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Knowledge Gap and Digital Media: Effect of Socio Demographics and EHealth literacy On Perceived Trust Pn Online Health Information Among Female Users

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Abstract

This article make an addition to the growing body of research that explores the significance of demographic factors (Age, Education level and Income) on perceived trust in health information , specifically in the context of knowledge gap hypothesis. A questionnaire-based survey collected data from female students studying at different levels and belonging to different age and income groups. The level of perceived trust in online health information was measured on the bases of these socio demographic differences. Findings revealed that eHealth literacy is a determinant of the perceived trust in online health information (OHI). However, result demonstrate no significant impact of independent variable i-e sociodemographics (age, education level and income) on the perceived trust of users in online sources which shows that digital media technologies are bridging the knowledge gap between haves and haven't.

Keywords: *eHealth literacy, Knowledge gap Hypothesis(KGH), Online health information (OHI), Perceived trust ,Socio demographics*

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1) INTRODUCTION

The ease of access and use, inexpensiveness and omnipresence have made internet most popular and frequently used source of health information both for general user and medical professionals. Users can have access to the information that in past was almost impossible for them to access (Massey, P. M. 2016). It is largely popular among patients who are in immediate need of information and responses on general health issues and emotional support to manage and handle health issues on day to day basis (Fox, 2011). The extent of popularity of this medium can be gauged from the fact that it is reported to be used as a first source of information and guidance that is approached as compared to other available human resources including both traditional and professional sources (i-e Family members, friends , co-workers, health professionals and conventional media (Jacobs,W. ,Amuta.A & Chan Jeon K.N 2017). Research has proved an increased use of internet by the people from getting general information about health, risks, illnesses, and health-protective behaviors(Lawson, R., Forbes, S., & Williams, J. R. (2011), to buy medicines (Lee, J. (2010), and to improve adherence to medical advice provided,(Berry,L,L, Parish, J.T.&, Janakiraman,.R. Ogburn-Russell,L., G. R.Rayburn,W.L Grisel, J.(2008) .

Studies in the field of Health communication have acknowledged women as playing the main role not as the gatekeeper for health but also as users of internet for health information. Fox, L. Rainie, 2002,; Rosenving, J. H., Laugerud, S,& Hjortdahl, P. (2003) (Shen, Wang, Chu, Wan, Viswanath, Chan& Lam, 2017& Fox, L. Rainie, 2002). Women actively seek health information from diverse sources than men, ,do extensive search and consult various sources than men (Rowley, Johnson& Sbaffi 2015)and are reported to have high level of trust in OHI.

This role of women as active seekers of health information involves information seeking for both Curative and preventive health care(PHC) not only for their personal health but also for the information they need as caregivers.(Baker, Wagner, Singer & Bundorf, 2003; Calabretta 2002, Navarro. & Wilkins, 2001).Characteristics of internet like ubiquity, access and availability of information in privacy of their rooms make it particularly famous among women belonging to traditional society like Pakistan who experience gender discrimination, social taboos , and poor health facilities related to their intimate health issues.

Due to this increased trend of the use of online health information among women a reverse gender gap is expected to emerge. Similarly this gap is expected to emerge in users with other socio demographics including Age (e.g. between Digital Natives, and Digital Immigrants*) and Education level. The phenomenon of differentiation in information access and acquisition among different categories of people in a society, also called Knowledge gap, however, is not new. Initially proposed by Tichenor, Donohue and Olien in 1970,this concept has been extensively studied by researchers and scholars particularly with the introduction of new media technologies. Besides having diversified point of views regarding the role of media in widening or bridging the knowledge- gap between haves and have-nots,(Viswanath,K &Finnegan ,John.R 1996) the inclusion of socio demographic factors as independent variable has been common among all the researches. With

the invention and spread of ICT,s ,Knowledge gap is said to be replaced by new term of "digital divide" (Norris, 2002) , which refers to the gap in information and technology access due to socio economic status of individuals and geographic areas, as cited by Sunny, E. U. (2013) .The presence of disparities in access to information due to socio demographics and their identification as factors that contribute to knowledge gap, thus, makes it worth study with reference to modern communication technologies .This becomes more significant when these technologies seems to be promising the narrowing of this gap due to their certain characteristics (as discussed above).

Similarly, the increased popularity and characteristics of internet as a source of health information, as described above are not adequate enough to declare it the most useful medium of health information, too. The usefulness of any Health Information Source (HIS) is determined by the degree to which the users trust the acquired information from that particular source.

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*The terms "digital native" and "digital immigrant" were popularized by education consultant Marc Prensky in his 2001 article entitled Digital Natives, Digital Immigrants. The term digital native describes a person who has grown up in the digital age,, rather than having acquired familiarity with digital systems as an adult ,as an digital immigrant.

Trust, is among the factors which has been highlighted not only the one which affects motivation of the user regarding the source preference (Rains, 2007 Rains, S. A. (2007) but also is the key determinant of the effectiveness of Health Information Sources (HIS) including OHI among users. Digital communication technologies and involvement of professionals has resulted in availability of increased amount of content from numerous sources. The ability to interact with others is another factor that has increased the dependency of people on new media technologies. It thus become highly important systematically understand the construct of trust . (Love, B., Macker, M., & Silk, K. (2013).

Realizing the significance of trust in information source, it becomes essential to study the factors which influence the trustworthiness of OHI among users with diversified socio demographics. eHealth literacy is amongst the identified ones, which refers that how much convenient a user is in accessing, finding , and comprehending the information. (Ye, 2011).

However ,it has not extensively been explained that how health literacy and perceived trust in online health information are interconnected .(Diviani, N., Putte, B., Giani, S., &Weert, J. C. M. (2015) as well as eHealth literacy itself. Similarly, it is yet to be explored how demographic factors e.g., Age, education level and socio-economic status etc cause differences in perceived trust in health information how from specific online health communication sources. (Samantha, R. P., Janice, K. K., & Michael, L. S. (2016). Therefore, this study aims at exploring how demographic factors (Age, Education level and, and income interact with e-health literacy to influence perceived trust of online health information among female users of OHI, in Pakistan.

This study therefore aims at finding out the relationship between the demographics (Age, Education level and Income) and eHealth literacy among female users of OHI in Pakistan .It further is intended to explore the effect of socio demographics on perceived trust of OHI among users in the context of Knowledge gap hypothesis theory.

2) KNOWLEDGE GAP: AN INSIGHT

Introduced by Tichenor, Donohue and Olien in 1970 ,Knowledge gap hypothesis holds the idea that information acquisition is inequitable among different segment of society caused by disparities in socio-economic status of people. Severin and Tankard (1992) presented this phenomenon as haves, those who have access to information sources and have-nots, that refers to people as being deprived or have little or no access to information. This uneven distribution of information, according to them is similar to the disparities in socio economic status of people. Referring to different studies, Visvanath K, and John R Finnegan (1996) hold the idea that the concept of unequal distribution of knowledge not only existed long before it was formalized in 1970 but has produced a significant amount of research and not only social scientists but policy makers also have keen interest in studying the phenomenon, in different areas including public affairs, science, current affairs and health.

Tradition in knowledge gap research has shown mixed results over time. On one side there have been studies with sustained support to K.G hypothesis but there have also been studies which did not maintain this support to the hypothesis that was initially devised (Ettema & Kline1977, Shinghi & Mody 1976. Some even found reverse gap (Douglas, D F, Westley, B. W.,& Chaffee, S.H (1970) : Fathi 1973). Grown scholarly interest specified contingent conditions when gaps widen, decrease, or do not occur .This resulted in identification of different conditions(at social and individual level) as well as related to media and content which could affect knowledge gap (Ettema et al 1977),and opened avenues to study media in new ways. In an attempt to find relationship between media choice and effects of media exposure on political knowledge , Leeper,J.(2018) focused Syrian issue and identify that under conditions ,despite having equal exposure, knowledge gap between engaged and disengaged either broadened or remained persistent .The study found homogeneous media effects across media preferences and media environments. Another significant finding was the role of selective exposure in knowledge gap. Similarly those who had pre existing knowledge of the Syrian issue and selected hard news were found most knowledgeable.

Among the areas studied in the context of Knowledge gap,, Health knowledge, has received considerable studies. Even the very first article on the K.G .H that was about the link between smoking and cancer, had explores how SES cause knowledge differences . (Tichenor, P. J., Donohue, G. A,& Olien, C.N.(1970). Similarly, most knowledge gap studies have used education as an indicator of SES (Gaziano, 2016, Bailey, G.A 1971) .

Researches on new media and information technologies have also focused SES and other demographics and have come up with mixed results. Some in their attempt to explore that how technological change can increase knowledge differences between social segments have made a comparison of traditional media with internet and the role of SES in selection of media from among traditional media and internet . (Tran,H. 2013).The findings were in consistence with the original knowledge-gap as those with high SES and more education were found to benefit more from new technology. Similarly, from traditional news media, heavy users had acquired more knowledge than light users about politics. Tran's study reported contradictory results to the previous studies (Kim, 2008; Wei & Hindman, 2011) that had found Internet news an important source in increasing knowledge of public affairs.

Jeffres, L., Neuendorf, K. & Atkin, D. (2012)examined knowledge gap perspective in current online environment and found the effect of education and income in causing gaps in all the three knowledge types included in the study i-e international affairs, the local community, and the Internet. The study , discovered opportunities to media access as an additional cause of gaps other than SES and highlighted the need to reexamine the well known theories from time to time due to the rapid changes occurring in media environment.

Sunny, E. U. (2013) in his conceptual paper has also held internet as being responsible for broadening the gap in knowledge acquire by different groups of people Differences in access, use and ownership of new media were identified as the major contributing factors of this increased gap which according to the researcher has become much broader as compared to the gaps created by media prior to internet. The new media has ,according to divided individuals and nations into the digital privileged and the digital underprivileged classes.

Jantti, K.(2014), in a report titled "knowledge gap and the information environment", attempted to identify main issues behind the knowledge diffusion in order to identify that what type of regulations and policies are needed in contemporary information environment to assure equal and fair access to information .The report was based on the findings of studies on the effects of media on knowledge gap in Communication, Psychology and Political Science disciplines. The particular focus was on "Civic knowledge" in the context of Knowledge gap hypothesis and a critical review of three similar perspectives on media effects including Virtuous Circle hypothesis, Media malaise hypothesis; and Differential Effect hypothesis.

In the light of the review of these theoretical explanations, the report highlighted factors that wider the knowledge gap which includes a) commercialization of media as it targets the audience that belong to high SES and neglect lower socioeconomic groups. This results in knowledge gap between disadvantaged groups like low socioeconomic status and ethnic minorities. b) Content of media which due to its episodic nature and ignorance of physiological realities of the audience, and c) Media environment that affects motivation, which is a key variable for knowledge acquisition. The current information environment, according to the researcher, is characterized with an increased no of media outlets which cater the media

desires of particular groups and thus enhance the probability of growing the gap between groups. The report found that internet has not only become a key medium to disseminate knowledge but has also reduced the obstacles to the access and creation of information. It thus has created an environment that is highly favorable for increasing knowledge even among particular segments that remain inattentive otherwise. This enhances the probability of the role of Internet in decreasing the knowledge gap.

Some researchers focused specific sources and specific fields of knowledge to study the role of internet in reducing or widening the knowledge gap. One such study was conducted by Chen, X. (2013) who examined the influence of social media on knowledge gaps about science and technology among students. Data collected from Chinese and US students aimed to seek relationship between motivation and use of Gukoar, a social media site which possesses combined characteristics of blog and social networks. The results did not show any role of demographics (education, gender, major, residence, and household) on overall science knowledge. Internet in general and social media specifically was found to broaden the gap about science and technology.

Like traditional media, studies on internet have also reported mixed results regarding its role in widening or narrowing the knowledge gap. Very few studies, however, have attempted to study knowledge gap in the context of health information. Following the tradition of research on Knowledge gap, , this study aims at exploring the role of socio demographics (Age, Education and Income) in the context of new media technologies with particular focus on health information.

3) OBJECTIVES OF THE STUDY

Following were the objectives of study,

1.1) To measure the eHealth literacy of female users of OHI belonging to different socio demographics.

1.2) To identify/explore the association between eHealth literacy and perceived trust of OHI.

1.3) To seek the mean difference of perceived trust of OHI among female users with different socio economic status (Age, education level and income)

4) RESEARCH QUESTION

Is there any significant relationship between eHealth literacy and perceived trust of OHI among users?

5) HYPOTHESES OF THE STUDY

H1 Users belonging to youngest age group (digital natives) will have high eHealth literacy than the users of elderly (digital immigrants).

H0 There will be no effect of age on eHealth literacy level of OHI among users.

H2 Higher the level of education, higher will be perceived trust of OHI among users.

H0 There will be no difference in perceived trust of OHI among users with different education levels.

H3 Higher the income, higher will be eHealth literacy among users.

H0 There will be no difference in eHealth literacy among users with different income levels.

H4 Higher the income, higher will be perceived trust of OHI among users.

H0 There will be no difference in perceived trust of OHI among users with different SES.

6) RESEARCH METHODOLOGY

The data reported in this paper were collected from the students of public sector women Universities in Pakistan, during a period of six months i-e September 2019 to February 2020. eHEAL scale was used to measure the eHealth literacy level of respondents whereas items were designed to collect information regarding the perceived trust of respondents in Online sources to get health information for themselves or their dear ones. A total of 5 relevant sources on internet were included in the survey including websites, support groups, blogs and you tube, which were identified as most extensively used sources through focus groups .The respondents indicated their trust level toward each source with respect to retrieving information for health related issues. A five point scale ranging from not at all (1) to a lot (5) was used.

7) SAMPLING

Sampling was done in two stages. Initially random sampling technique was used to select six public sector women universities (Lahore college for women University, Lahore. Govt. Sadiq College University Bahawalpure. Women University Swabi. Sardar Bahadur Khan University,Quetta, Fatima Jinnah University, Islamabad and Government College University, Sialkot.) from among HEC recognized public sector women universities of Pakistan. No of respondents from each selected university was decided proportionate to total enrolled students at that particular university. Further, based on the education level, stratified sampling was used to include respondents from intermediate, graduation and post graduation level again. From among the selected Universities, two universities i-e Lahore College for women University and Government Sadiq College University had been upgraded from College to University status. These universities therefore also offer intermediate level classes. Majority of intermediate level respondents were selected from these

two universities. To avoid the issue of generalization, intermediate level students were included in the study from the same cities where these universities are located. Total sample size (813) comprised of respondents from all the three levels in each selected university followed by random selection of respondents proportionate to total enrollments at each level.

8) TOOL OF DATA COLLECTION

The questionnaires included structured, pre-coded items. The questionnaire comprised the following two sections:

1.1) Questions relating to eHealth literacy (Adopted from eHEAL Scale)

2.2) Questions relating to level of perceived trust to various sources of OHI (Adopted from Health information national trends survey (HINTS).

9) SOCIO DEMOGRAPHICS

Socio demographic characteristics measured in present study were as followings: (a) Age (Group 1: 15 -20 years, Group 2: 21-26 years, Group 3: 27 and above, (b) The respondents were asked to mention monthly collective income of earning members in their family which was further categorized into four groups i-e, Group 1:less than Rs 50,000, Group 2:above Rs 50000 to Rs one hundred thousands(100,000), Group 3:above Rs one hundred thousand (100,000)to Rs 1.5 hundred thousand(1,50,000) and Group 4:more than Rs 1.5 hundred thousand, (c) Level of education (Group 1:Intermediate, Group 2.graduation , Group 3:Post graduation). Respondents who positively answered to have accessed internet in last one year to get OHI for themselves or someone dear were included in the study.

10) EHEALTH LITERACY

eHealth literacy was measured using the eHealth Literacy Scale (eHEALS). It is a rating scale that is used to evaluate efficacy and knowledge of an individual as perceived himself/herself to search for, discover, comprehend, and apply health related information acquired from electronic sources to solve health problems and make health decisions (Norman & Skinner, 2006). The scale consists of eight items which measures the self reported eLiteracy on a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree).

11) PERCEIVED TRUST IN ONLINE HEALTH COMMUNICATION CHANNELS

Items were adapted from the Health Information National Trends Survey (Health Information National Trends Survey). Respondents were asked to rate their level of perceived trust on different online sources on a scale from 1 (not at all) to 5 (a lot). The sources included were websites, blogs, online support groups, and social media (i-e you tube) which were identified as most extensively used by users, in focus groups conducted prior to survey.

12) RESULTS

13) STATISTICAL ANALYSES

SPSS Version 25.0 was used to figure out the descriptive statistics about socio demographics, perceived trust in health information and eHealth literacy. A value of $p < .05$ was decided to detect statistical significance. To test Hypothesis 1, we conducted Pearson Product Moment Correlation Coefficient. Dependent variable was Perceived trust in health communication whereas eHealth literacy was entered as the factor variable. In the second analysis, mean score of respondents on perceived trust in health information was compared on the bases of Age, education and income .

Table 1
Correlation between eHealth literacy and Perceived trust of OHI among Users

15) CORRELATIONS			
		totalliteracy	Totaltrust
Totallitera-cy	Pearson Correlation	1	.240**
	Sig. (2-tailed)		.000
	N	815	813
Totaltrust	Pearson Correlation	.240**	1
	Sig. (2-tailed)	.000	
	N	813	813

Table 1 shows the relationship between eHealth literacy (as measured by the eHEAL scale) and perceived trust in OHI (as measured by the HINTS scale) which was examined through Pearson product-moment correlation coefficient. A positive correlation was found between the two variables [r=.24, n=813, p<.0005], greater eHealth literacy linked with high level of perceived trust in OHIS.

Table 2:

One way ANOVA to identify mean difference in score of eHealth literacy among the female users of OHI

Due to difference in education level/Studying at different levels

Descriptive

	N	*M*	*SD*
Intermediate	287	21.41	4.23
Graduation	472	21.52	4.35
Post Graduation	56	21.70	3.86
Total	815	21.48	4.28

ANOVA

	Sum of Squares	*df*	*Mean Squares*	*F*	*Sig.*
Between Groups	36.60	2	12.2	.66	.58
Within Groups	14920.9	812	18.398		
Total	14957.5	814			

A one-way between-groups analysis of variance was conducted to explore the difference of eHealth literacy due to education level, as measured on eHEALS scale. Subjects were divided into three groups according to their education level (Group 1:Intermediate; Group 2: Graduation ; Group 3: MS/PhD and above). Statistical examination did not come up with a significantly different mean score for eHealth literacy for the three age groups [F(3,810)=.66, p=.58]. A very small difference in mean scores between the groups was found .Eta squared was used to calculate the effect size, which was found.002. Tukey HSD ,Post-Hoc was conducted to find significance of difference between the mean score of groups Intermediate (M=21.41, SD=4.23), BS/MA (M=21.52, SD=4.35) and MPhil/PhD (M=21.70, SD=3.86) and it turns out that no group is significantly different from the other.

Table 3

One way ANOVA to identify mean difference in score of eHealth Literacy among the female users of OHI belonging to different age groups

Descriptive

	N	*M*	*SD*
15-20 years	405	21.35	4.33
21-25 years	372	21.67	4.25
26-and above	38	21.08	4.14
Total	815	21.48	4.29

ANOVA

	Sum of Squares	*df*	*Mean Squares*	*F*	*Sig.z*
Between Groups	25.85	2	12.925	.703	.495
Within Groups	14931.64	812	18.389		
Total	14957.49	814			

A one-way ANOVA between-groups analysis of variance was conducted to explore the impact of Age on perceived trust of OHIS, as measured on a five items Likert scale . Subjects were divided into three groups according to their Age. (Group 1: 15 to 20 years; Group 2: 21 to 25 years ; Group 3: 26 years and above). Statistical examination did not come up with a significantly different mean score for eHealth literacy for the three age groups ,[F(3,810)=.70, p=.49]. A very small difference in mean scores between the groups was found. Eta squared was used to calculate the effect size, which was found.001. Tukey HSD ,Post-Hoc was conducted to find significance of difference between the mean score of groups. Group1: (M=23.28, SD=5.66), Group 2: (M=22.93, SD=5.54) and Group 3: (M=23.47, SD=6.2) and it turns out that no group is significantly different from the other.

Table 4

One way ANOVA to identify mean difference in score of eHealth literacy among the female users of OHI belonging to different SES/income levels

Descriptive

	N	*M*	*SD*
Less than 50000 Rs.	44	20.50	4.38
Rs 50000 to Rs. - 100000	316	21.77	4.43
Above Rs 100,000 to – 150,000	356	21.25	4.30
More than 150,000 .	99	21.83	3.61
Total	815	21.48	4.29

ANOVA

	Sum of Squares	*df*	*Mean Squares*	*F*	*Sig.*
Between Groups	101.12	3	33.71	1.84	.138
Within Groups	14856.38	811	18.32		
Total	14957.5	814			

A one-way between-groups analysis of variance was conducted to explore the impact of income on eHealth literacy, as measured on a five items likert scale. Subjects were divided into four groups according to their total family income, (Group 1: Less than 50,000; Group 2: Above 50,0000 to 1000000, ; Group 3: Above 100000 to 150000, and Group: Above 150000). For the four income groups , no statistically significant difference in perceived trust scores was found. [F(3,810)=1.84, p=.13]. The actual difference in mean scores between the groups was also quite small. The effect size, calculated using eta squared, was .007. Post-Hoc comparisons also did not find any group ss significantly different from the other Group 1 (M=20.5, SD=4.38), Group 2: (M=21.77, SD=4.43), Group 3: (M=21.25, SD=4.3) and Group 4: (M=21.83, SD=3.61) and it turns out that.

Table 5

One way ANOVA to identify mean difference in score of perceived trust among the female users of OHI belonging to different income groups

Descriptive

	N	*M*	*SD*
Less than 50000 Rs.	44	23.09	6.11
Rs 50000 to Rs. - 100000	314	22.91	5.65
Above Rs 100,000 to – 150,000	356	23.19	5.68
More than 150,000 .	99	23.59	5.19
Total	813	23.13	5.63

ANOVA

	Sum of Squares	*df*	*Mean Squares*	*F*	*Sig.*
Between Groups	36.48	3	12.159	.383	.765
Within Groups	25694.73	809	31.761		
Total	25731.21	812			

One-way between-groups analysis of variance (ANOVA)was conducted to explore the impact of income perceived trust of OHIS, as measured on a five items Likert scale. Subjects were divided into four groups according to their total family income, (Group 1: Less than 50,000; Group 2: Above 50,0000 to 1000000; Group 3: Above 100000 to 150000, and Group 4: Above 150000). Tukey HSD ,Post-Hoc was conducted to find significance of difference between the mean score of groups. Eta square was used to calculate the effect size, which was found.007. A very small difference in mean scores between the groups was found,age groups [F(3,810)=.38, p=.13]. The actual difference in mean scores between the groups was also quite small.Group 1: (M=23.05, SD=6.11), Group 2: (M=22.92, SD=5.65), Group 3: (M=23.19, SD=5.68) and Group 4: (M=23.59, SD=5.19) and it turns out that no group is significantly different from the other.

Table 6:

One way ANOVA to identify mean difference in score of perceived trust among the female users of OHI

Studying at different education level/ due to education level

Descriptive

	N	*M*	*SD*
Intermediate	287	23.30	5.69
Graduation	472	22.89	5.62
Post Graduation	54	24.35	4.85
Total	813	23.13	5.63

ANOVA

	Sum of Squares	*df*	*Mean Squares*	*F*	*Sig.*
Between Groups	178.27	2	59.42	1.881	.131
Within Groups	25552.93	809	31.58		
Total	25731.21	811			

A one-way between-groups analysis of variance (ANOVA) was conducted to explore the impact of education level on levels of perceived trust of OHIS, as measured on a five items Likert scale . Subjects were divided into three groups according to their education level (Group 1: Intermediate; Group 2: Graduation/Masters ; Group 3: MS/PhD and above). There was no statistically significant difference at the $p<.05$ level in perceived trust scores for the three age groups [$F(3,810)=1.8$, $p=.13$]. The actual difference in mean scores between the groups was also quite small. The effect size, calculated using eta squared, was .007. Post- oc comparisons using the Tukey HSD test has been used to find significance of difference between the mean score of groups Intermediate (M=23.31, SD=5.69), BS/MA (M=22.89, SD=5.62) and MPhil/PhD (M=24.35, SD=4.85) and it turns out that no group is significantly different from the other.

Table 7*One way ANOVA to identify mean difference in score of perceived trust am*

ong the female users of OHI

belonging to different age groups

Descriptive

	N	*M*	*SD*
15-20 years	403	23.28	5.66
21-25 years	372	22.93	5.54
26-and above	38	23.47	6.20
Total	813	23.13	5.63

ANOVA

	Sum of Squares	*df*	*Mean Squares*	*F*	*Sig.*
Between Groups	28.26	2	14.131	.445	.641
Within Groups	25702.94	810	31.732		
Total	25731.21	812			

A one-way between-groups analysis of variance (ANOVA)was conducted to explore the difference in mean score of respondents belonging to different age groups. Subjects were divided into three groups according to their Age. (Group 1:15 to 20 years; Group 2: 21 to 25 years ; Group 3: 26 years and above). There was no statistically significant difference at the $p<.05$ level in perceived trust scores for the three age groups [$F(3,810)=.44$, $p=.64$]. The actual difference in mean scores between the groups was also quite small. The effect size, calculated using eta squared, was .002. Post-Hoc comparisons using the Tukey HSD test has been used to find significance of difference between the mean score of groups Group1: (M=21.35, SD=4.33), Group 2: (M=21.67, SD=4.25) and Group 3: (M=21.07, SD=4.14) and it turns out that no group is significantly different from the other.

14) ANALYSIS AND DISCUSSION

The study was conducted to explore the relationship between media literacy with particular reference to health information called eHealth literacy and perceived trust of acquired information in the context of new media. It further intended to find out the extent to which eHealth literacy and perceived trust of OHI is influenced by socio demographics of users in the context of Knowledge gap hypothesis.

The findings confirmed a strong relationship between eHealth literacy and perceived

trust of OHI among female users .These findings were in accordance with different studies which also sought the relationship between the two variables(Samantha, R. P., Janice, K. K., & Michael, L. S. (2016), Lawson, R., Forbes, S., John Williams, J.,2014). Trust and credibility which has been identified as a significant indicator of the usefulness of OHI, thus was found to be associated with the eHealth literacy level of users.

Apart from the easy access and wider use of internet , an important question, which has been of constant concern among the scholars raised is whether the Web is dropping or creating inequalities in health information availability and use among users with different socio demographics, for making health decisions. To find answer to this concern and following the tradition of research in Knowledge gap hypotheses, socio demographics were used as independent variables of the study.

The findings showed no significant difference the mean score of eHealth literacy and perceived trust among respondents belonging to different age and income groups. Similarly Education level was also not found a significant factor which can influence the eHealth literacy level and perceived trust of OHI among users .Similar results were found by Hwang and Jeong (2009) who found analyzed ten studies and found a small change in the relationship between education and knowledge .

One of the possible interpretation of these findings ,which show the narrowing of Knowledge- gap among respondents with different Socio economic status, can be found in nature of new media technologies which have enabled the users to autodidact or this technology is self teaching to its user. User can learn and excel the use of these information sources over time and even without any formal training .Thus to seek, get access to , analyze and select the needed information seem to become convenient for user over time. Similarly the items included in eHEALS are also designed so as to measure the self efficacy of user to which can be mastered over time with regular use. The need to study the influence of communication channel or media on K.G was also highlighted by Viswanath, K and John R. Finnegan, Jr .. Thus ,possible reasons of Knowledge gap ,as proposed by Severin et al (1992) seem to have become less effectual with reference to Knowledge gap. Technical superiority over conventional media, interactive and user friendly nature of digital media highlights the need to study media and audience relationship and knowledge gap hypothesis , in new context.

The sample of study comprised of students who are regular users of internet for the completion of their academic tasks and even if they do not have android phones and internet at home, they still have opportunities to access online information due to the facilities provided in their respective academic institutes and different schemes launched by the governments. Packages offered at cheap rates by cellular companies is another reason of the easy access and extensive use of internet among users for different needs including information related to health, thus reducing the gap among different segments of society.

The absence of the difference of means score in different age groups with reference

to the perceived trust in OHI did not support research hypothesis. Therefore, the null hypothesis that there will be no difference in perceived trust among users belonging to different age groups was supported. It appears from the findings, that the increased popularity and high dependency of users on the internet for all types of information including health has increased perceived trust of OHI among both digital natives and digital immigrants thus narrowing the knowledge gap. This results, therefore highlights the need to study the phenomena in other context like dependency also. Similar findings have been reported by many researches in past which that did not support K.G.H. (Ettema & Kline1977, Shingli & Mody,1976; Douglas,Westley & Chaffee 1970; Fathi 1973; Synder 1990).

Reasons for use of specific media were another important factor which affects knowledge gap. This factor has been addressed in many previous researches (Chaffee S.,Ward, S. & Tipton, L. 1970,Pearson L. L, 1993). Referring to these studies ,Viswanath and Fennigan(1996) have concluded that, " If media use is purposive and equal across social groups, knowledge differences are much less evident". Since this study also focused on use of media to gain health information, which is a purposive and need-based action in most, if not all the cases. People usually turn to internet intentionally when they need health related information. This seems to be another reason of the decrease knowledge gap among users with different socio demographics.

15) CONCLUSION

The results revealed that eHealth literacy is a significant predictor of perceived trust in OHI among users. However, eHealth literacy is not influenced by socio demographics. Easy access, affordability and usability have made digital media reduce the knowledge gap between haves and haven't. There is no role of age, education level and income on eHealth literacy and among female user. Similarly perceived trust can also not be determined by the socio demographics of users. Since, both eHealth literacy and perceived trust in OHI among users are not found to be influenced by demographics, it can be concluded that new media is playing an effective role in bridging the Knowledge gap.

16) LIMITATIONS

From among the selected universities, three universities including Lahore college for women University, Lahore. Govt. Sadiq College University Bahawalpure, and Sardar Bahadur Khan University,Quetta were upgraded to university status from college status. Therefore students at intermediate level were included from these universities only.

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