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RESEARCH ARTICLE

IMPACT OF E-CULTURE ON LONELINESS AMONG ELDERLY

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ABSTRACT

Electronic-culture is new. It is emerging as a transnational and global phenomenon; not confined to geographical boundaries. E-culture is both technological and a social development. E-culture is increasingly perceived as a new digital media culture or digitalization of culture. The present study focuses on impact of e-culture on loneliness among elderly. The study was carried out in lucknow. Multistage sampling technique was followed in the present study. The sample for this study comprised of 120 elderly individuals (60 females and 60 males respectively) from urban and semi-urban areas. E-culture Inventory: developed by patel and ranjendran (2005) Revised University of California at Los Angles (UCLA) Loneliness Scale. The samples of this study were personally and individually contacted and data was obtained through face-to face interview. The present study reveals that e-culture is positively and significantly related to life-satisfaction is negatively and significantly related to e-culture among the elderly. Half of the respondents reported that they felt lonely sometimes or more often. Women, widows/ers living alone were more prone to report loneliness.

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INTRODUCTION

The innovations in the field of science and technology during the 20th & 21st centuries have caused an explosion in the use of electronic items throughout the globe. Prevalence and excessive use of electronic goods has been found among people cutting across cultural differences. There are many areas of electronic technology helping different sections of a common man. Breakthrough made in the area of information technology and communications (ICT) have resulted in the emergence of e-banking, e-commerce, e-governance, and e-medicine etc., which have set in a trend for e-culture (Patel and Rajendran, 2005). According to Uzelec, (2003) the ICT revolution same decades ago but its development towards network logic was brought about by the internet which gave it an extra push. It is the ICT availability and internet access that provides opportunities for production of e-culture (Mercer, 2003). However today the emergence of e-culture is taken for granted due to prevalence of the interactive digital applications such as internet and mobile technologies (Mitchell, 2003). Research on e-culture is at a rudimentary level and many researchers have defined e-culture in different ways. Patel and Rajendran (2005) have defined "electronic culture" as increased use of electronic goods by individuals in various areas.

De Haan and Huysmans, (2002) defined the term e-culture in diffusion of new technology, its application for various avenues such as information and communication in addition to shifts elected in related attitudes. There is a consensus that ICTs (Information and Communication Technologies) have a propensity to contribute to economic growth and to improve quality of life. For example, these technologies can be deployed to facilitate integration of value chains within and among firms, industries and economic sectors. In addition, they can enhance productivity and improve competitiveness for businesses through appropriate strategic applications (OECD, 2003; Fong, 2009).

These technologies have also been viewed by governments and international aid agencies as important tools for national integration because they are capable of enabling greater access to health and education services, and creating economic opportunities for underprivileged population groups (Mercer, 2001; Reisman *et al.*, 2001; UNDP, 2001; Oberski, 2004; Jensen, 2007). There have been empirical studies investigating the impact of ICTs on economic development. For example, Canning (1999) and Breitenbach *et al.* (2005) found a positive causal relationship between GDP (Gross Domestic Product) and telephone penetration rate. Maiorano and Stern (2007). Highlighted the contribution of mobile telecommunication infrastructure to higher levels of per capita GDP in 30 low and middle-income countries between 1990 and 2004.

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At the microlevel, Jensen's (2007) study on fishermen in Kerala shows that the adoption of mobilephones can promote economic and social welfare not only for these fishermen but also for consumers. The EIU's (2004) analysis offers further insights into the link between ICTs and GDP per capita growth. It examines this relationship in 26 developed countries and 34 less developed countries between 1995 and 2002, and reported strong evidence of positive association between ICTs and economic growth for developed countries but not for developing countries. Weak association in the latter case was attributed to the absence of a critical mass in ICT adoption within these developing countries, suggesting that significant economic growth will only be attained if a minimum threshold of ICT penetration and usage is achieved. Together, these studies indicated that a digital divide between developed and developing countries is likely to result in significant differences in economic development.

Developing countries such as China, South Korea, Malaysia, India and Brazil have made substantial investments to install national ICT infrastructure in an effort to bridge this divide in order not to lag behind developed countries. However, these countries tend to focus such investments on developed urban regions due to limited resources and thus, courting the risk of creating a digital divide between urban and rural areas and generating income disparity between these areas.

This research paper provides greater details on the link between digital divide and income disparity between the urban and rural areas in China. Firstly, it evaluates the development relationship between the adoption rate of ICTs and per capita income gap between the urban and rural areas in China between 1985 and 2006, using Pearson's correlation method. Secondly, it examines the adoption of specific ICT between the urban and rural regions, and looks at two pressing issues that affect the digital divide – affordability of these technologies to the rural population, and the educational level of rural users that impact upon usage capability.

Given that all people seek happiness and all people desire to be happy, the feelings of loneliness as registered among adolescents, young adults (Marcoen, Goossens, & Caes, 1987; Sippola & Bukowski, 1999), midlife and older adults (see among many others, Lopata, 1996) reveal a major problem in society. Although there is a general core to loneliness - the evaluation of a discrepancy between the desired and the achieved network of relationships as a negative experience - the forms of loneliness and their antecedents vary enormously according to personal and contextual determinants. Despite the fact that loneliness is not treated as a specific clinical entity (Mijuskovic, 1996), Russell, Peplau, and Cutrona (1980) presented evidence on the uniqueness of loneliness as a phenomenon in its own right. After being largely ignored by social scientists until the mid-20th century, an ever-increasing flow of work since the 1980s amply testifies to the utility of loneliness as an important concept.

This chapter addresses the concepts of loneliness and social isolation using theoretical ideas and empirical evidence from various sources and disciplines including psychology, sociology, and anthropology.

Loneliness is a situation experienced by the individual as one where there is an unpleasant or inadmissible lack "of (quality of) certain relationships. This includes situations, in which the number of existing relationships is smaller than is considered desirable or admissible, as well as situations where the intimacy one wishes for has not been realized (De Jong Gierveld, 1987, p. 120).

Loneliness is a significant problem for many older people. Previous research has shown that loneliness in old age is a risk factor that can be linked to various health-related problems, physical and mental problems. Aging, in particular among the oldest (80+) is accompanied by physical problems such as frailty and functional decline and mental problems such as reduced cognitive capacity and greater loneliness. In Sweden, as well as in many other European countries, the population of older people is growing and over the coming decade the increase will be mainly accounted for by the oldest age groups (80+). Thus there will be a greater need for personal care and support as advanced old age is associated with disability. Much research has focused on physical health problems among the oldest people but research into mental health and loneliness are to some extent still sparse.

The social and familial resources with which current and future cohorts enter middle and old age reflect the dramatic social changes of this century. These cohorts are characterized by a much greater diversity of family forms and personal histories than the cohorts that preceded them, a result of lower mortality, lower fertility, and higher divorce rates as well as societal acceptance of a wider range of available life paths for men and women (Bengtson and Silverstein, 1993; Uhlenberg, 1974). Specifically, low fertility in this century has resulted in a high proportion of people entering old age with few or no children and with fewer siblings within their families (Bengtson, Rosenthal, and Burton, 1990).

Gerontological research has documented the importance of familial resources, especially adult children, in providing social support for the aged (see Horowitz, 1985; Cantor, 1979; Brody, 1990), and childless elders have been generally identified as a potentially vulnerable sub-group among the elderly. Childlessness has been associated with higher risks of loneliness, social isolation, depression, and institutionalization (Bachrach, 1980; Johnson and Catalano, 1981). However, much of the literature on the childless elderly is nearly fifteen years old and, therefore, does not reflect the changes in the composition and experiences of the current and emerging cohorts of elderly persons (see Preston 1989; Goldscheider 1990).

Loneliness is a complex and usually unpleasant emotional response to isolation or lack of companionship. Loneliness typically includes anxious feelings about a lack of connectedness or communality with other beings, both in the present and extending into the future. As such, loneliness can be felt even when surrounded by other people. The causes of loneliness are varied and include social, mental or emotional factors. Research has shown that loneliness is widely prevalent throughout society among people in marriages, relationships, families and successful careers. It has been a long explored

theme in the literature of human beings since classical antiquity. Loneliness has also been described as social pain — a psychological mechanism meant to alert an individual of isolation and motivate him/her to seek social connections.

Objectives of the Study

- To study the impact of e-culture on loneliness among elderly.

Hypothesis

- There is no significant differences in impact of e-culture on loneliness across gender among the elderly.

MATERIALS AND METHODS

The sample for this study comprised of 120 elderly individuals (60 females and 60 males respectively) from urban and semi-urban areas. Lucknow city was purposively selected to conduct the study. Multistage sampling technique was followed in the present study.

Tools and techniques: To carry out the present study, the following tools were used to measure various parameters

E-culture Inventory

This inventory was developed by Patel and Rajendran (2005) to measure e-culture. It evaluates e-culture based on multiple electronic products people use in different areas such as home, office, public places and those that they carry personally with them. Under each area certain electronic items used by people such as (a) Personal computer, (b) Internet, (c) digital diary, (d) mobile phone, (e) micro-oven, (d) disc-man, (e) Digital cameras, (f) lap-tops, (g) automatic washing machine, (h) DVD players, and frequent visits to (i) computerized shops/ movie halls/ theme parks/ ATMs, etc were stated and verified. The inventory consists of 42 items with 2 responses, i.e., "yes" and "no" respectively for each item. The 42 items are classified into 4 areas, namely, home=16 items, office=11 items, personal=8 items and public=7 items. The score for 'yes' in home area is 2, in office is 1, in personal area is 3 and in public area is 1 were as the score for 'no' in all the areas is 0. The maximum score possible in this inventory is 74 and the minimum score is 0. High score indicates high e-culture and low score indicates low e-culture. The reliability and validity co-efficient values for this inventory were 0.72 and 0.85 respectively found significant at 0.001 levels.

Revised University of California at Los Angeles (UCLA) Loneliness Scale

This scale was developed by Russell *et al.* (1980). It is a 20 item self-report on which respondents express how often their feelings and behaviours reflect perceived isolation and dissatisfaction with social relationships. This scale consists of 10 statements dealing with satisfaction of one's social relationships and 10 statements dealing with dissatisfaction of one's social relationships.

Respondents indicated how frequently they experience each item on a scale from 1 to 4, corresponding to 'never,' 'rarely,' 'sometimes,' and 'often' respectively. Russell *et al.* (1980) determined high internal consistency reliability for the instrument yielding a co-efficient alpha of 0.94. They also found acceptable concurrent validity and discriminant validity. Split-half reliability in Indian context was 0.71 (Jha, 1988).

Reliability

The ULCA loneliness scale shows high internal consistency for a scale of only 20 items. For the total sample of 239 students, coefficient alpha was .96. It is important to note that this level of coefficient alpha exceeds Nunnally's (1967) criterion for a measure to be used in an applied clinical setting. Data are available from Jones (Note 1) regarding the test-retest reliability of the 20-item ULCA Loneliness scale. Based on a sample of 102 University of Tulsa student volunteers assessed over a 2-month period, a test-retest correlation of .73 was found. This suggests that there is some stability in the measure over time, despite changes in an individual's level of loneliness that might be expected to occur in a two-month period.

Validity the ULCA loneliness scale was examined in relation to several validity criteria. The correlation between the subjective self-report question about current loneliness and the loneliness scale score was highly significant ($r(45) = .79, p < .001$). High scorers on the loneliness scale described themselves as more lonely than other people. Loneliness scores of people who were sufficiently troubled by loneliness to volunteer for a 3-week clinic/discussion program differed dramatically from scores of students in a comparison group who were tested in a concurrently. The mean loneliness scale score of clinic participants was 60.1 compared to a mean of 39.1 for the comparison sample ($t(41) = 5.09, p < .001$).

Normative Data

Although no attempt has been made to collect representative normative data for the ULCA loneliness Scale, some data on college samples are available from the current investigation and from research presently underway at the University of Tulsa. Summary statistics for loneliness scale scores of students in these two samples are shown in Table 1. As can be seen from the Table, no regional or sex differences were found.

In conclusion, loneliness is a serious mental health problem, and the lack of research concerning its causes and possible treatment is disturbing. It is hoped that the adequacy and convenience of the ULCA Loneliness Scale will spur new research into this important topic.

Procedure

The samples of this study were personally and individually contacted and data was obtained through face-to face interview. The duration of data collection were spread over a period of two months (60 days). The obtained responses were scored and statistically analyzed.

Methods of data collection: The data for the present research was collected personally through interview method. A pilot study was conducted on 10% of the sample to validate the data collection instrument and requisite changes in the schedule were made. Visits were made to the selected areas in order to establish a rapport and to ensure full co-operation from the identified sample.

Data processing

Coding: Coding refers to the process of assigning, numbers other symbols to answers. So that workers on them be part into a limited number of categories or classes appropriate to the research problem under consideration.

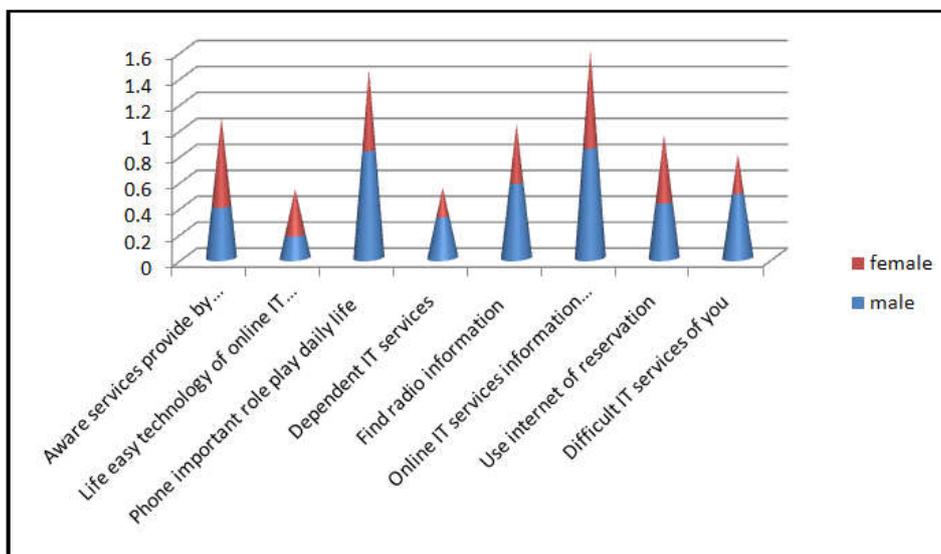
Scoring: The scoring of various dependent and independent variables include in the questionnaire was done as mentioned below

Mean value of females was significantly higher as compared to that of males in assuming the life easy with technology. Most of the elderly males and females believe that online IT services can be used in a best possible manner for obtaining information regarding health services.

Statistically no significant difference was observed across gender for any of the items except items tune with the people around me, lack companionship, outgoing persons, feel left out, no one really know me well, isolate from others, find companionship, and they are people who really understand ($p < 0.05$). Mean values of males were significantly higher as compared to those of females for items such as tune with the people, interest and ideas are not share, feel left out, isolate from others and find companionship. Mean value of females was significantly higher as compared to that of males in assuming the lack companionship.

Table 1. E-Culture among elderly

S.No.	Statement	Male	Female	t	P
1	Aware of services provide by information technology	0.40±0.494	0.68±0.469	-3.221	0.068
2	Life easy technology of online IT services	0.18±0.390	0.35±0.481	-2.084	0.000
3	Phone important role play daily life	0.83±0.376	0.62±0.490	2.717	0.000
4	Dependent on IT services	0.32±0.469	0.22±0.415	1.236	0.015
5	Find radio information	0.58±0.530	0.45±0.502	1.415	118
6	Use online IT services for information regarding health.	0.85±0.360	0.75±0.437	1.415	0.006
7	Use internet for reservation	0.43±0.500	0.52±0.504		0.349
8	Difficult to use IT services	0.50±0.504	0.30±0.462		0.001
	TOTAL	4.1000±1.8383	3.8833±1.3912		0,011



RESULTS

Statistically no significant difference was observed across gender for any of the items except items life easy due to technology of online IT services, phone play an important role in daily life, dependence on IT services, online IT services information regarding health and difficult IT services ($p < 0.05$). It was observed that for items phone play an important role in daily life. Mean value of males were significantly higher as compared to those of females for items such as dependency on IT services, use online services for information regarding health and reservation.

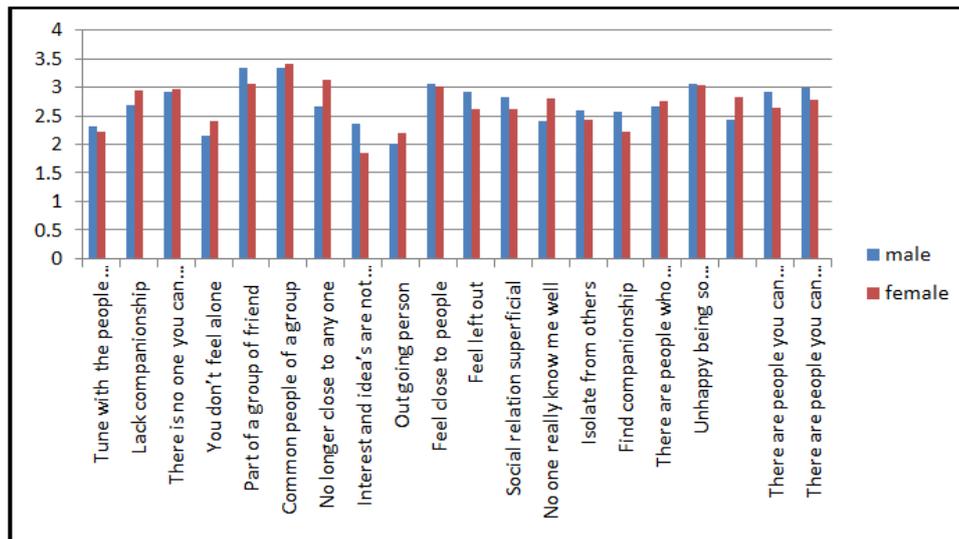
Outgoing person, no one really know me well and there are people who really understand you. Most of the elderly male ($\mu = 2.93$) and female ($\mu = 2.63$) believe that feel left out. Data showed that as the p value were less than 0.05 in some parameter like outgoing person and there are people who really understand you. The hypothesis was highly significant.

DISCUSSION

Loneliness is common among older people and seems to be a steady state affected mainly by psychological and psychosocial

Table 2. Showing the Mean, SD, t-test and P-value for loneliness score of the groups on the basis of gender

S.No.	Statement	Male	Female	T	P
1	Tune with the people around me	2.32±1.000	2.23±1.294	7.46*	0.007
2	Lack companionship	2.70±1.013	2.95±0.832	12.75**	0.001
3	There is no one you can turn to	2.92±0.944	2.98±0.748	3.040	0.084
4	You don't feel alone	2.17±0.827	2.43±0.533	3.272	0.073
5	Part of a group of friend	3.35±0.799	3.07±0.800	0.705	0.403
6	Common people of a group	3.35±0.856	3.42±0.889	0.511	0.476
7	No longer close to any one	2.67±0.951	3.13±0.965	0.335	0.564
8	Interest and idea's are not share	2.38±0.739	1.87±0.791	0.009	0.923
9	Out going person	2.03±1.008	2.22±1.403	37.21**	0.000
10	Feel close to people	3.08±0.743	3.02±1.770	0.012	0.913
11	Feel left out	2.93±1.023	2.63±1.178	6.95	0.009
12	Social relation superficial	2.83±0.886	2.63±0.663	2.199	0.141
13	No one really know me well	2.42±0.829	2.82±1.000	4.834*	0.030
14	Isolate from others	2.60±0.978	2.45±1.141	4.458	0.037
15	Find companionship	2.58±1.211	2.23±0.981	10.690**	0.001
16	There are people who really understand you	2.67±1.036	2.77±0.698	15.17**	0.000
17	Unhappy being so withdrawn	3.07±0.954	3.05±1.048	1.956	0.165
18	People are around me but not with me	2.45±0.769	2.83±0.668	3.268	0.073
19	There are people you can talk to	2.93±0.841	2.65±0.840	0.357	0.551
20	There are people you can turn to	3.00±0.844	2.80±0.860	0.937	0.335



factors such as personality, satisfaction with life, risk of depression. Lack of friends and loss of spouse Psychosocial interventions targeting emotional loneliness and social isolation are suggested. The finding of this research that e-culture is inversely related to loneliness among elderly indicates that increased use of electronic products by elderly individuals results in low level of loneliness and vice versa. The rationale for this finding might be that the preoccupation with electronic products especially multi-media technologies by the elderly may make them feel part of a social network or be a replacement for the lack of friends. The information and communication technology (ICT) championed by Internet and mobile technology ensuing in e-culture has made access to information and communication between people simple, effortless and undemanding. Loneliness which is popularly viewed as relative deficit in adequate social relations may be compromised by increased indulgence in electronic technology making contacts and communication easy for the elderly. Further the elderly individuals possessing the motivation and skills to use electronic products may have more perceived control over their environments. Patel (1998) has empirically

proved that increased perceived control results in decreased loneliness among the elderly.

Conclusion

Loneliness is very common among the oldest people (78+) and once a person becomes lonely. Factors associated with and predictors for loneliness have been shown to encompass both physical and psychological aspects on a multi-level. However, it seems that those factors which can be directly linked to psychological wellbeing are the major causes for older people being or becoming lonely. Half of the respondents reported that they felt lonely sometimes or more often. Women, widows/ers living alone were more prone to report loneliness. Both independent associated factors and predictors were identified showing that loneliness is associated with and predicted by both physical and psychosocial outcomes.

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