

A Study on Knowledge and Utilization of Social Media in Elderly People in Whitefield, Bangalore

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Abstract

Background: Elderly people are at risk of social isolation and loneliness. Targeting social isolation in elderly people is a growing public health concern. Social isolation has a detrimental effect on health and well-being.

Social media is the social interaction among people in which they create, share or exchange information and ideas in virtual communities and networks. Technically, it's a group of Internet-based applications. Social media is a two way street that gives you the ability to communicate too. The social media allows the elderly to face more easily the difficulties of modern life, trespassing the limits of their social and emotional isolation, to promote social participation and to enhance intergenerational communication thus achieving a more qualitative living.

Objectives: To assess the knowledge and utilization of social media among the elderly.

Methodology: In this cross sectional study, 140 subjects aged 60 years and above were assessed for knowledge and utilization of social media in Whitefield area, Bangalore for a period of two months (July 2014 - August 2014). A pretested and semi-structured questionnaire was used to collect data. Data was entered in Microsoft Excel spreadsheet, analyzed and was expressed in percentages and proportions.

Results: Among the 140 elderly, 25(17.9%) used social media. 115(82.1%) contributed to Non-users of which : 12(8.6%) did not possess any device; 12(8.6%) were unaware of Internet facilities; 10(7.1%) were aware but the device did not support Internet features; 10(7.1%) were aware having Internet-friendly devices, but did not opt for Internet facilities; 26(18.6%) suffered from health conditions that made use of technology challenging; 45(32.1%) of them used the Internet facilities for purposes other than for social media.

Conclusion: The Non-users (82%) contributed to larger proportion in which there were modifiable groups who required assistance and motivation for usage of social media. Thus there is a need for intervention to improve the usage of social media in elderly population and strengthen their quality of living.

Keywords: Elderly, Social isolation, loneliness, Social media, Social networking sites.

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Introduction

Aging is a natural process. In the words of Seneca: "Old age is an incurable disease", but more recently Sir James Sterling Ross commented: "You do not heal old age. You protect it; you promote it; you extend it". "Old Age" is usually associated with declining faculties, both mental and physical, and a

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reduction in social commitments (including sport participation) of any person.¹ Government of India adopted 'National Policy on Older Persons' in January, 1999. The policy defines 'senior citizen' or 'elderly' as a person who is of age 60 years or above.¹In the recent years, there has been a sharp increase in the number of older persons. By the year 2025, the world will host 1.2 billion people aged 60 and over and rising to 1.9 billion in 2050.² In India, the elderly population (aged 60 years or above) accounted for 7.4% of total population in 2001 and is projected to rise to 12.4% of population by the year 2026.³ According to official population projections, the number of elderly persons will rise to approximately 140 million by 2021.³

More than 75% of elderly males and less than 40% of elderly females live with their spouse. Less than 20% of aged men and about half of the women live with their children. However, with the rapid changes in the social scenario and the emerging prevalence of nuclear family set-ups in India in recent years the elderly people are likely to be exposed to emotional, physical and financial insecurity in the years to come.³

It's a fact that with age people tend to participate in social and community activities far less, they often lose contact with their social network members. This loss of contact is often associated with declines in socio-emotional outcomes, such as feelings of social isolation and increased loneliness. Loneliness and social isolation are closely related, yet distinct, concepts. Loneliness is the subjective experience of negative feelings about levels of social contact; otherwise stated it is the involuntary state of social isolation or the feeling of being alone. Social isolation is the objective experience of the absence of contact with other people, especially the absence of contact with people who provide needed or desired social support.

Social isolation and loneliness is associated with increased mortality, poor self-rated physical health and increased susceptibility to dementia in the general population of older people with the onset of disability. The prevalence of social isolation, combined with the evidence that it can impact on an individual's health and wellbeing, supports the targeting of social isolation as an important public health issue.⁴ Studies have shown that social ties enhance both physical and mental health. One solution to enhance social ties and hence alleviate loneliness and social isolation is to encourage the elderly to participate in social networks. Compared with traditional social networks, an online social network will provide

more extensive kinds of services to people to participate in social activities.

Media is an instrument on communication, like a newspaper or a radio. Social media is a two-way street on communication that gives us also the ability to communicate too. Social media is the social interaction among people in which they create, share or exchange information and ideas in virtual communities and networks.⁵ Furthermore, social media depend on mobile and web-based technologies to create highly interactive platforms through which individuals and communities share, co-create, discuss, and modify user-generated content.⁶ In today's aging world social media are often believed to enhance social connectivity of isolated elderly people (e.g. Ambient Assisted Living (AAL)). Social Media has created a great opportunity for those individuals who fall within the senior citizen and elderly population in terms of increased social interconnection opportunities. Social media, especially through the use of the Internet, is an excellent way in making both existing and new social connections more available to elderly.⁷

Elderly can employ social media outlets to engage in research, and to learn about topics that may be of interest to them. Such activities can lead to the origination of new hobbies, new business ideas and updated health information. Additionally, seniors can also learn about new products, work on their ancestry projects, and almost always learn something new along the way. Another benefit through the use of social media is the ability to access educational opportunities.⁷

Materials and Methods

Study design, setting and duration

A community-based, cross-sectional mixed method study was conducted during July 2014 - August 2014 in Whitefield area, Bangalore.

Sample size and sampling technique:

Based on convenient sampling, the sample size was 140 elderly people.

Study Population

Study subjects comprised of elderly persons aged 60 years and above, living permanently in the study area and were randomly selected during house to house visit.

Study methods:

After taking informed consent, a pretested and semi-structured questionnaire which was modified according to local needs was used to collect data.

Interviewing questionnaire: A pre-designed questionnaire was used to collect information about knowledge and usage of social media. The attributes included are users of social media, device ownership and facilities, usage and non-usage of Internet, reasons of usage and non-usage of social media among Internet users, social media sites used, and modifiable constraints of non-usage of social media. The research method for this paper had two phases. In the first phase, a pilot study was conducted where a series of semi structured interviews were conducted on ten elderly people each lasting 30 to 45 minutes. A summary of the results of the interviews was analyzed. In phase two, the results from the pilot were combined with literature and theory related to online social networking to create a conceptual research model.

Statistical analysis:

Microsoft Excel version 2010 was used to analyze the data. The results are presented in percentages and proportions.

RESULTS

Table 1: Distribution of users of social media among the elderly

Social Media	Category	Number	Percentage (Out of 140)
Users		25	17.9%
Non-Users	Non-usage of Internet	70	50.0%
	Non users of social media among Internet users (Perception related)	45	32.1%
Total		140	100.0%

Among the 140 elderly, 17.9% (25) used social media. 82.1% (115) were Non-users (Table 1).

Analysis on the group of non-users of social media among the 140 elderly persons the factors were: non-usage of Internet - 50% (70), perceptions regarding social media among the Internet users - 32.1% (45).

Table 2: Availability and type of devices used supporting Internet and hence social media usage among the elderly

Description	Type of device	Number	Percentage
Non-availability of device		12	8.6%
Availability of the device	Internet not supported	10	7.1%
	Internet supported	118	84.2%
Internet supported device	Desktop	48*	40.7%*
	Laptop	66*	56%*
	Tablet	34*	28.9%*
	Cell Phone	86*	73.0%*
	SmartTV	11*	9.3%*

*Number of users reported was out of 118 users with Internet supported device

There were 8.6% (N=12) of elderly persons who did not have any device. 128 possessed devices of which: 10 were not Internet supported and 118 were Internet supported devices. The Internet supported devices used were Laptops, Desktops, Tablets, Cellphones and Smart TV of which cellphone (86), laptop (66) and desktop (48) were commonly used (Table 2).

Table 3: Reasons for non-usage of Internet among the elderly

Description	Group Type	Reasons	Number	Percentage (Out of 140)
Non-users of Internet	Non-modifiable (22)	Non-availability of any device	12	8.6%
		Non Internet supported device usage	10	7.1%
	Modifiable (48)	Did not opt for Internet facilities in Internet supporting devices	10	7.1%
		Lack of awareness of Internet facilities	12	8.6%
		Health Related issues preventing use of web-based technology	26	18.6%
Total			70	50.0%

A study on the Internet users showed that 50% (70) of the elderly did not use Internet. The reasons for non-usage of Internet in 140 elderly were non-availability of any device in 8.6% (12) and non-Internet supporting device in 7.1% (10), which comprised of the non-modifiable group. And not opting for Internet facilities in Internet supported devices was found in 7.1% (10), lack of awareness about Internet facilities in 8.6%(12) and health related issues in 18.6%(26) of the elderly. Hence, among the 70 non-users of Internet, 48 belonged to the modifiable group who could be motivated to use Internet and hence social media. (Table 3)

Table 4: Reasons for non-usage of social media among Internet users

Descri- ption	Category	Reasons	Number	Perce- ntage (Out of 45)
Users of Inter- net	Non- users of social media (Modi- fiable group)	Lack of awareness of social media, Personal constraints (considered as waste of time, non-sense, ineffective)	39	86.6%
		Fear or anxiety of adoption of new technology, Perception on difficulty to learn and use social media	38	84.4%
		Structural constraints (Web design is not user-friendly)	29	64%
		Security constraints (Loss of privacy, investment fraud)	33	73%
		Social constraints (Conflict of use by families and friends)	11	24%

Out of 70 Internet users, 45 did not use social media. Lack of awareness and personal constraints (39), security constraints (33), fear or anxiety of adoption of new technology and perception on difficulty to learn and use social media (38), and structural constraints (29) were the most common reasons hindering the use of social media. These 45 Internet users also belonged to the modifiable group who could be motivated to use social media (Table 4).

The study showed that among 25 social media users most common purposes of usage were –To keep in touch with families members – 21 (84%), Social Photo and Video Sharing –19 (76%), Health seeking information– 18(72%), Community Belonging– 17(68%) and Sharing– 18 (72%). (Table 5)

Table 5: Purpose of usage of social media among elderly Internet users

Descri- ption	Cate- gory	Purpose	Numb er	Perce- ntage (Out of 25)
Users of Inter- net	Users of social media	To keep in touch with families members	21	84%
		Social Photo and Video Sharing	19	76%
		Health seeking information	18	72%
		Community Belonging (Search of friends with similar background & characteristics)	17	68%
		Sharing (emotions, stories, ideas, blogs, offering advice and mentoring)	18	72%
		Entertainment (movies, videos, games)	9	36%
		Learning (new online courses, posts, articles, e-books,) to keep in touch or staying up-to-date	8	32%
		Financial interest (to start or grow business, find jobs)	6	24%
		Online shopping	14	56%

Table 6: Commonly used Social Media sites

Names	Number of users	Percentage (Out of 25 social media users)
Facebook	20*	80%
Twitter	17*	68%
WhatsApp	14*	56%
YouTube	09*	36%
Flickr	08*	32%
Flipkart	07*	28%
Quikr	11*	44%
Amazon	08*	32%
Wikis(Wikipedia, wikia)	11*	44%
Skype	16*	64%

*Number of users reported is out of 25 users of social media

Of the 25 users who used social media, a study on the social networking sites used revealed that Facebook (80%), Twitter (68%), Skype (64%) and WhatsApp (56%) were the commonly used social networking sites. YouTube (36%) and Flickr (32%) were commonly used for photo and video sharing. Amazon (32%) and Flipkart (28%) for financial interests, sales and online shopping. Wikis (44%) were used for learning and research. Linkedin (28%) was used for professional networking (finding jobs) (Table 6).

Table 7: Modifiable constraints of Social Media non-usage

Description	Reasons	Number	Percentage
Non-users of Internet (48)	Did not opt for Internet facilities in Internet supporting devices	10	14.3%*
	Lack of awareness of Internet facilities	12	17.1%*
	Health Related issues preventing use of web-based technology	26	37.1%*
Users of Internet: Non-users of social media (45)	Lack of awareness of social media, Personal constraints (considered as waste of time, non-sense, ineffective)	39	86.6%**
	Fear or anxiety of adoption of new technology, Perception on difficulty to learn and use social media	38	84.0%**
	Security constraints (Loss of privacy, investment fraud)	33	73.0%**
	Structural constraints (Web design is not user-friendly)	29	64.4%**
	Social constraints (Conflict of use by families and friends)	11	24.4%**

*The percentage was out of 70 non-users of Internet.

** The percentage was out of 45 users of Internet who did not use social media.

In the study, 93 of the elderly: 48 Internet non-users (Table 3) and 45 Internet users (Table 4) were found to be modifiable groups who could be influenced to use social media.

Of the 70 Internet non-users, 22 were non-modifiable. Of the remaining, 48 constituted the modifiable groups. The main modifiable constraint was health related issues seen in 37.1% of the total Internet non-users. Among the 45 Internet users, lack of awareness (86.6%), fear of adoption of new technology (84%), security constraints (73%) and structural constraints (64.4%) were the key modifiable constraints (Table 7).

Discussion

In the study, high percentage of elderly (84.2%) had devices which support Internet facility for usage of social media (118). Only 50% of elderly used Internet facility (70) and a still smaller percentage of 17.9% used social media (25) which was in contrast with data from other survey report by Pew Internet & American Life Project.⁸ The study of small percentage of usage of social

networks and social media (17.9%) were similar to the findings of Chen Y.⁹

Social Media has created a great opportunity for those individuals who fall within the senior citizen and elderly population in terms of increased social interconnection opportunities which is similar to the findings by Nef T et al and Eggermont S et al.^{10, 11} Online communities allow seniors the opportunity to discuss and exchange experiences with their peers while also gaining social support. However a study by Maier C describes the negative side of ICT-enabled communications.¹² Another study by Eggermont S et al also pleads for the maintenance of non-mediated communication (face-to-face contacts) and for non-technological alternatives in the future.¹¹

In the study regarding devices, out of 118 elderly persons possessing Internet supported devices commonly used devices were cell phone (73%), laptop (56%) and tablet (40.7%). A study conducted by Uchida H et al concluded that elderly were more interested in using cell phone than desktop similar to findings in this study. User-friendly devices can help elderly to engage in social media. Redesign of the equipment combining features of a touch screen and a dictionary for the elderly would facilitate ease of use of devices as supported by Uchida H et al.¹³

In the study regarding non-usage of Internet, about 18.6% (i.e. 26) had various health related issues which prevented them using Internet and henceforth social networking sites (SNS) in spite of availability of Internet supporting device. The small percentage of usage of social networks and social media in the study were similar to findings by Chen Y stating that when senior people grow older, they face both physical and mental changes such as eyesight deterioration, hearing loss, and decrease in movement precision considerably long time for to learn.⁹ Findings of this study were similar to those of Hendrix CC et al which revealed health conditions as key deterrents to seniors' Web savviness.¹⁴ Teaching strategies facilitating the learning process about use of devices among elderly population may play a vital role in enhancing the usage of the devices and in turn the use of social media.¹⁴ About 7.1%(10) of the elderly did not opt for the Internet facilities assuming that it was not useful to them. This finding went along with the study by Freese et al where the most frequently cited reason for not utilizing such technologies is the assumption that it will not be useful to them.¹⁵

Regarding Internet usage, the study found that 50% of the elderly (70) used Internet regularly. Only 25 of them used social media and remaining

45 used Internet facilities for various other purposes such as email, to gather hobby information, news, browsing “just for fun,” and weather updates. Similar findings were observed in a study survey conducted by the Pew Internet and American Life Project, where approximately 87% of senior citizens used Internet for online search engines such as Google and not for any social media activities.⁸ Also Johnson quoted Yang in his article about a study conducted by the Nielsen Company which found that 88.6% of senior citizens use the Internet to check their e-mail.⁷

In the study, 25 of the elderly used social media for various purposes. 84% of them relied on social media to keep in touch with family members. The findings were supported by the study done by Lewis S et al which found that online social networking enriches the lives of the elderly by providing them with an easy way to stay in touch with family members and alleviate social isolation and loneliness.¹⁶ Similar results were found in a study by Nef T et al. and in a citation by Erickson, Lee B.^{10, 17} The main benefit of using social networking sites for older adults is to enter in an intergenerational communication with younger family members (children and grandchildren) that is appreciated by both sides.¹⁰

A higher percentage of users, 76% (19) used social media for photo and video sharing which became a common purpose of usage as seen in an interventional study by Jimison HB et al as it increased number of social contacts and more communication time with remote family members.¹⁸

About 72% of the social media users (18) were seeking and relying on health related information which constituted a large proportion of the purpose of usage. These findings were similar to reports quoted by Johnson.⁷ Looking into the negative aspect of usage, a study by Lorence et al revealed that senior citizens using the Internet to access health information may be inaccurate.¹⁹ McMillan et al also found that senior citizens who are computer literate tend to believe that many sources of health information they've obtained online are accurate though may be inaccurate.²⁰

Sharing as a purpose of usage was seen in a high percentage of users 72% (18). This was supported by a study by Boyd and Ellison which found increase in users due to sharing (SNS's ability to satisfy its user's desire for information from others, information on events and activities and also desire to give information) through these sites.²¹

Community belonging (looking of persons with similar background) in 68% users (17) was also another common purpose of social media usage

which was supported by the findings in a study by Boyd and Ellison due to SNS's ability to satisfy its user's desire for information about other users and in a citation by Erickson, Lee B.^{17, 21}

As quoted by Johnson in this study also the smallest proportion (6 users) used social media for financial interests such as start a new business and find jobs to be financially independent and improve their quality of life.⁷

In the study, 45 of the elderly (32%) used Internet for various other purposes and did not utilize social media because of the various constraints.

Lack of awareness and personal constraints was a major constrain in using social media accounting for 86.6% (39). This finding was similar to that of Nef T et al and Lehtinen et al.^{10, 22} The usage could be increased by education among the elderly as reported by Chen, Y.⁹

The constraint of fear or anxiety of adoption of new technology was seen in 84% (38) of elderly persons. This finding as a major constraint was similar to the findings by Chen, Y and Lehtinen et al.^{9, 22} Especially more than other age groups, elders tend to adopt social networks when referred to by friends and family to adopt this new technology. This finding was supported by a research by Chesney et al which revealed that individuals tend to adopt the technology when they become aware of the adoption decisions of others.²³

Security constraint (loss of privacy) was another major constraint in use of social media found in 73 % (33) subjects. This finding is in line with the findings in studies by Nef T et al, Eggermont et al, and Lehtinen et al.^{10, 11, 22} Similarly, a recent study by Nosko et al examined age as a major factor, as age increases, perceptions of privacy, security and trust in the online social network decreased thus becoming a constraint and revealed that seniors feared entrapment and security concerns when interacting.²⁴ In the above literatures perceived privacy, security and trust were included as factors that influence online social networking.

Structural constraints (web design is not user friendly) were seen in 29(64%) subjects. This finding of constraint goes along with the finding of Chen, Y which also states that this constraint could be alleviated if the interface used is Elderly User-friendly. i.e. simple and well designed.⁹

Of the social media sites Facebook was commonly used among the study subjects supporting the finding in the study by Nef T et al where Facebook was found to be the most commonly used social media site.¹⁰ A study by Jimison HB et al

also found Skype video conferencing software was a feasible technology for facilitating socialization among older adults.¹⁸ As quoted by Johnson a study in Social bakers found that the average age of a Facebook user changed from 29.53 in 2010 to 30.11 in 2013 as older people become more computer and social media-literate.⁷ Such findings help substantiate the fact that senior citizens are more active with social media than previously assumed as per the report by Pew Internet & American Life Project.⁸ Social Networking Sites like Facebook, MySpace, LinkedIn, Twitter and others allow individuals to instantly communicate with large networks of friends, acquaintances and colleagues, while supporting multimedia content linked to other social media applications such as YouTube and Flickr. These Web sites are often seen as relationship facilitators. Online communities allow seniors the opportunity to discuss and exchange experiences with their peers while also gaining social support. Further, most social network sites are free to join, with the only costs incurred include computer and Internet access.

In addition, there are a number of online communities that specifically focus on social support for senior citizens. Some of the most popular online communities catering predominantly to this age group includes: AARP, SeniorNet.com, The Third Age, Yahoo Groups and SeniorSite.com. Inability to use social media technology can place senior citizens who are less mobile than their peers at a disadvantage in being able to live independently and connect with friends and family.

Conclusion

Technology by itself is not the answer, it cannot replace human contact, but it may be a means of better facilitating it. It was interesting to notice that half of the elderly were non-users of Internet (70) and half were users of Internet (70). About a large proportion, nearly two-third of elderly (93) did not use social media due to constraints that were modifiable and could be amended to increase the usage of social media and improve quality of living of the elderly.

Recommendations

- We need to educate and increase awareness among older people to start using and keep using technology. Older people need training and support to get online and stay online. Caregivers could play a vital role in educating the elderly by sharing their own experience about social media.

- The benefits of technology need to be marketed to older people in a way that reflects their needs and aspirations.
- Design and ease of use issues need to be addressed; Principles of "Design for All" and "Universal Design" are planned to benefit all users including disabled or older people, not all disabled or elderly are able to use products that follow "Design for All".
- We need to develop and support service options and intermediaries which support/create opportunities for older people to connect and participate.

The above mentioned recommendations could improve the social media utilization and knowledge among the elderly to enhance social ties and alleviate social isolation and loneliness.

Limitations

Accepting the limitation that cross-sectional data were used, the results of this study indicate associations between key measures but should not be seen as reflective of causal relationships. Also, the study was limited to a small sample size and the sampling method used, which was convenient sampling, highlighting the need of longitudinal study with large sample size.

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