	3.84	0.90	4.33	0.47
10	Leads to break ups in relationships and marriages	4	0.53	3.90	0.77	4.51	0.50
11	Leads to brainwashing of individuals	3.83	1.02	3.93	0.83	4.38	0.56
12	Leads to diseases such as Tennis elbow	3.84	0.77	4.10	0.67	4.33	0.55
13	Has brought high levels of insecurity as it makes it easier for terrorist to communicate through social media	4.25	0.53	3.69	0.93	4.74	0.43
14	Leads to time wastage at the expense of other things	4.02	0.59	3.76	1.12	4.40	0.49
15	It has given a viable platform for hate speech	3.95	0.92	3.53	0.98	4.33	0.47
16	Has facilitated negative ethnicity	3.74	0.92	3.54	1.08	4.14	0.55
	Aggregate Mean SD	3.92	0.86	3.72	0.98	4.41	0.53

Table 2 (a)-one sample *t* test results-13-15 years

P value and statistical significance:

The two-tailed P value is less than 0.0001

By conventional criteria; this difference is considered to be extremely statistically significant.

Confidence interval:

The hypothetical mean is 0.0000

The actual mean is 3.9200

The difference between these two values is 3.9200

The 95% confidence interval of this difference:

From 3.8294 to 4.0106

Intermediate values used in calculations:

$t = 92.2459$

$DF = 15$

standard error of difference = 0.042

Table 2(b) - one sample *t* test results-15-17 Years

P value and statistical significance:

The two-tailed P value is less than 0.0001

By conventional criteria; this difference is considered to be extremely statistically significant.

Confidence interval:

The hypothetical mean is 0.0000

The actual mean is 3.7269

The difference between these two values is 3.7269

The 95% confidence interval of this difference:

From 3.6097 to 3.8440

Intermediate values used in calculations:

$t = 67.8014$

DF = 15

standard error of difference = 0.045

Table 2(c). One sample t test results-17-19 Years

P value and statistical significance:

The two-tailed P value is less than 0.0001

By conventional criteria; this difference is considered to be extremely statistically significant.

Confidence interval:

The hypothetical mean is 0.0000

The actual mean is 4.4100

The difference between these two values is 4.4100

The 95% confidence interval of this difference:

From 4.3191 to 4.5009

Intermediate values used in calculations:

$t = 103.3720$

DF = 15

standard error of difference = 0.043

The above table 2 describes the Awareness of Risks of Using Social Media among the adolescents. From the table it is found that among the adolescents of the age group 13-15 years the Awareness of Risks of Using Social Media of favorable reflections are

- Social media has brought high levels of insecurity as it makes it easier for terrorist to communicate through social media.

- Social media have increased cyber bullying.
- Takes a lot of money buying data bundles and better phones that can browse faster and that have wider screens
- Leads to break ups in relationships and marriages

With regard to the age group of 15-17 years

- Many young people end up wasting a lot of their time on games and chatting on social networks
- Leads to diseases such as Tennis elbow
- Social media have increased cyber bullying.

With regard to the age group of 17-19 years

- Social media brought high levels of insecurity as it makes it easier for terrorist to communicate through social media
- Due to social media, many young people have been accidentally introduced to pornographic web content.
- Many young people end up wasting a lot of their time on games and chatting on social networks

Found to be of higher order positive opinions regarding the risks of using Social media.

The null hypothesis is rejected for the age groups of 13-15, 15-17, and 17-19 years respectively. Therefore the Difference of opinions are significant for all the age groups of adolescents. There is no similarity among the opinions regarding the risks of using Social media.

Objective 4: To examine the uses and gratifications of social media among the adolescents in Karnataka state.

Table 4		13-15 Years		15-17 Years		17-19 Years	
Benefits of Using of Social Media		Mean	SD	Mean	SD	Mean	SD
1	I prefer social media because my message is received in real time.	4.31	0.55	3.88	0.64	4.21	0.41
2	Sending an e-mail is faster than writing a letter.	4.39	0.65	4.18	0.79	4.37	0.48
3	In social media a reply is received almost immediately as opposed to old traditional methods.	4.45	0.73	4.11	0.85	4.44	0.49

4	Social media enables individuals to know if their messages have reached their recipient or not.	4.06	0.58	4.01	0.80	4.23	0.43
5	Social media are convenient since individuals are always connected thanks to mobile phones.	4.23	0.76	4.12	1.02	4.43	0.49
6	Social media are less expensive as opposed to old traditional methods.	4.24	0.76	3.85	0.87	4.32	0.47
7	Social media are insecure as compared to old traditional methods.	3.96	1.08	4.10	1.00	4.25	0.72
8	With social media I feel independent as in I don't need an adult to supervise me when am using for instance my mobile phone.	4.04	0.83	4.02	0.94	4.20	0.94
9	Social media elevates my social status and earns me respect among my peers, since I have many followers both in Face book and Twitter.	4.13	0.93	4.07	0.98	4.24	0.95
10	Social media helps me relieve stress because when I post the stressor friends and family post comforting comments	4.14	0.98	4.02	1.07	4.16	0.86
11	Social networks help me maintain contacts with old friends and create new friends.	4.20	0.88	3.89	1.14	4.07	0.77
12	Social media have made planning easier. I just need to post in my wall any event and all my friends can view and decide to attend or not to.	3.91	0.88	3.89	0.89	4.00	0.93
13	Social media saves me cost on travelling to see family and friends.	4.01	1.10	3.87	0.88	3.87	0.79
14	Internet has made things easier for meat school since I get my assignments via SMS and after doing them I send via e-mail.	4.23	0.76	3.72	1.15	3.91	1.25
15	Social media has reduced my cost of purchasing stationery	4.26	0.76	3.73	1.03	3.93	0.80
	Aggregate Mean and SD	4.16	0.80	3.96	0.92	4.19	0.70

Table 4.1- One sample *t* test results 13-15 years

P value and statistical significance:

The two-tailed P value is less than 0.0001

By conventional criteria; this difference is considered to be extremely statistically significant.

Confidence interval:

The hypothetical mean is 0.0000

The actual mean is 4.1631

The difference between these two values is 4.1631

The 95% confidence interval of this difference:

From 4.0817 to 4.2445

Intermediate values used in calculations:

$t = 109.0250$

DF = 15

standard error of difference = 0.038

Table 4.2-One sample *t* test results-15-17 Years

P value and statistical significance:

The two-tailed P value is less than 0.0001

By conventional criteria; this difference is considered to be extremely statistically significant.

Confidence interval:

The hypothetical mean is 0.0000

The actual mean is 3.9619

The difference between these two values is 3.9619

The 95% confidence interval of this difference:

From 3.8883 to 4.0354

Intermediate values used in calculations:

$t = 114.8402$

DF= 15

standard error of difference = 0.034

Table 4.3-One sample *t* test results

P value and statistical significance:

The two-tailed P value is less than 0.0001

By conventional criteria; this difference is considered to be extremely statistically significant.

Confidence interval:

The hypothetical mean is 0.0000

The actual mean is 4.1888

The difference between these two values is 4.1888

The 95% confidence interval of this difference:

From 4.0898 to 4.2877

Intermediate values used in calculations:

$t = 90.2168$

DF= 15

standard error of difference = 0.046

The above objective is designed examine the uses and gratifications of social media among the adolescents

The uses, gratifications and benefits of social media among the adolescents are listed as

- Prefer social media because my message is received in real time.
- Sending an e-mail is a lot faster than writing a letter.
- In social media a reply is received almost immediately as opposed to old traditional methods.
- Social media enables individuals to know if their messages have reached their recipient or not.
- Social media are convenient since individuals are always connected thanks to mobile phones.
- Social media are less expensive as opposed to old traditional methods.
- Social media are insecure as compared to old traditional methods.
- With social media I feel independent as in I don't need an adult to supervise me when am using for instance my mobile phone.

- Social media elevates my social status and earns me respect among my peers, since I have many followers both in Face book and Twitter.
- Social media helps to relieve stress
- Social networks help to maintain contacts with old friends and create new friends.
- Social media have made planning easier, just need to post in my wall any event and all my friends can view and decide to attend or not to.
- Social media saves the cost on travelling to see family and friends.
- Internet has made things easier for school assignments via SMS and after doing them can be shared via e-mail.
- Social media has reduced my cost of purchasing stationery.

The variables of the respective social media gratifications are measured and analyzed by using the descriptive statistics Mean and SD. The one sample t tests are further administered to examine the significant difference among the opinions of the adolescents of the age group 13-15 years, 15-17 years and 17-19 years respectively to verify the stated hypothesis.

H (0): There is no significant difference in the uses and gratifications of social media among the adolescents in Karnataka state.

H (1): There is a significant difference in the uses and gratifications of social media among the adolescents in Karnataka state.

The above table 4, 4.1, 4.2, 4.3 describes the General opinions on gratifications of Social Media among the adolescents.

From the table it is found that among the adolescents of the age group 13-15 years the major gratifications observed are

- In social media a reply is received almost immediately as opposed to old traditional methods.
- Prefer social media because the message is received in real time.
- Sending an e-mail is a lot faster than writing a letter.
- Social media are less expensive as opposed to old traditional methods
- Social media are convenient since individuals are always connected thanks to mobile phones.

- Internet has made things easier because school assignments after completing them can be shared via e-mail.

Among the adolescents of the age group 15-17 and 17-19 years the major gratifications observed are

- Sending an e-mail is faster than writing a letter
- In social media a reply is received almost immediately as opposed to old traditional methods
- Social media are convenient since individuals are always connected thanks to mobile phones
- In social media a reply is received almost immediately as opposed to old traditional methods.
- Sending an e-mail is faster than writing a letter
- Social media are less expensive as opposed to old traditional methods
- Prefer social media because the message is received in real time.

The null hypothesis is rejected for the age groups 13-15, 15-17 and 17-19 years respectively. Therefore, the opinions regarding the gratifications differ significantly among the adolescents of 13-19 years of age group. In consolidation it may be stated that the uses, benefits and the gratifications are wide spread and meets the versatile needs of the adolescents.

Objective 5: To evaluate the impact of social media on adolescents of Karnataka state.

H(0): There is no significant difference in the impact of social media on adolescents of Karnataka state.

H(1): There is a significant difference in the impact of social media on adolescents of Karnataka state.

Table 5 Compulsive behaviour		13-15 Years		15-17 Years		17-19 years	
		Mean	SD	Mean	SD	Mean	SD
1	Although using Smartphone has brought negative effects on my	4.16	0.89	3.80	0.64	3.91	0.65

	interpersonal relationships, the amount of time spent on Internet remains unreduced						
2	I feel distressed or down once I cease using Smartphone for a certain period of time	3.96	0.90	3.92	0.76	4.18	0.82
3	My life would be joyless hadn't there been Smartphone	3.91	0.82	3.98	0.88	4.26	0.85
4	My recreational activities are reduced due to Smartphone use	4.02	1.04	4	1.06	4.55	0.88
5	I use Smartphone for a longer period of time and spend more money than I had intended	3.91	1.019	3.55	0.99	3.99	0.89
6	I try to spend less time on Smartphone, but the efforts were in vain	3.94	0.88	3.56	0.93	4.16	0.82
7	I feel very vigorous upon Smartphone use regardless of the fatigues experienced	3.97	0.969	3.55	0.84	4.44	0.49
8	Surfing the Smartphone has exercised negative effects on my physical health. For example, viewing Smartphone when crossing the street; fumbling with one's Smartphone while driving or waiting and resulted in danger	3.94	0.94	3.76	1.095	4.28	0.85
9	I fail to control the impulse to use Smartphone	4	0.92	3.55	0.79	3.87	0.62
	Aggregate Mean and SD	3.98	0.93	3.74	0.89	4.18	0.76

Table 5.1

One sample *t* test results 13-15 years

P value and statistical significance:

The two-tailed P value is less than 0.0001

By conventional criteria; this difference is considered to be extremely statistically significant.

Confidence interval:

The hypothetical mean is 0.0000

The actual mean is 3.98

The difference between these two values is 3.98

The 95% confidence interval of this difference:

From 3.9194 to 4.0384

Intermediate values used in calculations:

$t = 154.280$

DF = 8

standard error of difference = 0.025

Table 5.2

One sample *t* test results 15-17 years

P value and statistical significance:

The two-tailed P value is less than 0.0001

By conventional criteria; this difference is considered to be extremely statistically significant.

Confidence interval:

The hypothetical mean is 0.0000

The actual mean is 3.74

The difference between these two values is 3.74

The 95% confidence interval of this difference:

From 3.5917 to 3.8905

Intermediate values used in calculations:

$t = 57.737$

DF = 8

standard error of difference = 0.06480

Table 5.3**One sample *t* test results 17-19 years**

<p>P value and statistical significance:</p> <p>The two-tailed P value is less than 0.0001</p> <p>By conventional criteria; this difference is considered to be extremely statistically significant.</p> <p>Confidence interval:</p> <p>The hypothetical mean is 0.0000</p> <p>The actual mean is 4.18</p> <p>The difference between these two values is 4.18</p> <p>The 95% confidence interval of this difference: From 4.0048 to 4.3597</p> <p>Intermediate values used in calculations:</p> <p>$t = 57.737$</p> <p>DF = 8</p> <p>standard error of difference = 0.06480</p>

Table 6 Functional Impairment		13-15 Years		15-17 years		17-19 years	
		Mean	SD	Mean	SD	Mean	SD
1	I feel aches and soreness in the back or eye discomforts due to excessive Smartphone use	4.06	1.01	3.77	0.89	3.99	0.72
2	I feel tired on daytime due to late-night use of Smartphone	3.9	0.92	3.86	0.98	4.13	0.8
3	I make it a habit to use Smartphone and the sleep quality and total sleep time decreased	3.88	0.91	4.09	0.82	4.28	0.86
4	I have slept less than four hours due to using Smartphone more than once	4.06	1.07	3.96	0.82	3.96	0.82
5	To use Smartphone has exercised	3.9	1.07	3.39	1.02	4.22	0.95

	certain negative effects on my schoolwork or job performance						
6	I find myself indulged on the Smartphone at the cost of hanging out with friends	3.77	0.94	3.88	1.23	3.96	0.83
7	My interaction with family members is decreased on account of Smartphone use	3.85	0.96	4.06	1.13	4.12	0.93
8	I need to spend an increasing amount of time on Smartphone to achieve same satisfaction as before	3.83	0.96	3.77	0.7	3.99	0.72
	Aggregate Mean and SD	3.90	0.98	3.84	0.95	4.081	0.83

Table 6.1

One sample *t* test results 13-15 years

<p>P value and statistical significance: The two-tailed P value is less than 0.0001 By conventional criteria; this difference is considered to be extremely statistically significant.</p> <p>Confidence interval: The hypothetical mean is 0.0000 The actual mean is 3.9063 The difference between these two values is 3.9063 The 95% confidence interval of this difference: From 3.8194 to 3.9931</p> <p>Intermediate values used in calculations: $t = 106.323$ $DF = 7$ standard error of difference = 0.03674</p>
--

Table 6.2

One sample t test results 15-17 years

P value and statistical significance:

The two-tailed P value is less than 0.0001

By conventional criteria; this difference is considered to be extremely statistically significant.

Confidence interval:

The hypothetical mean is 0.0000

The actual mean is 3.8475

The difference between these two values is 3.9063

The 95% confidence interval of this difference:

From 3.6635 to 4.0315

Intermediate values used in calculations:

$t = 49.440$

$DF = 7$

standard error of difference = 0.07782

Table 6.3

One sample t test results 17-19 years

P value and statistical significance:

The two-tailed P value is less than 0.0001

By conventional criteria; this difference is considered to be extremely statistically significant.

Confidence interval:

The hypothetical mean is 0.0000

The actual mean is 4.0813

The difference between these two values is 4.0813

The 95% confidence interval of this difference:

From 3.9771 to 4.1854

Intermediate values used in calculations:

$t = 92.640$

$DF = 7$

standard error of difference = 0.04406

Table 7 With drawl Behaviour		13-15 Years		15-17 years		17-19 years	
		Mean	SD	Mean	SD	Mean	SD
1	I feel restless and irritable when the Smartphone is Unavailable.	3.74	0.87	3.96	0.67	4.07	0.77
2	I feel uneasy once I stop Smartphone for a certain period Of time.	4.05	1	4.3	0.88	4.38	0.88
3	I cannot have meal without Smartphone use	3.71	0.93	3.7	0.96	4.48	0.88
4	The idea of using Smartphone comes as the first thought On mind when waking up each morning.	3.88	1.03	4.21	0.78	4.19	0.83
5	I feel missing something after stopping Smartphone for a certain period of time	3.84	0.94	4.12	0.74	4.09	0.78
6	I feel the urge to use my Smartphone again right after I Stopped using it.	3.86	0.9	3.96	0.94	4.17	0.82
Aggregate Mean and SD		3.85	0.94	4.042	0.82	4.23	0.83

Table 7.1 One sample *t* test results 13-15 years

<p>P value and statistical significance:</p> <p>The two-tailed P value is less than 0.0001</p> <p>By conventional criteria; this difference is considered to be extremely statistically significant.</p> <p>Confidence interval:</p> <p>The hypothetical mean is 0.0000</p> <p>The actual mean is 3.8467</p> <p>The difference between these two values is 3.8467</p> <p>The 95% confidence interval of this difference: From 3.7201 to 3.9732</p> <p>Intermediate values used in calculations:</p> <p>$t = 78.123$</p> <p>$DF = 5$</p> <p>standard error of difference = 0.04924</p>
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Table 7.2 One sample *t* test results 15-17 years

<p>P value and statistical significance:</p> <p>The two-tailed P value is less than 0.0001</p> <p>By conventional criteria; this difference is considered to be extremely statistically significant.</p> <p>Confidence interval:</p> <p>The hypothetical mean is 0.0000</p> <p>The actual mean is 4.0417</p> <p>The difference between these two values is 4.0417</p> <p>The 95% confidence interval of this difference: From 3.8160 to 4.2674</p> <p>Intermediate values used in calculations:</p> <p>$t = 46.031$</p> <p>$DF = 5$</p> <p>standard error of difference = 0.0878</p>

Table 7.3 One sample t test results 17-19 years

<p>P value and statistical significance:</p> <p>The two-tailed P value is less than 0.0001</p> <p>By conventional criteria; this difference is considered to be extremely statistically significant.</p> <p>Confidence interval:</p> <p>The hypothetical mean is 0.0000</p> <p>The actual mean is 4.2300</p> <p>The difference between these two values is 4.2300</p> <p>The 95% confidence interval of this difference: From 4.0573 to 4.4027</p> <p>Intermediate values used in calculations:</p> <p>t = 62.964</p> <p>DF = 5</p> <p>standard error of difference = 0.06718</p>
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	Table 8 Tolerance thresh hold Behaviour	13-15 Years		15-17 years		17-19 years	
		Mean	SD	Mean	SD	Mean	SD
1	I find that I have been hooking on Smartphone longer and longer	3.37	0.96	3.68	0.47	3.57	0.72
2	I have increased substantial amount of time using Smartphone per week in recent 12 months	3.38	0.91	3.38	0.91	3.78	0.92
3	I was told more than once that I spent too much time on Smartphone	3.67	1.13	3.84	0.67	3.71	0.99
	Aggregate Mean and SD	3.47	1	3.63	0.68	3.68	0.88

Table 8.1 One sample t test results 13=15 years

<p>P value and statistical significance:</p> <p>The two-tailed P value is less than 0.0001</p> <p>By conventional criteria; this difference is considered to be extremely statistically significant.</p> <p>Confidence interval:</p> <p>The hypothetical mean is 0.0000</p> <p>The actual mean is 3.4733</p> <p>The difference between these two values is 3.4733</p> <p>The 95% confidence interval of this difference: From 3.0501 to 3.8966</p> <p>Intermediate values used in calculations:</p> <p>$t = 35.307$</p> <p>$DF = 2$</p> <p>standard error of difference = 0.09838</p>
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Table 8.2 One sample t test results 15-17 years

<p>P value and statistical significance:</p> <p>The two-tailed P value is less than 0.0001</p> <p>By conventional criteria; this difference is considered to be extremely statistically significant.</p> <p>Confidence interval:</p> <p>The hypothetical mean is 0.0000</p> <p>The actual mean is 3.6333</p> <p>The difference between these two values is 3.6333</p> <p>The 95% confidence interval of this difference: From 3.0532 to 4.2134</p> <p>Intermediate values used in calculations:</p> <p>$t = 35.307$</p> <p>$DF = 2$</p> <p>standard error of difference = 0.13482</p>
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Table 8.3 One sample t test results 17-19 years

P value and statistical significance:

The two-tailed P value is less than 0.0001

By conventional criteria; this difference is considered to be extremely statistically significant.

Confidence interval:

The hypothetical mean is 0.0000

The actual mean is 3.6333

The difference between these two values is 3.6867

The 95% confidence interval of this difference:

From 3.4210 to 3.9523

Intermediate values used in calculations:

$t = 35.307$

$DF = 2$

standard error of difference = 0.06173

The above objective is designed evaluate the impact of social media on adolescents of Karnataka state. The impact of Social media on adolescents is studied with reference to the dimensions' like

- **Compulsive behaviour**
- Functional Impairment
- With drawl Behaviour
- Tolerance thresh hold Behavior

Among the age groups of 13-19 years.

The compulsive behaviour is studied based on the variables like

- Although using Smartphone has brought negative effects on my interpersonal relationships, the amount of time spent on Internet remains unreduced
- Feel distressed or down once I cease using Smartphone for a certain period of time

- My life would be joyless hadn't there been Smartphone
- My recreational activities are reduced due to Smartphone use
- I use Smartphone for a longer period of time and spend more money than I had intended
- I try to spend less time on Smartphone, but the efforts were in vain
- I feel very vigorous upon Smartphone use regardless of the fatigues experienced
- Surfing the Smartphone has exercised negative effects on my physical health. For example, viewing Smartphone when crossing the street; fumbling with one's Smartphone while driving or waiting and resulted in danger
- I fail to control the impulse to use Smartphone

The factors of functional impairment are listed as

- I feel aches and soreness in the back or eye discomforts due to
- excessive Smartphone use
- I feel tired on daytime due to late-night use of Smartphone
- I make it a habit to use Smartphone and the sleep quality and total
- sleep time decreased
- I have slept less than four hours due to using Smartphone more than
- once
- To use Smartphone has exercised certain negative effects on my schoolwork or job performance
- I find myself indulged on the Smartphone at the cost of hanging out
- with friends
- My interaction with family members is decreased on account of Smartphone use
- I need to spend an increasing amount of time on Smartphone to achieve same satisfaction as before

The with drawl Behaviour is categorized into the variables like

- I feel restless and irritable when the Smartphone is Unavailable.
- I feel uneasy once I stop Smartphone for a certain period of time.
- I cannot have meal without Smartphone use

- The idea of using Smartphone comes as the first thought on mind when waking up each morning.
- I feel missing something after stopping Smartphone for ascertain period of time
- I feel the urge to use my Smartphone again right after topped using it.

The tolerance threshold behavior is studied based on the variables like

- I find that I have been hooking on Smartphone longer and longer
- I have increased substantial amount of time using Smartphone per week in recent 12 months
- I was told more than once that I spent too much time on Smartphone

Are measured on the 5 point Likert scale and the respective Mean and SD are computed followed by the respective one way Anova tables, in support of the stated hypothesis with regard to age groups of 13-15 years, 15-17 year and 17-19 years respectively. The hypothesis is framed for the generic purpose of adolescents and further subdivided into three divisions accordingly for the age groups 13-15 years, 15-17 years and 17-19 years. The hypothesis is verified at 99% of level of confidence.

With regard to the compulsive behaviour it is found that the adolescents of the age group 17-19 years recreational activities of the adolescents of the age group 17-19 are reduced due to the usage of Smartphone and feel very vigorous upon Smartphone use regardless of the fatigues experienced, followed by using Smartphone has brought negative effects on interpersonal relationships and the amount of time spent on Internet remains unreduced (13-15 years), felt distressed or down once the adolescents cease using Smartphone for a certain period of time approve that the life would be joyless hadn't there been Smartphone.

Among the variables of Functional Impairment, the adolescents of the age group 17-19 years make it a habit to use Smartphone and the sleep quality and total sleep time decreased, followed by the interaction with family members is decreased on account of Smartphone use. The use of Smartphone has exercised certain negative effects on the schoolwork or job performance and feels tired on daytime due to late-night use of Smartphone.

The adolescents of the age group 13-15 and 15-17 years it is observed that the interaction with family members is decreased on account of Smartphone use, slept less than four hours due to using Smartphone more than once, make it a habit to use Smartphone and the sleep quality and total sleep time decreased feel aches and soreness in the back or eye discomforts due to excessive Smartphone use.

Among the variables of with drawl Behaviour the adolescents of the age group 17-19 years' opinions that they cannot have meal without Smartphone use, feel uneasy once they stop Smartphone for a certain period. Among the adolescents of the age group 13-17 years the withdrawal behaviour is witnessed in the form of uneasy feeling, the idea of using Smartphone comes as the first thought On mind when waking up each morning.

Among the variables of tolerance threshold behaviour the adolescents of the age group 17-19 years accept the fact that they have increased substantial amount of time using Smartphone per week in recent 12 months and told more often that they spent too much time on Smartphone.

The null hypothesis is rejected among all the age groups of adolescents and with regard to the dimensions of

- **Compulsive behavior**
- Functional Impairment
- With drawl Behavior
- Tolerance thresh hold Behavior

Therefore, the opinions regarding the impact of social media on adolescents differ significantly at 99% of level of confidence and the impact is widespread & manifold in nature among the adolescents of the age group 13-19 years.

Chapter 4:

Summary of Findings and Conclusion

Chapter - 4

Summary of Findings and Conclusion

The primary data for the study of Impact of Social Media on Adolescents in Karnataka State was collected from a sample of 300 adolescents across the six major cities of Karnataka state that includes Mangalore, Mysore, Bangalore, Hubli, Davanagere and Tumkur respectively. The data was collected with the help of a structured questionnaire that was administered to the adolescents at their school/college premises as well as nearby places with the density of private coaching centres.

The summary of the findings is presented in this chapter based on the objectives set for the study.

- The respondents of the study consist of 65% of male and 35% of female adolescents.
- The respondents of the study consist of 71.3 % of the adolescents of the age group 15-19 years.
- The respondents of the study consist of 80.6 % of the adolescents whose parent's income lies in the range of 3 lacs to 5 lacs.

Findings with respect to the objective to understand the relationship between the social media and adolescent development in Karnataka state.

- From the study it is found that the usage of Smart phone among the adolescents is a regular and routine phenomenon.
- From the study it is found that 62.3% of the adolescents are attracted towards social media through the means of Cell/Smart Phone. The phenomenon is largely prevalent among the respondents of female adolescents (63.8%), than the male (61.5%) adolescent students. At the microscopic perspective the male (43%) and the female respondents of the age group 13-17 (45.8%)
- From the study it is found that 40.7 % of the adolescents are attracted towards social media through the means of iPod or Tablet. The phenomenon is largely prevalent among the respondents of female adolescents (47.6%), than the male (36.9%) adolescent students. At the microscopic perspective the female (34.2%) and the male (25.7%) respondents of the age group 13-17 years accepts that the

adolescents are more prone to wards iPod or Tablet as a means of primary source of accessing Social media.

- The phenomenon of attraction towards the social media is largely prevalent among the respondents of male adolescents (40.5 %), than the female (35.2%) adolescent students. At the microscopic perspective the male (29.7%) and the female (25.7%) respondents of the age group 13-17 years accepts that the adolescents are more prone to wards Library or public computer as a means of primary source of accessing Social media.
- From the study it is found that 92.7 % of the adolescents are attracted towards social media because of games. The phenomenon is largely prevalent among the respondents of male adolescents (95.4 %), than the female (87.6%) adolescent students. At the microscopic perspective the male (62%) and the female (72.4 %) respondents of the age group 13-17 years accepts that the adolescents are more prone to wards social media because of Games.
- From the study it is found that 72.3 % of the adolescents are attracted towards social media because of Pictures. The phenomenon is largely prevalent among the respondents of male adolescents (69.2 %), than the female (78.1%) adolescent students. At the microscopic perspective the male (46.7%) and the female (54.3 %) respondents of the age group 13-17 years accepts that the adolescents are more prone to wards social media because of Pictures.
- From the table it is found that 74.3% of the adolescents are attracted towards social media because of Instant access to information. The phenomenon is largely prevalent among the respondents of male adolescents (74.9 %), than the female (73.3%) adolescent students. At the microscopic perspective the male (46.1 %) and the female (45.7 %) respondents of the age group 13-17 years accepts that the adolescents are more prone to wards social media because of Instant access to information.
- From the table it is found that 85.3% of the adolescents are attracted towards social media because of Videos. The phenomenon is largely prevalent among the respondents of male adolescents (90.3 %), than the female (76.2%) adolescent students. At the microscopic perspective the male (56.9 %) and the female (60.9 %) respondents of the age group 13-17 years are attracted by social media because of videos.

- The phenomenon of viewing others status is largely prevalent among the respondents of male adolescents (70.8 %), than the female (78.1%) adolescent students. At the microscopic perspective the male (39.5 %) and the female (60.2 %) respondents of the age group 13-17 years accepts that the adolescents are more prone to wards social media with the intentions of viewing others' status.
- From the study it is found that the male (50.8 %) and the female (63.8 %) respondents of the age group 13-17 years accepts that the adolescents are more prone to wards social media because of Sharing/Posting links.

Findings with respect to the objective to assess the access to social media among the adolescents in Karnataka state

- From the study it is found that the Facebook (Mean>4.00) is largely accessed by using cell phones, iPad or Tablet and Personal Computer (Laptop, Desktop) among the adolescents followed by twitter, you tube, Google+ and Instagrams and Whatsapp.
- From the study it is found that the Whatsapp (Mean-5.00) is largely accessed by using Library/Public Computer among the adolescents followed by Face book, You tube, Facebook, Instagrams and Google +

Findings with respect to the objective to analyze the social media use patterns among the adolescents in Karnataka state.

The study it is found that General opinions on using of Social Media among the adolescents of the age group 13-19 years the major general opinions of favorable reflections are

- Love watching videos whenever I am connected to the internet
- Download music videos and movies from the internet a lot.
- enjoy browsing/surfing the internet
- With regard to the age group 15-17 years of adolescents
- Download music videos and movies from the internet a lot
- Online games are addictive and I play them whenever I have an opportunity
- Love watching videos whenever I am connected to the internet
- Always looped to get to know almost everything that happens and almost instantly, thanks to technology.

- With regard to the age group 17-19 years of adolescents
- feel am always looped because I get to know almost everything that happens and almost instantly, thanks to technology
- Social networks enable me to remain connected with my family and friends
- Online games are addictive and I play them whenever I have an opportunity

Findings with respect to the objective to examine the uses and gratifications of social media among the adolescents in Karnataka state.

From the study it is found that with respect to the Awareness of Risks of Using Social Media of favorable reflections are identified and reported as,

- Social media has brought high levels of insecurity as it makes it easier for terrorist to communicate through social media.
- Social media have increased cyber bullying.
- Takes a lot of money buying data bundles and better phones that can browse faster and that have wider screens
- Leads to break ups in relationships and marriages

With regard to the age group of 15-17 years

- Many young people end up wasting a lot of their time on games and chatting on social networks
- Leads to diseases such as Tennis elbow Social media have increased cyber bullying

From the table it is found that among the adolescents of the age group 13-19 years the major gratifications observed are identified as,

- In social media a reply is received almost immediately as opposed to old traditional methods.
- Prefer social media because the message is received in real time.
- Sending an e-mail is a lot faster than writing a letter.
- Social media are less expensive as opposed to old traditional methods
- Social media are convenient since individuals are always connected thanks to mobile phones.
- Internet has made things easier because school assignments after completing them can be shared via e-mail.

- Prefer social media because my message is received in real time.
- Sending an e-mail is a lot faster than writing a letter.
- In social media a reply is received almost immediately as opposed to old traditional methods.
- Social media enables individuals to know if their messages have reached their recipient or not.
- Social media are convenient since individuals are always connected thanks to mobile phones.
- Social media are less expensive as opposed to old traditional methods.
- Social media are insecure as compared to old traditional methods.
- With social media I feel independent as in I don't need an adult to supervise me when am using for instance my mobile phone.
- Social media elevates my social status and earns me respect among my peers, since I have many followers both in Face book and Twitter.
- Social media helps to relieve stress
- Social networks help to maintain contacts with old friends and create new friends

Findings with respect to the objective to evaluate the impact of social media on adolescents of Karnataka state.

The impact is studied with regard to the perspectives to wards

- Compulsive behaviour
- Functional Impairment
- With drawl Behaviour
- Tolerance thresh hold Behavior

From the study it is found that, With regard to the compulsive behaviour it is found that the adolescents of the age group 17-19 years recreational activities of the adolescents of the age group 17-19 are reduced due to the usage of Smartphone and feel very vigorous upon Smartphone use regardless of the fatigues experienced, followed by using Smartphone has brought negative effects on interpersonal relationships and the amount of time spent on Internet remains unreduced (13-15 years), felt distressed or down once the adolescents cease using Smartphone for a certain period of time.

With regard to the Functional Impairment the adolescents of the age group 17-19 years make it a habit to use Smartphone and the sleep quality and total sleep time decreased, followed by the interaction with family members is decreased on account of usage of Smartphones.

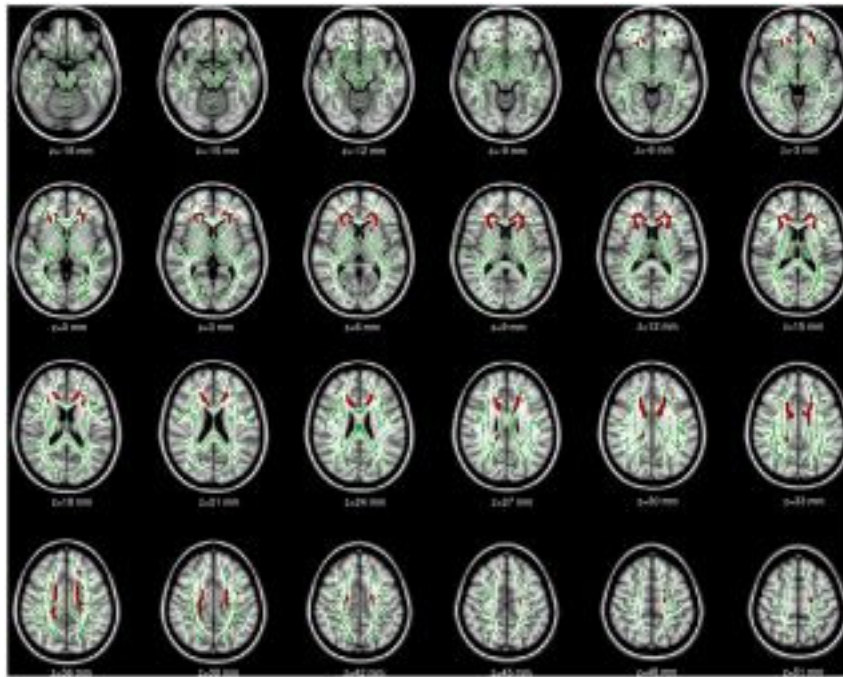
With reference to the withdrawal Behaviour among the adolescents of the age group 17-19 years' opinions that they cannot have meal without Smartphone use, feel uneasy once they stop Smartphone for a certain period. Among the adolescents of the age group 13-17 years the withdrawal behaviour is witnessed in the form of uneasy feeling.

From the study it is found that the tolerance threshold behaviour the adolescents of the age group 17-19 years accept the fact that they have increased substantial amount of time using Smartphone per week.

Conclusion

We are all aware about Apple founder Steve Jobs who never allowed access to any electronic gadgets to his children. I am sure this explains the negative impact. The Social media in the aggregate sense are found to be having a profound impact on the social and psychological well-being of the adolescents. The current findings of the research may help fill the knowledge gap amongst the educationists, policy makers, psychologists, communication researchers and others associated with the social media studies to spread the awareness of the ill effects of being addicted to social media and internet usage in the long-term. The findings further pose a serious threat for the future decades of population as the current adolescents are being stressed both socially and psychologically. The Social media has given a new understanding to friendship, the respondents seem to like online friends to the real ones. Many newspapers have reported about the serious consequences of online games like “Pokémon” and “Blue whale”, many kids even ended their lives. Some global solution to this epidemic is Media Literacy, media literacy has been introduced in schools in the USA, Canada and Australia and some countries in Europe, the idea here is critical thinking skills is required before engaging with media and through digital and media literacy intervention programmes the students may be made aware of the consequences.

As stated by Tennyson in the last line of his poem *Ulysses*, media educators should lead their students with the mission, “to strive, to seek, to find, and not to yield”.



Source: Lin, Zhou, L ei, et al.

Red areas designate abnormal white matter in internet addicted kids.

In a welcome move, it is reported that several private schools in Bengaluru have started issuing advisories to parents asking them to restrict the time their children spend on mobile phones and electronic gadgets. It is the start of the academic year and schools are making early efforts to stop children from getting addicted. Many schools have instructed parents to set time limits on their wards' phone usage. This is after the classification of “gaming addiction” as a mental disorder by World Health Organisation (WHO). The WHO gave a public declaration that “a pattern of persistent or recurrent gaming behaviour” that becomes so extensive that it “takes precedence over other life interests”. Gaming disorder is defined in the WHO draft’s 11th Revision of the International Classification of Diseases (ICD-11) as a pattern of gaming behavior (“digital-gaming” or “video-gaming”) characterized by impaired control over gaming, increasing priority given to gaming over other activities to the extent that gaming takes precedence over other interests and daily activities, and the continuation or escalation of gaming despite the occurrence of negative consequences.

It further states that this gaming disorder results in significant impairment in personal, family, social, educational, occupational or other important areas of functioning. This declaration by WHO is in line with the research findings which is

finding a definite relation to online activity and adolescent mental health. However, The Society for Media Psychology and Technology, a division of the Association American Psychiatric Association stuck to its previous stand explaining lack of research evidence to categorize gaming addiction as a "unique mental disorder." Major research in this area, cut across different geography should be encouraged which in turn could possibly reveal significant evidence for all these agencies to come to a consensus. As such disagreement only creates confusion over how to approach many innocent deaths over the last decade. As Gianfranco Polizzi, PhD Researcher in the Department of Media at Communications at London School of Economics says, "Parents have a responsibility to find a balance between protecting their children from online risks and allowing them to pursue online opportunities. They also need critical digital literacy themselves to benefit from engaging reflectively with digital media and to be better educators at home".

Hence, there is a need of collaborative approach from teachers, parents and policy makers to tackle this challenge. Hence it is concluded that the stakeholders need to understand first the nature scope and impact of the social media in order to design effective ways and means to address the complex problems and threats generated through the use and abuse of new media. Accurate understandings of the impact help practitioners such as Parents, Policymakers, Psychiatrists, Doctors and Counselors to reform the behavioral problems of the adolescents so that the wellness of the society is protected from the ill effects and impact of social media on the young population of the country.

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Annexures

Annexures

Questionnaire

Impact of Social Media on Adolescents in Karnataka State: An Empirical Study

Demographic Profile

Gender: Male Female

Age:

Education:

Parents Income:

1 What is the primary source that you use for social media

1	Cell/Smart Phone	
2	iPad or Tablet	
3	Personal Computer (Laptop, Destop)	
4	Library or public computer	

2. What attracts you to use social media? (Select all that apply.)

1	Games	
2	Applications for smart phones	
3	Pictures	
4	Discussion boards	
5	Instant access to information	
6	Videos	
7	Communicating with family and friends	
8	Viewing others' status	
9	Sharing/Posting links	

3. Mention the most preferable Social media

Social Media	Very often	Often	Moderate	Less often	Rarely
Face book					
Twitter					
MySpace					
YouTube					
Google +					
Blogs					
Instagram					
Linked In					
WhatsApp					

4. Have you heard of dangerous games like?

	yes	No
Pokémon-go		
Blue whale		

5. If yes have you played/Would you like to play the game?

Yes	No
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6. What are the other activities which makes you happy?

7. Please select your appropriate opinion regarding the usage, Awareness of Risks and benefits of using Social Media

{SA=Strongly Agree, A=Agree, CS=Cannot say, DA=Disagree, SDA=Strongly Disagree}

7.1 General opinions on Using of Social Media	SA	A	CS	DA	SDA
I love watching videos whenever am connected to the internet.					
Online games are addictive and I play them whenever I have an opportunity.					
I download music videos and movies from the internet a lot.					
I frequently upload and share videos and photographs in social networks such as, in Face book, Twitter, Instagram, Whatsapp etc.					
I always enjoy browsing/surfing the internet.					
I love visiting social networks because I get to meet new people					
Social networks enables me to remain connected with my family and friends.					
Am always on the phone/computer chatting with online friends.					
My friends and I have forums/groups where we post messages to each other or the whole group.					
I use my mobile phone for texting and I text a lot.					
Social networks make it easy for me to talk to someone I have never met before.					
I use the internet for doing my assignments and enriching class notes.					

I feel am always looped because I get to know almost everything that happens and almost instantly, thanks to technology.					
Social media have made access to class notes and other relevant information easier because of tools like Drop box and Google Drive					
Skype and other video conferencing tools enable me to have discussion with my lecturers and group members from anywhere in the world.					

7.2 Awareness of Risks of Using Social Media	SA	A	CS	DA	SDA
Social media have increased cyber bullying.					
Due to social media, many young people have been accidentally introduced to pornographic web content.					
Social have made many youth lazier.					
The youth today are physically antisocial due to social media.					
Many adolescents are having sex due to early exposure from social media and through peer influence.					
As a result of social media many unsuspecting youths and adolescents have fallen for sex predators.					
Many young people end up wasting a lot of their time on games and chatting on social networks.					

Mobile phones and computers have become very addictive such that it is very hard for people to live without.					
Takes a lot of money buying data bundles and better phones that can browse faster and that have wider screens.					
Leads to break ups in relationships and marriages					
Leads to brainwashing of individuals					
Leads to diseases such as Tennis elbow					
Has brought high levels of insecurity as it makes it easier for terrorist to communicate through social media					
Leads to time wastage at the expense of other things					
It has given a viable platform for hate speech					
Has facilitated negative ethnicity					

7.3 Benefits of Using of Social Media	SA	A	CS	DA	SDA
I prefer social media because my message is received in real time.					
Sending an e-mail is a lot faster than writing a letter.					
In social media a reply is received almost immediately as opposed to old traditional methods.					
Social media enables individuals to know if their messages have reached their recipient or not.					

Social media are difficult and time consuming.					
Social media are convenient since individuals are always connected thanks to mobile phones.					
Social media are less expensive as opposed to old traditional methods.					
Social media are insecure as compared to old traditional methods.					
With social media I feel independent as in I don't need an adult to supervise me when am using for instance my mobile phone.					
Social media elevates my social status and earns me respect among my peers, since I have many followers both in Face book and Twitter.					
Social media helps me relieve stress because when I post the stressor friends and family post comforting comments					
Social networks help me maintain contacts with old friends and create new friends.					
Social media have made planning easier. I just need to post in my wall any event and all my friends can view and decide to attend or not to.					
Social media saves me cost on travelling to see family and friends.					
Internet has made things easier for at school since I get my assignments via SMS and after doing them I send via e-mail.					
Social media has reduced my cost of purchasing stationery					

8. Prevalence of Smartphone addiction (SPAI) symptoms among study participants

Please select your appropriate opinion

8.1 Compulsive behaviour	SA	A	CS	DA	SDA
Although using Smartphone has brought negative effects on my interpersonal relationships, the amount of time spent on Internet remains unreduced					
I feel distressed or down once I cease using Smartphone for a certain period of time					
My life would be joyless hadn't there been Smartphone					
My recreational activities are reduced due to Smartphone use					
I use Smartphone for a longer period of time and spend more money than I had intended					
I try to spend less time on Smartphone, but the efforts were in vain					
I feel very vigorous upon Smartphone use regardless of the fatigues experienced					
Surfing the Smartphone has exercised negative effects on my physical health. For example, viewing Smartphone when crossing the street; fumbling with one's Smartphone while driving or waiting and resulted in danger					
I fail to control the impulse to use Smartphone					

8.2 .Functional Impairment	SA	A	CS	DA	SDA
I feel aches and soreness in the back or eye discomforts due to excessive Smartphone use					
I feel tired on daytime due to late-night use of Smartphone					
I make it a habit to use Smartphone and the sleep quality and total sleep time decreased					
I have slept less than four hours due to using Smartphone more than once					
To use Smartphone has exercised certain negative effects on my schoolwork or job performance					
I find myself indulged on the Smartphone at the cost of hanging out with friends					
My interaction with family members is decreased on account of Smartphone use					
I need to spend an increasing amount of time on Smartphone to achieve same satisfaction as before					

8.3 .With drawl Behaviour	SA	A	CS	DA	SDA
I feel restless and irritable when the Smartphone is unavailable					
I feel uneasy once I stop Smartphone for a certain period of time					
I cannot have meal without Smartphone use					
The idea of using Smartphone comes as the first thought on mind when waking up each morning					
feel missing something after stopping Smartphone for a certain period of time					
I feel the urge to use my Smartphone again right after I stopped using it					

8.4.Tolerance thresh hold Behaviour	SA	A	CS	DA	SDA
I find that I have been hooking on Smartphone longer and longer					
I have increased substantial amount of time using Smartphone per week in recent 12 months					
I was told more than once that I spent too much time on Smartphone					