Major Activities of the Centre July– December, 2015

1. The Centre has Completed National Health Mission (NHM)-Programme Implementation Plan Monitoring in 4 districts of Karnataka and 8 districts of Odisha.
2. The Centre has Completed Endline Household Survey for Project Sukshema on Maternal , Neonatal and Child Health funded by KHPT, Bangalore
3. Dr. Shriprasad H. Jt. Director attended one week workshop on "Time Series Econometrics" organized by Department of Economics, Mysore University, Mysore, Karnataka.
4. Dr.Shriprasad H. Jt. Director published an article on Prevalence of tobacco use and attitude of tobacco users in India: A macro perspective in SHODHA journal
5. Dr. Jyoti S. Hallad, Mr. J. A. Golandaj, Mr. R. V. Deshpande and Mr. B. I. Pundappanavar published a Research paper titled "Differentials and Determinants of Neonatal and Infant Mortality in Rural Karnataka" in "Demography India".
6. Dr. Shriprasad H. Jt. Director published an article 'Infrastructure and manpower status in PHCs and CHCs: A macro perspective' in International Journal of public health research and management.
7. Mr. H. R. Channakki, Field Invistigator, published a Research paper entitled "An Analysis of disparities in Sanitation Facilities" in Kannada Monthly Magazine ***Hosatu***

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Padmavibhushana Dr. D. Veerendra Heggade
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Correlates of Domestic Violence against Women in Madhya Pradesh

Dr. Nikhilesh Parchure*

Abstract : *Domestic violence is considered as one of the silent crimes as the victim of domestic violence often hesitates to report it to the law enforcement agencies. Mostly women are the victims of domestic violence in India. It is often considered as "normal" to beat wife by her intimate partner across many societies and regions in India. This paper aims to find correlates of domestic violence against women and analyze different forms of domestic violence and its associated socio-economic and demographic dimensions. Background characteristics such as, age, education, age at marriage, work status of women, number of children linked to domestic violence. Bivariate analysis is used to examine the variation of domestic violence by background characteristics. The results show a decline in women's justifying physical violence by husband between NFHS-2 and FNHS-3. Logistic regression results show that women in middle ages, non working, having more number of children and having parental domestic violence is more likely to both justify and experience domestic violence in the form of beating by husband.*

Key Words: Women Empowerment, Domestic Violence, Wife Beating, Madhya Pradesh

Introduction

Domestic violence is the wilful intimidation, physical assault, battery, sexual assault, and/or other abusive behaviour as part of a systematic pattern of power and control perpetrated by one intimate partner against another. It includes physical violence, sexual violence, psychological violence, and emotional abuse. Domestic violence also encompasses any act of physical, sexual, or psychological abuse, or the threat of such abuse, inflicted against a woman by a person intimately connected to her through marriage, family relation, or acquaintanceship is universal and has its root in the socio-cultural set up of the society. The perpetrators of domestic violence have often been found to be the males and the victims, their sexual partners. Internationally, one in three women have been beaten, coerced into sex or abused in their lifetime by a member of her own family (Heise et al. 1999). Starting from childhood to the end of her life she has to be under the control of father or husband or the son. The subordinate status of women combined with socio-cultural norms that are inclined towards patriarchy and masculinity can be considered as an important factor determining the domestic violence.

Domestic violence also affects empowerment of women, with consequences of women's health, their health health-seeking behaviour and their adoption of small family norm. In view of the prevalence as well as the pervasiveness of domestic violence, many researchers in the past have attempted to assess the situation, besides exploring its possible cause and subsequent consequences for society in general and women in particular. INCLEN (2000), found it as a problem that cuts across age, education, social class and religion in India. The same study is of the view that 40 percent women had

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experienced at least one form of physical violence in their married life. Studies have shown that family size, type of marriage, husband's education and menstrual problems have significant influence on domestic violence (Murthy et al. 2004), certain life style behaviors of men such as smoking, alcoholism and drugs also related to domestic violence by men (McKenry et al., 1995; Rao, 1997 and Bhatt, 1998),. Again, persons with lower socialization and responsibility are found to be the enhancers of the problem (Barnett and Hamberger, 1992). Study among Uttar Pradesh men by Gerstein (2000) and among women in Madhya Pradesh by Mishra et al. (2013) concluded that low educational level and poverty as important predictors of domestic violence against women besides it influences on women's autonomy in taking decision related to her own health, money spending and freedom to socialize.

Several other studies have pointed towards other harmful effects like unwanted pregnancy (Khan et al., 1996), gynecological disorders (Golding and Taylor 1996) and physical injuries to private parts (Stark et al., 1979) besides large-scale mental health impacts (UNICEF, 2000). Further, violence by husband against wife is seen as a break down in the social order and further an affirmation to patriarchal social order (Travers, 1997). Similarly, (Jejeebhoy, 1998) pointed wife beating, as an act, is deeply entrenched, also women herself justify it. Thus, domestic violence against women is simply not a personal abnormality, but it roots in the cultural norms of the family and the society. Similarly , looking through another perspective, it is found that many of the victims of domestic violence has either refused to name the perpetrator of the assault or attributed the injuries to other reasons (Daga et al., 1999).

In view of the above discussion, it seems essential to understand the women's viewpoint besides the assessment of the problem and its correlates. Further, in the present world, where gender equality and justice have become the buzz words, examining the domestic violence in the largest democracy of the world appears worthy for the betterment of half of its citizens. The study focused on state of Madhya Pradesh which is as culturally diverse as India and its one third population belongs to lower socio-economic communities.

Objectives

The present paper aims to study different facets of domestic violence against women in general and women's perception about wife beating and prevalence of physical violence against women by intimate partner (i.e., husband) in particular. The study incorporates ever-married women of reproductive age group who have experienced physical violence against them by since the age of 15 years. Specific objectives of the present paper are as follows:

1. To compare the variations of women's view about wife beating as justified and her experience of beating by husband.

2. To study the different dimensions of Domestic Violence against Women and its associated factors.
3. To study differentials in Domestic Violence against Women
4. To ascertain temporal variation in correlates of Domestic Violence against Women

Data and Methods

Data from the National Family Health Survey (NFHS-2) conducted during 1998-99 and NFHS-3 conducted in 2005-06 has been used for the present analysis. The survey provides information on and socio-economic background and health care services provided to mothers and children. In addition, it provides indicators of the quality of health and family welfare services, reproductive health problems, status of women and domestic violence. The survey adopted a multi-stage sampling design to select the eligible woman for the interview. The research findings of the present paper are based on a representative sample of 6941 ever-married women in the age group 15-49 years for NFHS-2 and 6427 for NFHS-3. The data is analyzed using statistical software and includes both bivariate and multivariate analysis techniques.

NFHS asked every married women respondent of age-group 15-49 years –

- Whether she justifies beating by her intimate partner for different reasons?
- Whether she has ever experienced any form of emotional, physical or sexual violence by her intimate partner?

The interplay between attitude toward justifying wife beating by husband and actual experience of spousal violence cannot be seen as direct and obvious. It may be negative or positive. However, combining the two dimensions can provide insight into mapping of domestic violence in the form of SWOT analysis. Women who experience spousal violence may be more likely to accept and live with such violence if they perceive it as a husband's 'right' and therefore justified; or their own experience of violence may make them see such violence as never justified. Similarly, women who do not experience wife beating may be less likely to justify it in any form; or women who do not justify wife beating may be less likely to experience wife beating.

For analysis dependent variable has been taken as combination of variables – Attitude towards spousal violence i.e., Whether women justifies wife beating by husband and Whether women ever beaten by her husband. Three dichotomous dependent variables have been computed as follows.

a. Woman justifies beating by husband and not experienced beating by her husband
b. Woman does not justify beating by husband but has experienced beating by her husband
c. Woman justifies beating by husband and also experienced beating by her husband.

For examining the association between each independent variable and above three dependent variables bivariate analysis is used. Multivariate analysis in the form of logistic regression has been carried out to assess the statistical significance of the association between three dependent variables and independent variables.

Independent variables considered for the analysis are – age of women, educational attainment, number of children even born, no. of girl child, age at first marriage, employment, spousal educational difference and parental domestic violence.

Results and Discussion

Regional variations between NFHS-2 and NFHS-3

Table 1 provides proportion of women justifying beating by husband across selected states during NFHS-2 and NFHS-3 surveys. The table depicts the scenario of domestic violence in Madhya Pradesh vis-s-vis other states having similar socio-economic and cultural background. During NFHS-2, more than 70 per cent of women from Madhya Pradesh affirmed that they justify beating by husband. Madhya Pradesh has been a dominant patriarchal society. During NFHS-3 proportion of women justifying beating by husband has reduced significantly in Madhya Pradesh, as compared states like Bihar and Rajasthan.

A comparison of proportion of ever married women who have ever beaten by their husbands is being shown in Table 2. It revealed that in Madhya Pradesh and some other states proportion of women beaten by their husbands have increased twice between NFHS-2 and NFHS-3. In Madhya Pradesh the proportion has increased from 21 per cent to 44 per cent. It may be because of presence of laws relating to the redressal of domestic violence. The women have reported more about the domestic violence during NFHS-3 as compared to NFHS-2.

Justification of reason of wife beating

The proportion of women in Madhya Pradesh who justifies beating by husband for various reasons is depicted in Figure 1. NFHS-2 revealed that, across all the reasons, half of the women think husband can beat his wife in case "she neglects children and house", "husband suspect that his wife is not faithful", "wife goes out without telling her husband" and "wife shows disrespect for her in-laws". It is found that for NFHS-3 percentage of women justifies beating by husband has reduced by nearly 50 per cent for reasons such as – "wife does not cook food properly", "she neglects children and house", "wife goes out without telling her husband" and "husband suspect that his wife is not faithful".

Experience of spousal violence by married women

In the NFHS-3 survey every pregnant women was asked about the type of violence she had ever experienced. It was revealed that nearly half (49 per cent) of the married women in Madhya Pradesh had gone through some form of physical or sexual or emotional violence from their husband (Figure 2). It is also found that 46 per cent of women had experienced either physical or sexual violence. Proportion of women receiving physical violence alone from their husband was 44 percent.

Justification for and ever experience of spousal violence

Figure 3 provides distribution of married women who according to their attitude and

experience of spousal violence. It appeared that majority women (56 per cent) in NFHS-2 reported of justifying beating by husband but had not beaten by their husband. Similarly, 18 per cent women both justified wife beating and also had been beaten by their husband. During NFHS-3, proportion of women who neither justifies wife beating nor had experienced of being beaten by their husband has increased significantly to 45 per cent. The proportion of married women who do not justifies wife beating but had been beaten by their husbands have gone up by three times from 4 per cent to 14 per cent during NFHS-2 and NFHS-3.

Correlates of women's attitude and experience of spousal violence

There may be are many factors that affect married women's opinions about whether wife beating is ever justified and/or her actual experience of being beaten by her husband". Many such factors will both directly and indirectly, through other variables, affect these opinions. Thus, logistic regressions were used separately for the three dependent variables created by combining women's justification and her experience of spousal violence. The dependent variables are given a value of 1 if either of three conditions are in agreement and was given a value of 0 otherwise.

Table 3 gives the adjusted odds ratios for women's agreement that she justifies wife beating but had not beaten by her husband (column 2), not justifies wife beating but had beaten by her husband (column 3) and both justifies wife beating and had been beaten by her husband (column 4) for NFHS-2. Similarly for NFHS-3 odds ratios are given in Table 4 for the three dependent variables. Different explanatory variables taken for the study along with reference category are given in column 1 of both the tables 3 and 4.

Each odds ratio (OR) gives the increase (OR>1.00) or decrease (OR<1.00) in the odds of agreement for a given value of the explanatory variable, compared with the reference category (OR=1.00). For example (see table 3), in the regression for women's agreement in column 2 an odds ratio of 1.51 for the age-group 20-29 years implies that the odds of women in this age group agreeing on her justifying wife beating but had not beaten by her husband are 51% higher (OR=1.51 vs. OR=1.00) compared to women of age 15-19 years old (the reference category) controlling for all the other variables in the regression. Similarly, the odds ratio for age at marriage of women implies that women in marital age of 19-24 are 32% less likely (OR=0.68) to agree both justifying wife beating and her experience of being beaten by her husband compared to women whose age at marriage is below 18 years (OR=1.00). The following are the key findings of the regression analysis regarding the relationship of agreement with wife beating with each explanatory variable:

Women justifies wife beating but not beaten by her husband

Table 3 shows that as compared to uneducated women (ref.), women with schooling of 12 years and more are 55 percent less likely to justify wife beating but not beaten by her husband (OR: 0.45)

implying number of schooling years is negatively associated with women's justification of wife beating and not experiencing spousal violence. Similar negative association is observed with women's employment. Table 4 for NFHS-3 shows that with more number of children ever born, women are more likely to justify the wife beating but had not beaten by her husband. For a working woman chances are 76 percent less that she justifies wife beating and not beaten by her husband than the women who is not employed. It is found that for NFHS-2 the model explains overall variability of 23.7 per cent in the proportion of women justifying and not beaten by her husband for different explanatory variables. This has reduced to 15.2 per cent for NFHS-3.

Women not justifies wife beating and beaten by her husband

Table 3 for NFHS-2 shows that women in the age of 30-39 years is more likely (OR 1.27) then the women of younger age 15-19 years to not justify wife beating but had been beaten by her husband. It is observed that there are 51 percent more chances among women who have three or more girls not to justify wife beating and had been beaten by her husband compared to women with no girl child. This model explains 19.8 per cent variability. For NFHS-3 results shows that number of girls born to a women (OR: 1.43) and presence of parental domestic violence (OR: 1.11) increases the likelihood of women reporting not to justify spousal violence and had been beaten by her husband. This model explains 13.8 percent variability.

Women justify wife beating and beaten by her husband

Table 3 for NFHS-2 shows that women in 30-39 years age group and presence of parental domestic violence in the women's household have 41 per cent more chances of justifying and experiencing wife beating. Women having more than three children ever born have two times more likelihood of justifying and experience of wife beating than women having no children. For NFHS-3, there is a significant positive association between number of children ever born and women's justification and her experience of spousal violence. Predictors such as age of women, number of girl children, lower educational difference in herself and her husband and presence of parental domestic violence shows her chances of reported about justifying and experiencing wife beating as positively associated. Both the model predicts 18.4 per cent and 21.7 per cent variability for NFHS-2 and NFHS-3 respectively.

Conclusion

The study revealed that during NFHS-2 i.e., in 1998-99 more women were of opinion that wife beating is justified for certain reasons but proportion of women who actually experienced any form of violence was comparatively low contrary to the women in NFHS-3 where proportion of women

justifying wife beating is less and women reporting beaten by their husbands are more. Women in Madhya Pradesh tend to justify violence against them for certain reasons. Prominently Disrespect for in-laws, neglect for children and house, and does not cook food properly. For the later two reasons lesser proportion of women tend to justify during NFHS-3. As compared to NFHS-2 more proportion of women have reported domestic violence in the form of beating by husband in NFHS-3. The proportion of women reporting violence has doubled in MP during the two surveys. Physical form of violence is most prominent followed by emotional and sexual reported by women in NFHS-3.

A possible explanation for this could be the absence of any law in favour of women for redressal against domestic violence. There could be beating by her husband to which she has no mechanism to sought help. Women in middle ages, non working, having more number of children and having parental domestic violence is more likely to both justify and experience domestic violence in the form of beating by husband. Women in middle age, having 3 or more children born or having 3 or more girls, married in early ages, and experienced parental domestic violence is more likely not to justify but experience domestic violence

However, during NFHS-3 more women had reported of violence by their husbands. This may be because of social awareness and efforts for women empowerment and increased education among women which led to increased reporting of spousal violence. Women in middle and higher ages, having more children and more girls, having lower education then husband is more likely to justify and experiences violence at home. Women in younger ages, married early and experienced parental domestic violence is more likely to justify the violence at home but not experienced any violence.

This paper has dealt with the issue of domestic violence and women's attitude towards justifying wife beating by husband and her experience of being beaten by her husband. This also puts forward a crucial question – why do women justify wife beating and experience of violence in marital unions in the present scenario where more educated, more liberal, more societal and cross-cultural environment? It is essential to mention here, that presence of domestic violence in the form of wife beating and increased reporting of it by women is an indication that women are not silent bearer of violence now. Awareness and changing attitude towards women's own rights may be the solution to end the domestic violence against women. The study indicates that there can be many other plausible explanations for this phenomenon to which this study could not explore owing to limited data.

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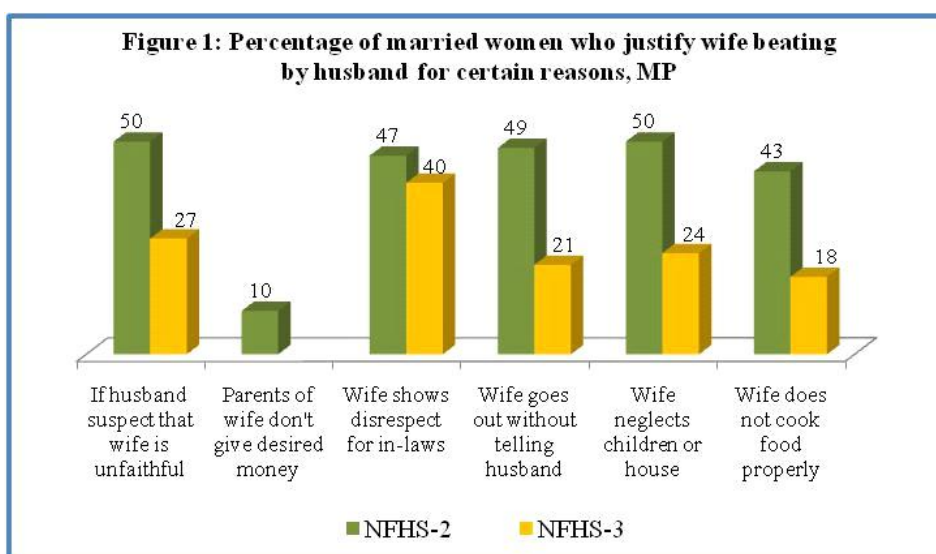
Table 1: Percentage of ever married women age 15-49 years who justify beating by husband in selected states of India, NFHS-2 and NFHS-3		
States	NFHS-2 (1998-99)	NFHS-3 (2005-06)
Madhya Pradesh	71.6	51.4
Uttar Pradesh	61.2	47.0
Bihar	47.1	56.9
Jharkhand	--	50.4
Rajasthan	51.3	57.6
Maharashtra	75.2	50.9
India	**56.3**	**54.4**

Table 2: Percentage of ever married women age 15-49 years who had experienced physical violence since age 15 by her spouse, NFHS-2 and NFHS-3		
States	NFHS-2 (1998-99)	NFHS-3 (2005-06)
Madhya Pradesh	21.2	44.0
Uttar Pradesh	22.4	41.2
Bihar	26.6	55.6
Jharkhand	--	34.7
Rajasthan	10.9	40.3
Maharashtra	18.1	30.6
India	**21.0**	**35.1**



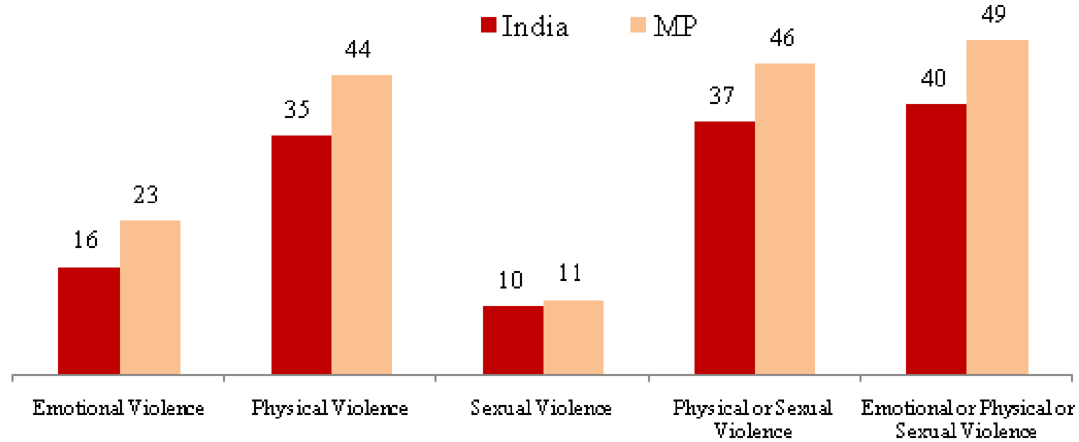


Figure 2: Percentage of married women age 15-49 who have experienced violence since age 15, India and MP, NFHS-3
India
MP
16
23
35
44
10
11
37
46
40
49
Emotional Violence
Physical Violence
Sexual Violence
Physical or Sexual Violence
Emotional or Physical or Sexual Violence

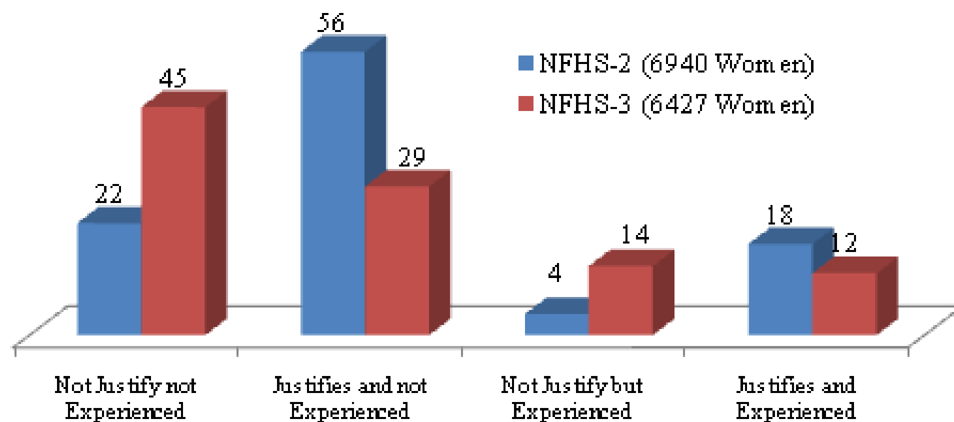


Figure 3: Percentage of married women age 15-49 according to their attitude and experience of spousal violence, MP
NFHS-2 (6940 Women)
NFHS-3 (6427 Women)
22
45
56
29
4
14
18
12
Not Justify not Experienced
Justifies and not Experienced
Not Justify but Experienced
Justifies and Experienced

Table 3: Logistic Regression Results of Effect of Socio-Economic and Demographic Characteristics on Women's attitude and experience of domestic violence in the form of wife beating by husband, MP (NFHS-2)			
Predictor Variable	**Justify and Not Exper Exp (â)**	**Not Justify and Exper Exp (â)**	**Justifies and Exper Exp (â)**
Age of Women			
15-19$	1.00	1.00	1.00
20-29	1.51*	0.98	1.14
30-39	1.12	1.27**	1.41**
40-49	1.09	0.89	1.16
Education (Years of Schooling)			
None$	1.00	1.00	1.00
1-4	0.93*	0.95	0.80*
5-9	0.80***	0.84**	0.62**
10-11	0.84***	0.57***	0.40*
12 or more	0.45***	0.39***	0.39*
Number of Children Ever Born			
0$	1.00	1.00	1.00
1-2	1.16*	1.41	1.65*
3+	1.37*	1.45*	2.14**
No. of Girls			
0$	1.00	1.00	1.00
1-2	1.10	1.22*	1.07*
3+	1.23**	1.51**	1.12
Age at Marriage			
Less than 18$	1.00	1.00	1.00
19-24	0.81	0.73***	0.68***
25+	0.96*	0.92**	0.73*
Employment Status			
Non Working$	1.00	1.00	1.00
Working	0.74**	0.72***	0.67**
Spousal Educational Difference			
No$	1.00	1.00	1.00
Lower	0.84**	0.44*	1.25
Higher	0.55	0.69	0.64
Parental Domestic Violence			
No$	1.00	1.00	1.00
Yes	0.71*	1.23*	1.41**
R^2 %	**23.7**	**19.8**	**18.4**
$: Reference Category. *p< .001** p< .01*** p < .05			

Table 4: Logistic Regression Results of Effect of Socio-Economic and Demographic Characteristics on Women's attitude and experience of domestic violence in the form of wife beating by husband, MP (NFHS-3)

Predictor Variable	Justify and Not Exper Exp (â)	Not Justify and Exper Exp (â)	Justifies and Exper Exp (â)
Age of Women			
15-19[$]	1.00	1.00	1.00
20-29	1.31*	0.78**	1.34
30-39	1.09	1.21*	1.31*
40-49	1.21	0.96*	1.26**
Education (Years of Schooling)			
None[$]	1.00	1.00	1.00
1-4	0.87**	0.90	0.80
5-9	0.71*	0.94**	0.75**
10-11	0.80**	0.57***	0.45*
12 or more	0.55**	0.41**	0.34*
Number of Children Ever Born			
0[$]	1.00	1.00	1.00
1-2	1.15**	1.43	1.65*
3+	1.26*	1.44*	1.98*
No. of Girls			
0[$]	1.00	1.00	1.00
1-2	1.13**	1.21*	1.05*
3+	1.26*	1.43*	1.22 ***
Age at Marriage			
Less than 18[$]	1.00	1.00	1.00
19-24	0.81	0.79***	0.78***
25+	0.91**	0.82**	0.93*
Employment Status			
Non Working[$]	1.00	1.00	1.00
Working	0.24**	0.76**	0.47**
Spousal Educational Difference	0.70**	0.40*	1.21
No[$]	0.55 *	0.61*	0.61**
Lower			
Higher			
Parental Domestic Violence			
No[$]	1.00	1.00	1.00
Yes	0.71*	1.11*	1.46**
R^2 %	**15.3**	**13.8**	**21.7**

[$]: Reference Category. *p< .001** p< .01*** p < .05

PUBLIC EXPENDITURE ON HEALTH SECTOR IN KARNATAKA: AN ANALYSIS OF ITS TRENDS AND PATTERNS

Shankaranand G* and R R Biradar

Abstract : *Public expenditure regulates the economic activities and helps to attain the long-run and short-run objectives of economic development. The study based on secondary data attempts to examine the trends and patterns of public expenditure on healthsector during 1991-92 to 2012-13 and explore plausible association between the public health expenditure and economic growth in Karnataka. The public expenditure on health as a percentage of GrossState Domestic Product(GSDP) at constant prices has found to beincreased negligibly over period of time in Karnataka.The per capita public expenditure on health in Karnataka has increased much faster rate in late reform periods as compared to early reform periods. The public health expenditure in relation to social service expenditure has been seen flatter over a period of time in Karnataka.The public health expenditure as a percentage of total government expenditure in Karnataka have seen fluctuations in the beginning of reform period after the launch of NRHM, it has been increased significantly. The growth rate of health expenditure was highest as compared to growth rate of GSDP in Karnataka. The growth of revenue expenditure on health was greater as compared capital expenditure in Karnataka.This study has found that major indicators of health such as CBR, CDR, IMR and TFR have been declined consistently during 1991 to 2011. The public expenditure on health in Karnataka increased over a period of time which has also inversely impacted on infant mortality rate to decline drastically.The correlation matrix shows that per capita public health expenditure is negatively associated with major health indicators.The study argues that state government has to increase financial allocation and ensureeffective utilization of resources for providing health care services and improving the health status of the people.*

Key Words: *Health Indicators, Health Expenditure and Gross State Domestic Product*

1. INTRODUCTION

Public expenditure has considered to bean important policy instrument for sub-national government which is expected to engender large effect on economic growth. Public expenditure on health leads to expansion of health infrastructure and improved health condition of the people who will be healthier workforce in future.Health being the State subject in India and much depends on the ability of the State Government to allocate higher budgetary support to health sector.In India the government budget allocations to health sector would reflect more of supply side factors than demand side, whereas the private sector health care expenditures would represent more of demand side conditions than supply side (Bath and Jain, 2004). Macroeconomic aspects of social spending and its impact on human and economicdevelopment are investigated empirically. Developing human capital through better educationalopportunities and improving the health status will boost the productive potential not only of theindividual but also the society through positive externalities.

Public expenditure on health was higher in developed countries as compared to developing countries. The developed country likeUSA, has marked highest in public expenditure on health as a percentage of GDP with 17.9 per cent, the public expenditure on health as percentage of total government expenditure was 19.9 per cent and per capita expenditure on health was8895US$as compared to other developed and developing countries in the world in 2012. The developing countries

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like Brazil and Russia have also performed better in the above indicators. The public spendingon health as percentage of GDP is low as the low income countries' health expenditure. As far as India and China is concerned, the public health expenditure as percentage of GDP was 4.1 percent and 5.4 percent, respectively. The Public expenditure on health sector as percentage of total government expenditure was 9.4 per cent in India, while it was 12.5 per cent in China. The per capita expenditure on health was US$.61 in India, whereas it was US$ 322 in China.This indicates that India spends very less as compared to that of China in 2012. It is important to examine the public expenditure on health sectors and its possible effect on health outcomes.

2. REVIEW OF LITERATURE

Several studies have focused on public expenditure on health, but few of studies have concentrated on private health expenditure. According to Wagner hypothesis emphasis the economic growth causes the public expenditure, while the Keynesian view is that the public expenditure causes economic growth. A study by Selvaraju (2000) discussed that data till 1996 he says there was a period of contraction on expenditure. But after the period, again the situation improved and then that expenditure contraction period got over. A study by Bhat and Jain (2004) examined the relationship between income and health expenditure. For every one percent increase in state per capita income, the per capita public healthcare expenditure has increased by around 0.68 per cent in Indian States. It is evident from the analysis by Rao and Choudhury (2004) that the public expenditure on health as a percentage of GSDP in Karnataka increased significantly between 1990-91to 2002-03. Joshi (2006) indicates that public expenditure incurred on health as a percentage of GDP declined in the post-reform period in India. A work by Berman and Ahuja (2008) using medical and public health and family welfare components estimated that health expenditure as a percentage ofGDP and health expenditure in total government expenditure in India declined significantly during 1999-00 to 2004-05. Rao and Choudhury (2012) argued that not only public expenditure on health care in India was too low but its distribution across the country was uneven. Public spending on health in India was about 1.1 per cent of GDP in 2010-11.A study by Choudhury and Nath (2012) examined public health expenditure as percentage of GDP has increased between 2004-05 to 2010-11 in India. In a study by Gayithri (2012) found that the government financing on health sector in Karnataka has a very small share in GSDP.

3. OBJECTIVES OF THE STUDY

- To analysethe trends and patterns of public expenditure on health sector in Karnataka;
- To examine the impact of public health expenditure on health status by considering certain indicators in Karnataka; and to
- offer policy suggestions for better management of healthcare delivery system in Karnataka

4. DATABASE AND LIMITATIONS

The study is based on secondary data collected from the various sources such as Directorate of Economics and Statistics, Bangalore; Accounts at a Glance, Finance Department, Government of Karnataka; Economic Survey; Various Budget Documents; Indian Public Finance Statistics various issues; and Central Statistical Organization (CSO), attempting to examine the trends and patterns of public health expenditure during 1991-92 to 2012-13in Karnataka.The data considered for the paper from the reform period and three important components have been considered such as Medical & Public Health, Family Welfare and Water Supply and Sanitation for both Karnataka and India in the study.

In order to examine into growth performance of public health expenditure, the period from 1991-92 to 2012-13 has been categorized into three periods: 1991-92 to 1997-98 as the beginning of reform period; 1998-99 to 2004-05 as mid-reform period and 2005-06 to 2012-13 as late reform period.The growth of public health expenditure has examined into the revenue and capital, but for plan and non-plan expenditure has not shown in the analysis due to non availability of data. The data on economic growth and public health expenditure measured in terms of constant prices, the data for Gross State Domestic Product (GSDP) has been collected from the CSO during the same period. The major health indicators such as Crude Birth Rate (CBR) is the no. of live births per 1000 population, Crude Death Rate (CDR) is the no. of deaths per 1000 population, Infant Mortality Rate (IMR) is the no. of Infant deaths per 1000 population and Total Fertility Rate (TFR) is the no. of children born to women, has used in the study which has collected from the Sample Registration System Bulletin (SRSB) for 2001 to 2011 but for the period from 1990 to 1999 has been collected from the work of (Sekher*et al*, 2001). To analyze the trends on the growth of public expenditure and GSDP the Compound Annual Growth Rate (CAGR) and simple percentage have been used.Thedata on PHE has been deflated by dividing GSDP current prices data in GSDP constant prices than we get divided values and the PHE at current prices data should divide in GSDP divided value than we get PHE in constant prices.

5. TRENDS AND PATTERNS OF PUBLIC HEALTH EXPENDITURE

5.1 Compound Annual Growth Rate of PublicExpenditure on Health

The relationship between income and public health expenditure we use realGSDPto represent income and public health expenditure (PHE).The compound annual growth rate of public health expenditure was higher than that of SGDP (Income) in Karnataka. Among the braking periods, growth of health expenditure had highest during early reform period (1991-92 to 1997-98), whereasthe growth was negative during mid reform period (1998-99 to 2004-05) but the growth of public health expenditure was increased in (2005-06 to 2012-13) due to impact of NRHM programme in state. Infect the growth of GSDP was quite betterin Karnataka as compared to India. The GSDP in the first and third

breaking periods was highest, whereas it was found lower growth during second braking period in Karnataka.Whereas in India, the growth of public health expenditure was higher than that of GDP in India (Table 1).

Table 1: Compound Annual Growth Rate(%) ofPublic Expenditure on Health and GSDP (Constant Price)

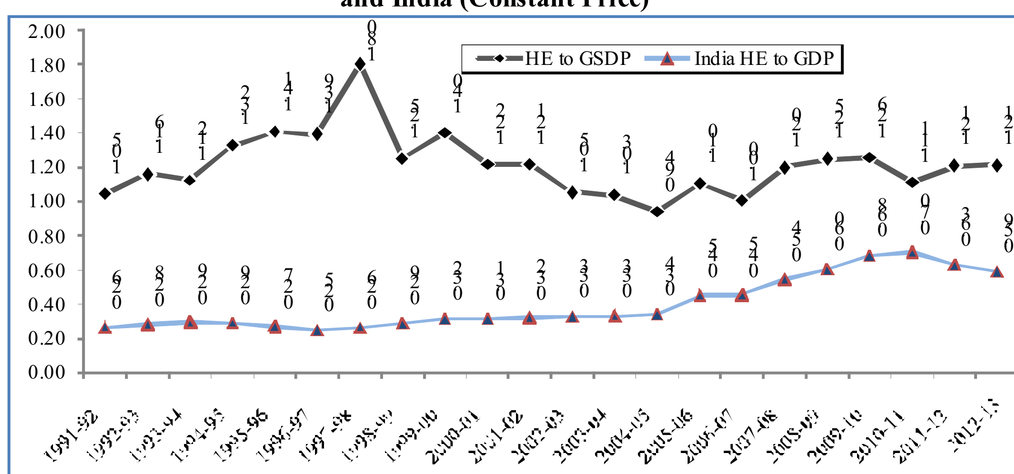
Period	Public Health Expenditure		GSDP/GDP	
	Karnataka	India	Karnataka	India
1991-92 to 1997-98	13.90	5.22	9.81	5.26
1998-99 to 2004-05	-0.28	7.69	3.48	5.17
2005-06 to 2012-13	7.69	10.46	7.69	6.74
Over All	7.05	10.49	6.58	6.52

Source: Finance Documents of Government of Karnataka, Indian Public Finance Statistics various issues and Central Statistical Organization (CSO)

5.2 Public Expenditure on Health as a Percentage of GSDP

The public health expenditure as a percentage to gross state domestic product in Karnataka and India.The public health expenditure as a percentage of GSDP has found negligible increase from 1.05 percent in 1991-92 to 1.21 percent in 2012-13 in Karnataka, Whereas in India found that increase in public health expenditure as percentage of GDP was increased consistently over a period of time.The Public health expenditure as a percentage of SGDP has increased slowly in the early reform period while it has declinedslowly in themid reform period but again increased slowly late reform period that after implementation of NRHM programme in 2005-06 in Karnataka(Figure 1).

Figure 1: Health Expenditure as a Percentage of GSDP in Karnataka and India (Constant Price)



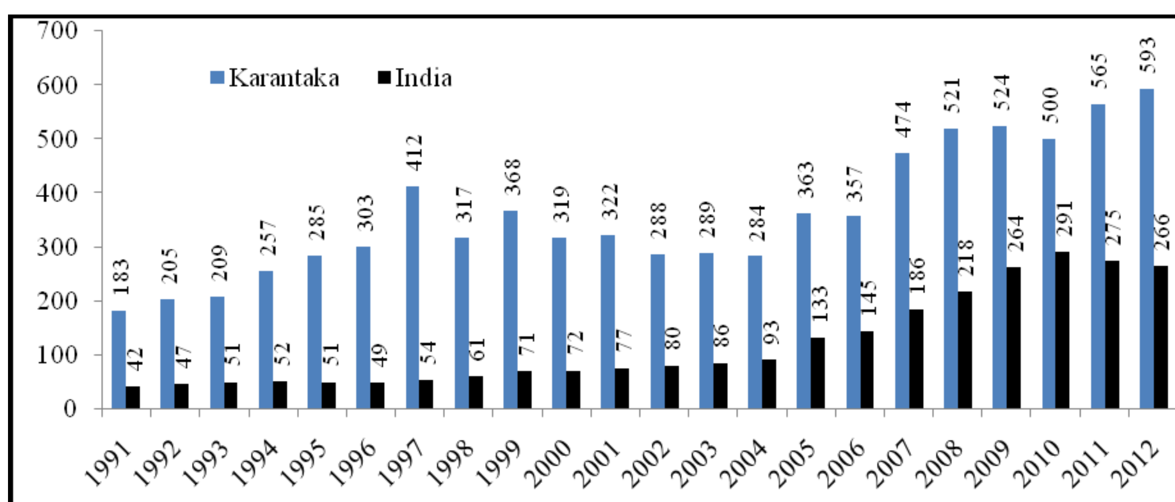
Source: Finance Documents of Government of Karnataka, Indian Public Finance Statistics various issues and Central Statistical Organization (CSO)

The public health expenditure in India declined significantly during 1991-92 to1996-97, because India started liberalization.At this point of time, economic situation of the country was bad.But after 1996-97, it has started increasing slowly. Public health expenditure as a percentage of GSDP and GDP in Karnataka and India has increased at faster rate since 2006-07 due to introduction of NRHM programme in 2005-06. The health expenditure as a percentage of the total state budget, social services expenditure andGross State Domestic Product (GSDP) increased after implementation of NRHM programme in Karnataka (Gayithri, 2012).

5.3 Per Capita Public Expenditure on Health

There has been an increase in per capita health expenditure over a period of time in Karnataka and India (Figure 2). The per capita health expenditure has increased much faster rate in Karnataka than in India. Theper capita health expenditure increased from Rs. 183 in 1991 to Rs. 593 in 2012 in Karnataka. However, the per capita health expenditure has increased significantly during the late reform period as compared to the early reform period in both Karnataka and India.

Figure 2: Per capitaExpenditure on Health in Karnataka and India (Rs.)



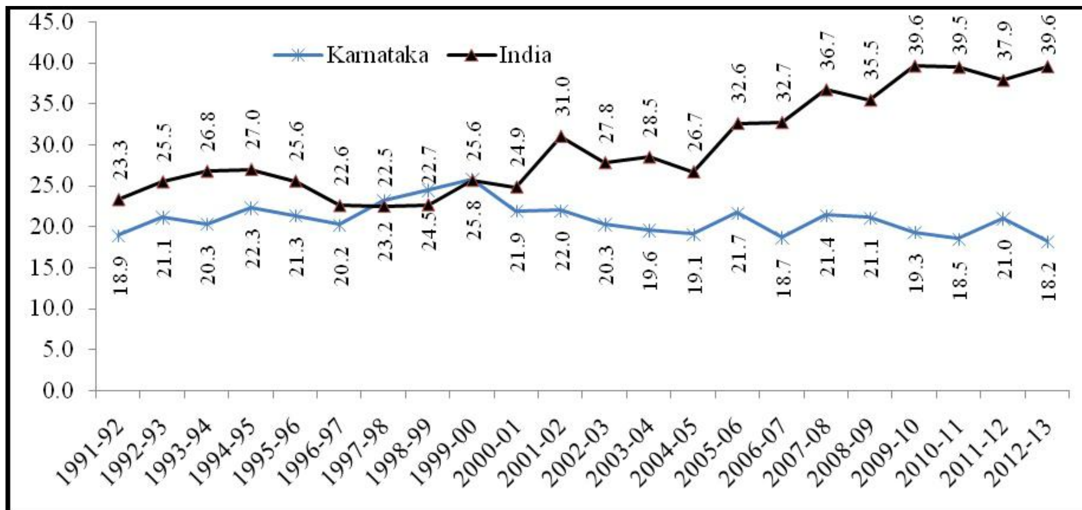
Source: Finance Documents of Government of Karnataka, Indian Public Finance Statistics various issues and Central Statistical Organization (CSO)

5.4 Public Expenditure on Health as a Percentage to Social Services Expenditure

The public health expenditure in relation to social service expenditure has found to be highest in India as compared to Karnataka state. There has been seen much oscillation rather than increasing or decreasing in health expenditure in both Karnataka state and India. Health expenditure as a percentage of social services expenditure in Karnataka increased for limited time period from 1996-97 to 1999-2000 because state government has provided much attention in allocating resources as compared to other heads of social services.

In India, the health expenditure as a percentage to social services expenditure has increased marginally over a period of time. The health expenditure in social services expenditure has declined during 1991-92 to 1996-97 due to economic condition at that point of time was very bad in India. After the period 1996-97, the health expenditure has started increasing slowly.

Figure 3: Health Expenditure as Percentage to Social Service Expenditure in Karnataka and India

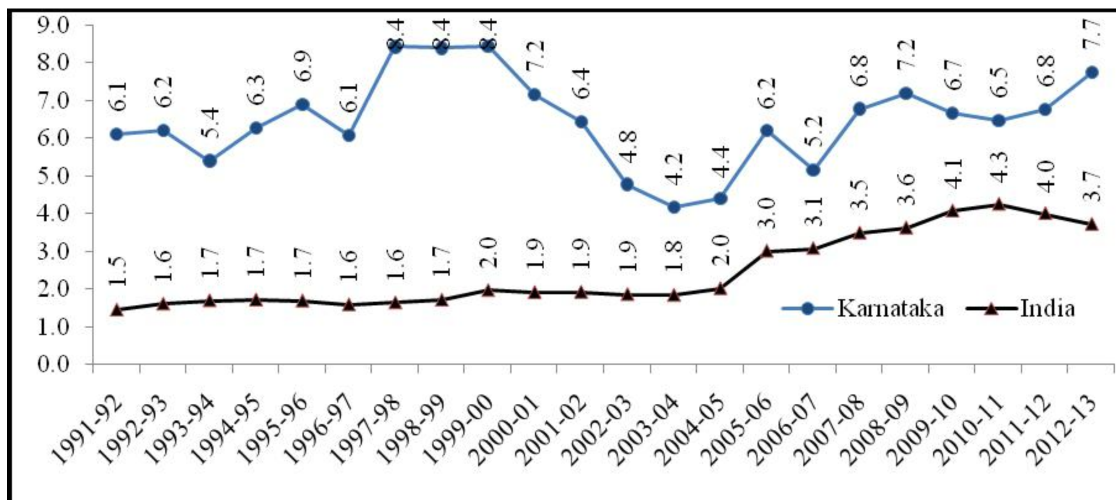


Source: Finance Documents of Government of Karnataka, Indian Public Finance Statistics various issues and Central Statistical Organization (CSO)

5.5 Public Expenditure on Health as a Percentage of Total Expenditure

The public health expenditure as a percentage to total government expenditure in Karnataka was found to be fluctuated over a period of time. At the India level, the increase was much negligible.

Figure 4: Public Expenditure on Health as a Percentage to Total Expenditure in Karnataka and India



Source: Finance Documents of Government of Karnataka, Indian Public Finance Statistics various issues and Central Statistical Organization (CSO)

There is also seen that the public health expenditure as percentage of total government expenditure has increased slightly after implementation of NRHM programme during 2005-06. The cause for decline in expenditure during 2009-10 was revenue collection short fall due to global economic recession in Karnataka (Figure.4)

6. GROWTH OF PUBLIC HEALTH EXPENDITURE BY DIVISIONS

6.1 Growth of Revenue and Capital Expenditure on Health

The Revenue expenditure is incurred for the purpose other than creation of assets and it is like the consumption expenditure of government. Whereas the capital expenditure is important for financing loan received by the government from central or market.Growth of revenue expenditure on health was found to be highest as against the growth of capital expenditure on health in Karnataka.While inIndia, the growth of capital expenditure was found higher than that of revenue expenditure.The growth of capital expenditure on health was marked highest during the early but duringthe late reform period, the growth has declined in Karnataka. As far as the growth of revenue expenditure on health is concerned, the growth was performed well only during the late reform periods in Karnataka but visa versa in the case of India (Table 2). The revenue expenditure on health has declined drastically until the launch of the NRHM programme in Karnataka (Gayithri, 2012)

Table 2:Compound Annual Growth Rate (%) of Revenue and Capital Expenditurein Karnataka (Constant Price)

Period	Karnataka		India	
	Revenue	Capital	Revenue	Capital
1991-92 to 1997-98	13.76	22.05	5.37	-0.49
1998-99 to 2004-05	0.73	-4.88	7.96	-8.39
2005-06 to 2012-13	8.61	3.40	8.19	28.67
Over All	8.61	3.40	8.58	10.28

Source: Accounts at a Glance, Finance Department Documents of Government of Karnataka, Indian Public Finance Statistics and Central Statistical Organization (CSO)

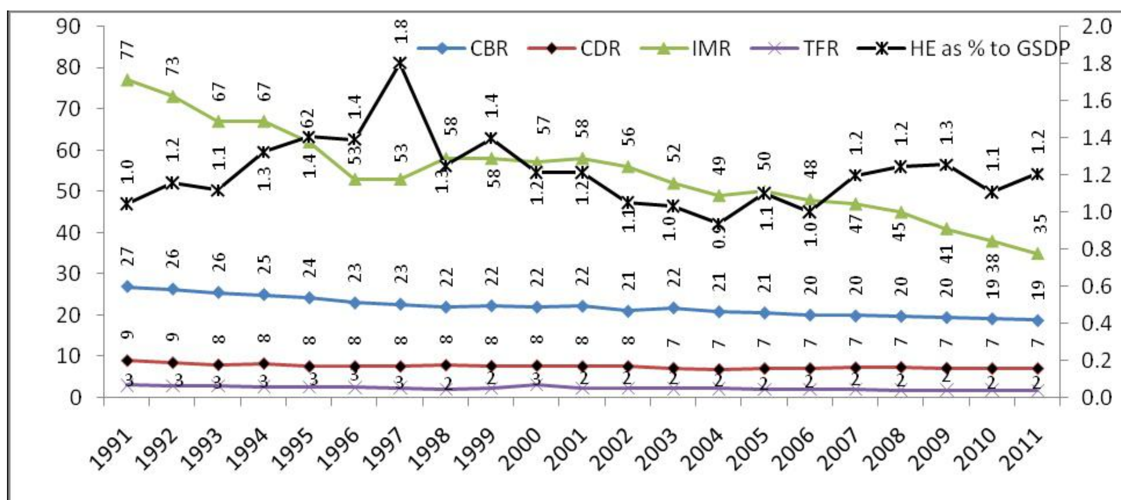
7. IMPACT OF HEALTH EXPENDITURE ON HEALTH INDICATORS

7.1 Health Expenditure and Major Health Indicators in Karnataka

In the case of CDR and CBR, it has declined significantly during 1991 to 2011 in Karnataka. Similarly, as public health expenditure in Karnataka is increasing over a period of time which has inversely impacted on infant mortality rate to decline drastically. The declining in the case of CDR and

IMR means that there has been a development in medical and medicine provided by the government to ensure facilities to people and also positive sign to population growth in the state. In the case of fertility rate, it has also decreased from 3 per cent to 2 per cent (Figure 5). The fertility rate declined at faster rate in the southern and coastal regions, and at a tardy pace found in backward northern districts characterized by low literacy, low female age at marriage, poor health infrastructure and low status of women (Sekher*et al*, 2001).

Figure 5: Public Expenditure on Health and Health Indicators in Karnataka (%)



Note: CBR (Crude Birth Rate), CDR (Crude Death Rate), IMR (Infant Mortality Rate) and TFR (Total Fertility Rate).

Sources: Sample Registration System (SRS) Bulletin of various years. Budget Documents of Karnataka various issues

Correlation Matrix

The correlation matrix table shows that per capita public health expenditure is negatively associated with CBR, CDR, IMR and TFR which means higher per capita expenditure on health has reduced CBR, CDR, IMR and TFR.

Table 6: Association between Per capita Public Health Expenditure and Health Indicators

Variables	PCPEH	CBR	CDR	IMR	TFR
PCPEH	1				
CBR	-.844**	1			
CDR	-.655**	.882**	1		
IMR	-.888**	.957**	.895**	1	
TFR	-.781**	.858**	.771**	.843**	1

Note:**. Correlation is significant at the 0.01 level (2-tailed).

8. CONCLUSION AND POLICY IMPLICATIONS

\ The foregoing analysis reveals thatthe public expenditure on health as a percentage of GSDP has increased negligibly over a period of time in Karnataka. Growth of public health expenditure was more than the growth of GDP in India.The per capita public expenditure on health in Karnataka has increased much faster rate in the late reform periods as compared to the early reform period. The public expenditure on health in relation to social service expenditure has been seen flatter over a period of time in Karnataka. The public expenditure on health as a percentage of total government expenditure in Karnataka have seen fluctuation in the beginning of reform periods. After the launch of NRHM, it has been increased significantly. The growth rate of health expenditure was highest as compared to growth rate of GSDP in Karnataka. The growth of revenue expenditure on health was greater than the capital expenditure.The major indicators of health such as CBR, CDR, IMR and TFR have been declined consistently during1991 to 2011. The public health expenditure in Karnataka has also increased slowly after the implementation of NRHM programme. The correlation matrix shows that per capita public health expenditure is negatively associated with major health indicators. The study argues that state government has to increase financial allocation and ensure effective utilization of resources for providing health care services and improving the health status of the people.

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PSYCHOLOGICAL WELL-BEING AMONG DALIT ADOLESCENT GIRLS

Vandana Jain* and M.Y.Manjula**

ABSTRACT : Adolescence is a transitional phase between childhood and adulthood that is characterized by rapid biological, psychological and social changes compared to any other stage of lifespan with the exception of infancy. The term "Dalit" means those who have been broken and ground down by those above them in the social hierarchy in a deliberate and active way. It is because of traditional social structures in India, dalits especially female dalits are at risk of discrimination, dehumanization, degradation, and violence every day. Psychological well-being is the way people evaluate their lives. This evaluation may be in the form of cognitions or in the form of effect. Present research is an intervention study of dalit adolescent girls to see whether intervention can bring about improvement in psychological well-being. The study adopts non-equivalent control group design. Sample for the study was selected from government pre-matric hostels for girls situated in Belthangady Taluk. The participants were administered psychological well-being inventory developed by Carol Ryff (1995). The data was analysed using correlated 't' test. Obtained results show that there is a significant increase in the psychological well-being of the experimental group on all the areas of psychological well-being, no significant change is noticed in the control group.

Key words: Psychological Well-being, Adolescents, Dalits, Girls

INTRODUCTION

The word "Dalit comes from the Sanskrit origin "dal", which means "broken, ground down, downtrodden, or oppressed." They are also referred to as Untouchables, Depressed Classes, and Harijans. They are the marginalized group and their marginalization is strongly ignored by the established field of psychology (Kagan & Burton 2011). Moreover, Dalit refers to one's caste rather than class; they are outcastes falling outside the traditional four-fold caste system(varna ashram) consisting of the hereditary Brahmin, Kshatriya, Vaishya, and Shudra classes. Therefore, they are considered impure and physically and socially excluded and isolated from the rest of society.

Dalits represent a community of 170 million in India, constituting 17% of the population. Nevertheless, one out of every six Indians is a Dalit, yet due to their caste identity they regularly face discrimination and violence, which prevent them from enjoying the basic human rights and dignity as promised to all citizens of India. More than 260 million people all over the world suffer from this hidden apartheid of segregation, exclusion, and discrimination (Muthumary 2000).

Adolescence is a transitional phase between childhood and adulthood. Moreover it is characterized by

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biological, psychological and social changes than any other stage of life span with the exception of infancy. It has been established that school connectedness, good relationship with others, liking family and peers, closeness to others, physical activity or healthy eating habits can protect young people and increase their psychological well-being (Marshall, 2001; Taylor & Turner, 2001; Allison et al., 2005; Rayle, 2005). Some factors like bullying, smoking, alcohol and drug use and unsafe sexual practices, tend to have a negative impact on psychological well-being (Cuijpers, 2002; Ethier et al., 2006; Rigby et al., 2007). Adolescence is a difficult passage to many girls, even those who have a strong support at home and in school. The physical changes of puberty coincide with enormous emotional and psychological challenges (Brooks-Gunn & Reiter, 1990).

A girl child is one of the most important segments of the society. Right from the day of her birth she carries the stigma of an unwanted child and so she is tortured mentally and physically by her parents, her in-laws and the society as of for no fault of hers. She is neglected from womb to the tomb. The girl child in India leads a life of multi-curse, multi-abuse and multi-neglect. Dalit girls in particular have been viewed in Indian society as passive victims of caste and gender discrimination (Dar, Islam et.al 2007). The present study mainly looks at psychological well-being of dalit girl students under pre and post intervention condition. Better psychological well-being predicts fewer problem behaviours and greater social competence (Srimathi & Kumar 2010).

Psychological well-being is the way people evaluate their lives. It can be described as the quality of a person's life it may be what layman call "Happiness", "Peace", "Fulfillment", and "Life satisfaction" (Srimathi & Kumar 2010). This evaluation may be in the form of cognitions or in the form of effect. There cognitive part refers to information based appraisal of one's life that is when a person gives conscious evaluative judgments about one's satisfaction with life as a whole. The affective part is a hedonic evaluation guided by emotions and feelings like frequency with which people experience pleasant or unpleasant moods in reaction to their lives (Diener & Suh 1997). According to Carol Ryff "Psychological well being is not directly connected to happiness but is the byproduct of a life that is well lived." Huppert in 2009 said "Psychological well being is about lives going well. It is the combination of feeling good and functioning effectively." By this definition we can conclude that people with high psychological well-being report feeling happy, capable, well-supported, and satisfied with life and so on.

The main objective of the paper is to assess whether intervention will bring about improvement in the psychological well-being of dalit adolescent girls.

Hypotheses :

- H1-Intervention will bring about improvement in the psychological well-being of experimental group
- No improvement will be noticed in the control group

Sample: Experimental GroupControl Group44 Students35 StudentsSample for the study consisted of dalit adolescent girls staying in government pre-matric hostels in Belthangady.

Experimental Group	Control Group
44 Students	35 Students

Design:

Non-equivalent control group design.

Inclusion criteria:

- Adolescent girls between 12 to 16 years of age
- Staying in Government Pre-matric hostel
- From low Socio-Economic Status families

Tool:

Psychological well-being developed by Caral Ryff (1995) was used to assess the psychological well-being. It is a theoretically grounded and self report scale designed to measure multiple facts of psychological well-being. The 84 items instrument consists of six subscales. They are:

1. Autonomy
2. Environmental mastery
3. Personal growth
4. Positive relationship with others
5. Purpose in life
6. Self acceptance

Each subscale consists of 14 items approximately equally between positive and negative items. Participant responds to each of them using a six point format: Strongly disagree – 1, Moderately disagree – 2, Slightly disagree – 3, Slightly agree – 4, Moderately agree – 5,Strongly agree – 6, a minus sign after an item indicates it is reverse scored.

Responses are totaled for each of the six categories. For each category, a high score indicates that the respondent has a mastery of that area in his or her life. Conversely, a low score shows that the respondent struggles to feel comfortable with that particular concept.

Psychometric Properties of the Ryff Scales of Psychological Well-Being

Scales:14-item scale correlation with 20-item parent scale Self-acceptance.99 Positive Relations with others .98 Autonomy.97 Environmental Mastery.98 Purpose in Life.98 Personal Growth.97

Scales:	14-item scale correlation with 20-item parent scale
Self-acceptance	.99
Positive Relations with others	.98
Autonomy	.97
Environmental Mastery	.98
Purpose in Life	.98
Personal Growth	.97

Procedure:

The pre-matric hostels of Belthangady were selected to conduct the study as it comes under Social Welfare Office of the taluk, permission for conducting the study was obtained from the Officer and subsequently, from the wardens of the hostels. Later, the children who fulfilled the criteria of research were selected for the study and their willingness to participate was ascertained by obtaining written permission. The participants were assured of confidentiality of the findings and they were assured that they could withdraw from the research at any point of time.

Results and discussion:

To find out the equivalence of the experimental and control groups, independent 't' test was calculated for pre-intervention scores on all the areas of psychological well-being.

Table 1 : 't' value of the control and experimental group on different areas of PWB

Variable	Group	Mean	S.D	Df	't' Value	'p' Value
Autonomy	Experimental Group	46.18	6.700	77	2.297	0.024
	Control Group	49.46	5.746			
Environmental Mastery	Experimental Group	55.14	6.282	77	0.479	0.633
	Control Group	54.29	9.445			
Personal Growth	Experimental Group	57.61	8.772	77	2.520	0.014
	Control Group	52.43	9.466			
Positive Relationship with others	Experimental Group	50.84	8.263	77	0.939	0.350
	Control Group	49.17	7.286			
Purpose in Life	Experimental Group	53.45	7.128	77	1.762	0.082
	Control Group	50.46	7.972			
Self Acceptance	Experimental Group	50.07	7.261	77	0.326	0.745
	Control Group	50.57	6.204			

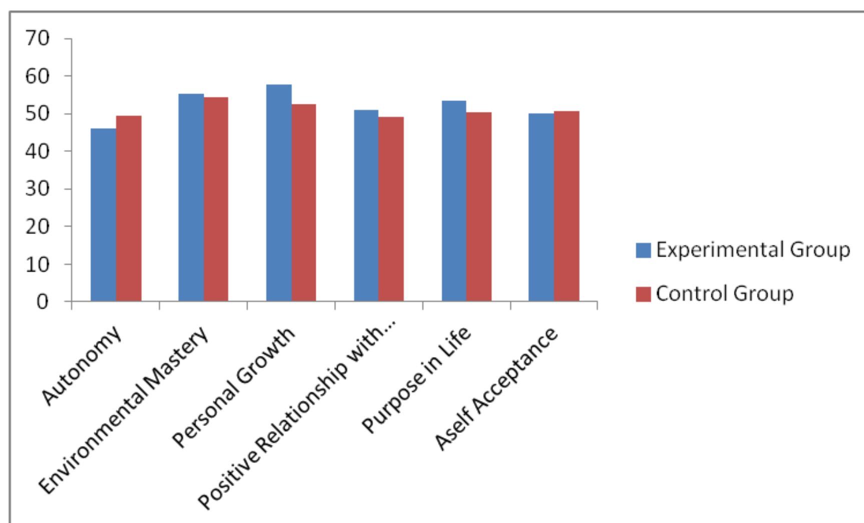

Figure 1 : Mean value of experimental and control group on different areas of PWB

On the four areas of psychological well-being— Environmental Mastery, Positive Relationship with others, Purpose in Life and Self Acceptance obtained 't' is not significant thereby showing that the equivalence of the two groups is established. On Autonomy the obtained 't' is significant and the means show that autonomy is significantly higher in the control group when compared to the experimental group and on Personal Growth, 't' is significant and examination of means shows that it is significantly higher for the experimental group. The following interventions were planned to improve the level of Psychological well-being of the experimental group. The intervention focused mainly on Academic skills, life skills, well-being and adolescent psycho-social issues.

1.	Effective Time Management	16.	Study Habits
2.	Communication Skill	17.	How to face exam
3.	Career Opportunities	18.	Importance of Yoga and training in Asthangha Yoga
4.	Leadership Training	19.	Women Empowerment
5.	Team Building	20.	Anger Management
6.	Goal Setting	21.	Group Dynamics
7.	Interpersonal Skill	22.	Self Esteem
8.	Adolescent Psychosocial Issues	23.	Importance of English
9.	Biological development during Adolescents	24.	Civic Sense
10.	Importance of nutrition during Adolescents	25.	Importance of Hobbies
11.	Dental Hygiene	26.	Importance of Art
12.	Personal Hygiene	27.	Environmental awareness
13.	Public speaking	28.	Assertive training
14.	Reading habit	29.	Self Defense Technique
15.	Memory Skills	30.	Life Skill Training

Table 2 : Correlated 't' for pre and post-intervention scores of control and experimental group on different areas of PWB

Area	Group	Pre-Intervention	Post-Intervention	df	't'value	'p'value
Autonomy	Control	M 49.46 SD 5.746	M 49.26 SD 5.802	34	0.160	0.874
	Experimental	M 46.18 SD 6.700	M 52.86 SD 8.385	43	4.117	0.001
Environmental Mastery	Control	M 54.29 SD 9.445	M 54.69 SD 9.773	34	0.201	0.842
	Experimental	M 55.14 SD 6.282	M 59.84 SD 8.061	43	3.142	0.003
Personal Growth	Control	M 52.43 SD 9.466	M 52.43 SD 9.095	34	0.001	1.000
	Experimental	M 57.61 SD 8.772	M 63.07 SD 9.161	43	3.384	0.002
Positive relationship	Control	M 49.17 SD 7.286	M 49.63 SD 6.988	34	0.360	0.721
	Experimental	M 50.84 SD 8.263	M 59.66 SD 11.123	43	4.606	0.001
Purpose in Life	Control	M 50.46 SD 7.972	M 51.26 SD 7.122	34	0.536	0.596
	Experimental	M 53.45 SD 7.128	M 60.00 SD 11.678	43	3.458	0.001
Self Acceptance	Control	M 50.57 SD 6.204	M 50.69 SD 6.601	34	0.079	0.937
	Experimental	M 50.07 SD 7.261	M 58.23 SD 10.835	43	4.128	0.001

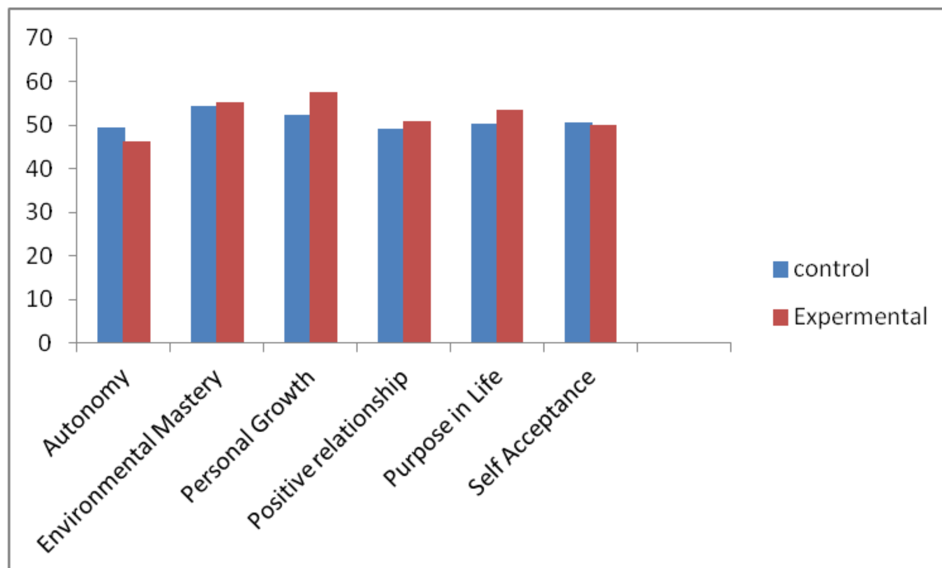

Figure 2 : Pre and post-intervention Mean scores of control and experimental group on different areas of PWB

Correlated 't' was calculated to test the significance of the difference between pre-intervention and post-intervention means. Obtained 't' for the control group is not significant, hence we accept the null hypothesis. 't' for the experimental group is significant on all the areas of PWB i.e., autonomy, environmental mastery, personal growth, positive relationship with others, purpose in life and self acceptance, hence we accept the hypothesis that intervention brings about improvement in psychological wellbeing.

Conclusion:

Intervention focusing on academic skills, life skills, well-being and adolescent psycho-social issues brings about improvement in psychological well-being.

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Rural-Urban Differences in Chronic Diseases among Older Population: Evidence from India

Javeed A. Golandaj*

Abstract : *The purpose of this study is to examine rural-urban difference in reporting chronic disease among older population in India. Data from the India Human Development Survey (IHDS), 2004-5 on 17,904 older persons are used. This study is restricted to elderly population who are ≥60 years. Using bivariate and binary logistic regression model the study investigates differences and factors that best explain and predict any chronic diseases among older persons. Results show that prevalence of chronic diseases was more common among urban older population than their rural counterpart. Furthermore, the reporting of chronic diseases was higher among Oldest-old, higher caste group, religious group belonging other than Hindu and Muslim, educated and non-poor section of the society. Findings suggest a clear need to design proper policies, health schemes and educational programmes that could help in bringing out the desired behavioural change in the population.*

Key words: Chronic disease, Life Style Diseases (LSD), Elderly, India, IHDS.

Background

Old age is viewed as the age of wisdom, experience and respect; which also needs care and support from others and this emerges as a challenge for countries. Today one of the emerging challenges being faced by economies of the world is rapid increase in the proportion of elderly population. The increase in the magnitude of elderly is so huge that the present century has been termed as "century of the aged" (Gavrilov LA and Heuveline P, 2003). Globally, the number of persons aged 60 or over is expected to increase by more than triple by 2100, increasing from 784 million in 2011 to 2 billion in 2050 and 2.8 billion in 2100 (United Nations, 2011). Furthermore, at present 65% of the world's older persons live in the less developed regions which is expected to increase to 79% by 2050 (United Nations, 2011). The developed countries became old after being rich (Bloom ED, *et al.*, 2010) but it's the opposite in the case of developing countries which makes it difficult for the governments to ensure a good life to its elderly population. On one hand these nations are grappling with maternal and child health issues and on the other hand providing with old age care and support to aging population.

In the context of India, the 60+ population has increased from 25 million in 1961 to 43 million in 1981 and further to 100 million in 2011. This shows that the proportion of elderly has risen from 5.6% in 1961 to 6.5% in 1981 and 8.5% in 2011(Census of India, 1961-2011). Thus there is clear sign of rapid increase in proportion of old age population. It is expected that by 2050 India will be home to second largest old population of the world (United Nations, 2013). The socioeconomic status of elderly in India is way behind many economically advanced nations (Bloom ED, *et al.*, 2010). The issue of ageing has recently come up as a challenge for India because the traditional system of multigenerational co-residence that has provided much needed support and care to the elderly is gradually giving way to

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nuclear family set ups where elderly are left alone (Alam M and Mukherjee M, 2005; Golandaj JA, *et al*, 2013; Irudaya Rajan S, *et al*, 2000).

The estimates provided by the World Health Organization (WHO) have also revealed that lifestyle and behaviour are linked to 20–25% of the global burden of diseases; the area of concern lies in the fact that the proportion of lifestyle based diseases would be increasing rapidly in the low- and middle-income countries (LMIC) in the backdrop of limited health care infrastructure (WHO, 2010). It is, therefore, expected that by 2020 the share of non-communicable diseases (NCDs) would increase to such an extent in the developing regions that it will account for seven out of every ten deaths (WHO, 2003, 2004, 2010; Huynen M, *et al*, 2005; Karar ZA, *et al*, 2009; Reddy KS, 1998). Recently, the office of the Census Commissioner of India served a warning that, NCDs have emerged as the leading cause of deaths in India, accounting for as many as half the deaths between 2010 and 2013, However, for urban areas, NCDs account for nearly 60% of deaths (Live mint, 2016). This urban vulnerability in suffering chronic diseases is well documented in earlier studies (Poulter NR, *et al.*, 1985; Opie LH and Seedat YK, 2005; Puoane T, *et al.*, 2002; Bourne LT, *et al.*, 2002; Douglas JG, *et al.*, 2003; Bovet P, *et al.*, 2002; Desai S, *et al*, 2010; Golandaj JA and Jain K, 2015; Yadav PN, *et al.*, 2014).

The area of greying population is being explored at length; however there is a virtual vacuum of studies that have attempted to explore the effect of chronic disease on the elderly population, especially with rural-urban divide. In this context, present study aims to explore whether rural-urban difference in reporting chronic diseases can be attributed to socioeconomic context.

Materials and Methods

Ethics statement

This study is based on anonymous public use dataset with no identifiable information on the survey participants. Survey data can be made available upon the request for academic use on the website of the Inter-university Consortium for Political and Social Research (ICPSR)[2] at, http://www.icpsr.umich.edu/icpsrweb/DSDR/studies/22626, and it does not require ethical approval.

Data source and sample size

The present study has used the data of India Human Development Survey (IHDS) 2005 (NCAER, 2004), a collaborative research project of the University of Maryland, USA and National Council of Applied Economic Research (NCAER), New Delhi. The IHDS is a household survey, whose primary goal is to advance the understanding of human development in India. The IHDS was administered to a nationally representative sample of 41,554 households located across all states and union territories of India with the exception of Andaman, Nicobar and Lakshadweep and covers total 215,754 sample including urban

[2] The ICPSR (Inter-university Consortium for Political and Social Research) is the world's largest archive of digital social science data established in 1962.

as well as rural areas. IHDS covering 99.9% of India's population has collected a vast range of information on various issues such as health, morbidity, education, employment, economic status, social capital etc. The present study is, however, focused on 17,904 elderly populations including 8,941 elderly women in the age group of ≥60 years. (For more details of the survey design, sampling and implementation IHDS 2004–05 reports can be consulted (Desai S, *et al*, 2010)).

Variables

The variables used in this study were broadly categorized into outcome variable and predictor variables. The outcome variables include any chronic disease prevalence. Any chronic disease prevalence calculation includes the older people who reported as suffered from any specified disease such as cataract, high blood pressure, heart disease, diabetes, cancer, asthma, paralysis and mental illness in the last year before the date of survey. Information on the following demographic and socio-economic variables such as place of residence, age, sex, caste, religion, education, wealth status, marital status and family type have been used. In this analysis, the variables were categorized as follows:

a. Place of residence: Rural, Urban.
b. Age: Older old population (60-69 years) and Oldest old population (≥70 years).
c. Sex: Male, Female.
d. Caste: Scheduled Castes (SCs)/Scheduled Tribes (STs), Other Backward Classes (OBCs), and Others.
e. Religion: Hindu, Muslim, Others.
f. Education: No schooling, 1-4 Years, 5-9 Years, ≥10 Years.
g. Wealth status[3]: Poor, Non-poor.
h. Marital status: Currently married, Widowed, Others.
i. Family type: Nuclear family, Joint family.

Analytical Approach

To assess the determinants of Rural-urban difference in reported chronic diseases among the older population, first, bivariate analyses were used to examine the nature of association between chronic diseases by selected socioeconomic and demographic background characteristics using chi-square test of significance. Second, to examine which factors best explain and predict reporting of any chronic disease among rural and urban older population, multivariate logit regression model was estimated. For all the statistical tests, p-values of <.001, <.01, and <.05 were considered for statistical significance. The analyses were conducted using SPSS version 17 (SPSS Inc., 2008).

[3] An index of economic status (wealth quintile) for each household is constructed using principal components analysis (PCA) based on the household data. The wealth quintiles are based on 30 assets and the housing characteristics. Each of the household asset is assigned a weight (factor score) generated through PCA. The resulting asset scores are standardized in relation to a normal distribution with the mean of zero and standard deviation of one. Then, the values of the wealth index was subsequently divided into five quintiles – poorest, poorer, middle, richer, and richest – however, for analytical purpose the bottom two quintiles (lower 40%) were considered as poor and remaining three were as non-poor. This classification is consistent with previous studies (Joe W, *et al*, 2009).

Results

Socio-economic profile of older population

Table 1 shows the percentage distribution of socioeconomic/demographic factor by place of residence of the older population in India. Majority of the older population belonged to the old-old age group of 60 to 69 years. According to social group, 42% of the aged population belongs to other backward castes (OBC) followed by higher caste (33%) and SC/ST (25%). The proportion of elderly belongs to higher caste is more (45%) at urban areas compared to rural (30%) counterpart.

Table 1: Percent distribution of older population with background characteristics in India, IHDS-2004-5, India.

Variables	% of older person			*n*
	Rural	Urban	Total	
Age				
Old-old(60-69)	61.8	62.9	62.1	10917
Oldest-old(=70)	38.2	37.1	37.9	6987
Sex				
Male	50.9	49.6	50.6	8963
Female	49.1	50.4	49.4	8941
Caste[1]				
SC/ST	27.7	16.3	25.0	4293
OBC	42.7	38.8	41.8	7191
Others	29.6	44.9	33.2	6420
Religion[2]				
Hindu	85.1	78.2	83.5	14641
Muslim	8.4	14.3	9.8	1758
Others	6.4	7.4	6.7	1505
Education				
No schooling	68.2	40.3	61.6	10672
1-4 Years	11.2	10.3	11.0	2007
5-9 Years	13.4	23.4	15.8	2915
=10 Years	7.2	26.0	11.7	2310
Wealth Status				
Poor	50.2	11.4	41.0	6384
Non-poor	49.8	88.6	59.0	11520
Marital Status[3]				
Currently married	62.6	60.7	62.1	11254
Widowed	36.1	37.9	36.5	6416
Others	1.3	1.4	1.4	234
Family type				
nuclear family	15.4	14.2	15.1	2797
Joint family	84.6	85.8	84.9	15107
Total	**100**	**100**	**100**	**17904**

Note: *n* = Un-weighted cases; SCs = Schedule Castes; STs = Scheduled Tribes; OBCs = Other Backward Classes; [1] = for caste variable, others category includes Brahmin and others; [2] = for religion variable, others category includes Christian, Sikh, Buddhist, Jain, Tribal, Others and None; [3] = for marital status variable, others category includes single, separated/divorce, sp. absent, no gauna; All data are weighted using sampling weights provided by the India Human development Survey-2004-5; Source: IHDS, 2004-05.

Religion wise distribution shows that majority of older population was from the Hindu religion, and interestingly, the proportion of Muslim is more at urban area than the rural areas. Around 40% of the urban and 68% of rural elderly were illiterate, whereas, the proportion of elderly who have ≥10 years of education is more at urban (26%) than rural (seven percent) area. While just one in every ten person was poor in urban, five in every ten person were poor in rural at the time of survey. In case of the marital status, around 62% of the elderly are currently married; widowhood is also considerable (37%) among older population. However, the proportion of currently married is more at rural areas than the urban areas and it is the other way around in case of widowhood. Majority of older population (85%) were residing in joint family.

Prevalence of Chronic Diseases

The survey also asked whether anybody in the household had ever been diagnosed by a physician for any long-term chronic illnesses. Figure 1 shows the prevalence (per 1,000) of elderly population suffering from the different chronic diseases. It is clearly visible that a high proportion of elderly population suffer from chronic disease in urban area compared to their rural counterpart.

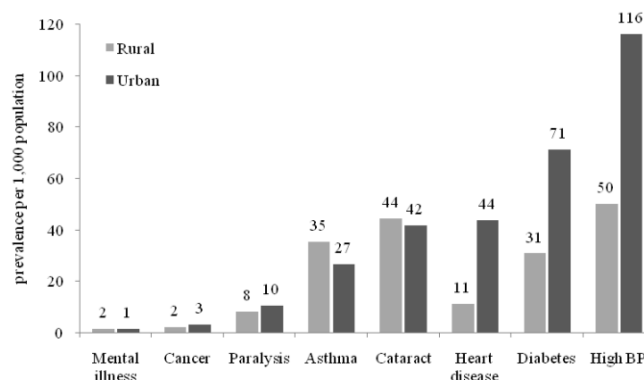

Figure 1: Prevalence (per 1,000 population) of Long-term Chronic diseases among elderly population (≥60 years) by place of residence, India Human Development Survey (IHDS), 2004-05.

Further, results show that, substantial high proportion of elderly population suffers from the problem of high blood pressure followed by diabetes, heart disease and cataract etc. In five out of eight chronic diseases considered for analysis, the proportion of elderly suffering is higher among urban residents. Whereas, the proportion of elderly population suffering from remaining three diseases, cataract, asthma and Mental illness is more among rural residence. Interestingly, the rural-urban difference is huge for high blood pressure followed by diabetes and heart disease.

Differentials in Chronic Diseases

Table 2 presents results of selected socio-economic associated variables with chronic diseases by rural and urban older population. Overall, chronic diseases were more common among urban older population (24%) than among rural older population (15%).

Table 2: Prevalence (in percentage) of chronic diseases among older population by considering place of residence and background characteristics, IHDS-2004-5, India.

Variables	Prevalence (in percent) of any chronic disease		
	Rural	**Urban**	**Total**
Age			
Old-old(60-69)	13.6	22.4	15.7
Oldest-old(=70)	18.2	27.0	20.3
Sex			
Male	15.3	25.2	17.6
Female	15.4	23.0	17.2
Caste[1]			
SC/ST	10.7	19.3	12.0
OBC	15.8	24.1	17.6
Others	19.1	25.8	21.2
Religion[2]			
Hindu	15.0	24.5	17.1
Muslim	14.4	20.8	16.6
Others	21.4	26.2	22.7
Education			
No schooling	13.9	19.5	14.7
1-4 Years	18.5	28.8	20.8
5-9 Years	18.6	26.4	21.4
=10 Years	18.3	27.2	23.0
Wealth Status			
Poor	12.3	15.1	12.5
Non-poor	18.4	25.3	20.8
Marital Status[3]			
Currently married	14.9	24.1	17.1
Widowed	16.3	24.2	18.2
Others	8.6	21.3	11.8
Family type			
nuclear family	18.7	24.5	20.0
Joint family	14.7	24.0	17.0
Total	**15.3**	**24.1**	**17.4**

Note: Any chronic disease prevalence calculation includes the older people who reported as suffered from any specified disease such as cataract, high blood pressure, heart disease, diabetes, cancer, asthma, paralysis and mental illness in the last year before the date of survey; SCs = Schedule Castes; STs = Scheduled Tribes; OBCs = Other Backward Classes; [1] = for caste variable, others category includes Brahmin and others; [2] = for religion variable, others category includes Christian, Sikh, Buddhist, Jain, Tribal, Others and None; [3] = for marital status variable, others category includes single, separated/divorce, sp. absent, no gauna; All data are weighted using sampling weights provided by the India Human development Survey-2004-5; Source: IHDS, 2004-05.

The proportion of older persons reporting any chronic disease increased with age and was highest in the oldest-old age group (≥70 years) for both the rural and urban (18% among rural and 27% among urban elderly). However, elderly in both old-old (60-69 years) and oldest-old (≥70 years) age group

reported any chronic disease is more at urban area than their rural counterpart. Male–female differences in reporting any chronic disease was almost similar for both the rural and urban older population and the proportion reporting any chronic disease was higher among urban than among their rural counterparts. A higher percentage of rural (19%) and urban (26%) elderly from higher caste group reported suffering of any chronic disease; anyhow, the urban older population were more likely to report any chronic disease irrespective of their caste. The prevalence of any chronic disease was higher among urban than the rural elderly irrespective of their religion. By religion, lower percentage of Muslim elderly reported suffering of any chronic disease (17%) among others and it is true in case rural (14%) as well as urban (21%) older population.

The proportion of older persons reporting any chronic disease increased with educational attainment and was highest among elderly who have studied till ≥10 years when combining rural urban together. However, a higher proportion of urban elderly consistently reported any chronic disease than rural counterpart in all the educational categories. The older persons who were not poor had the highest prevalence of any chronic disease (18% among rural and 25% among urban). However, a higher proportion of urban elderly who are poor reported suffering of any chronic disease (15%) than rural (12%) counterpart. The percentage of older persons reporting any chronic disease was found to be highest for those who were widowed, and this proportion was higher among urban (24%) elderly than among their rural (16%) counterparts. Urban older population living in nuclear family (25%) and in joint family (24%) were more likely to report any chronic disease than rural counterpart. However, a higher percentage of older population living in nuclear family reported as suffered from any chronic disease, and it is more among rural elderly.

Determinants of Chronic Diseases

Table 3 presents results of multivariate logit models estimated to examine the association between selected socioeconomic and demographic predictors on report of any chronic disease. Results reiterate that age is positively and strongly associated with the chronic disease for both the rural and urban elderly. Oldest-old elderly (odds ratio [OR] = 1.38, p = <0.001, 95% confidence interval [CI] = [1.241, 1.530] for rural and OR = 1.26, p = 0.001, 95% CI = [1.098, 1.438] for urban elderly) were more likely to report any chronic disease compared with old-old elderly. Moreover, the odds of reporting any chronic disease were higher among oldest-old rural elderly when we compare urban counterparts.

Rural elderly women were more likely to report any chronic disease compared with their male counterparts (OR = 1.10, p = 0.173, 95% CI = [0.960, 1.257]), but it is way around in case of urban elderly. The association between social groups and reporting of any chronic disease was clearly evident among both rural and urban elderly. Older population from the other castes were more likely to report any chronic disease (OR = 1.45, p = <0.001, 95% CI = [1.256, 1.674] for rural and OR = 1.31, p = 0.012, 95% CI = [1.061, 1.611]) compared with other backward classes. The likelihood of reporting any chronic disease was higher among other religious group rural (OR = 1.37, p = <0.001, 95% CI =

[1.160, 1.620]) and urban (OR = 1.02, p = 0.868, 95% CI = [0.813, 1.278]) compared with their Hindu counterparts. However, among Muslims, the odds of reported any chronic disease were lower among urban (0.91) older population.

Table 3: Logistic Regression Results; Likelihood Estimates of Any Chronic Disease Among Older Population, IHDS-2004-5, India

	Rural				Urban			
Variables	**OR**	***SE***	***P* value**	**95% CI**	**OR**	***SE***	***P* value**	**95% CI**
Age								
Old-old(60-69) [ref.]	1.00				1.00			
Oldest-old(=70)	1.38	0.054	<0.001	[1.241, 1.530]	1.26	0.069	0.001	[1.098, 1.438]
Sex								
Male [ref.]	1.00				1.00			
Female	1.10	0.069	0.173	[0.960, 1.257]	0.91	0.094	0.333	[0.760, 1.098]
Caste[1]								
SC/ST [ref.]	1.00				1.00			
OBC	1.23	0.070	0.003	[1.071, 1.409]	1.29	0.107	0.017	[1.046, 1.588]
Others	1.45	0.073	<0.001	[1.256, 1.674]	1.31	0.107	0.012	[1.061, 1.611]
Religion[2]								
Hindu [ref.]	1.00				1.00			
Muslim	1.00	0.096	0.992	[0.828, 1.206]	0.91	0.098	0.358	[0.754, 1.107]
Others	1.37	0.085	<0.001	[1.160, 1.620]	1.02	0.115	0.868	[0.813, 1.278]
Education								
No schooling [ref.]	1.00				1.00			
1-4 Years	1.61	0.078	<0.001	[1.384, 1.876]	1.61	0.113	<0.001	[1.287, 2.006]
5-9 Years	1.57	0.077	<0.001	[1.348, 1.825]	1.43	0.091	<0.001	[1.192, 1.705]
=10 Years	1.40	0.099	0.001	[1.151, 1.694]	1.42	0.095	<0.001	[1.178, 1.710]
Wealth Status								
Poor [ref.]	1.00				1.00			
Non-poor	1.26	0.057	<0.001	[1.128, 1.408]	1.56	0.124	<0.001	[1.219, 1.984]
Marital Status[3]								
Currently married [ref.]	1.00				1.00			
Widowed	1.14	0.066	0.043	[1.004, 1.299]	1.16	0.091	0.097	[0.973, 1.388]
Others	1.02	0.231	0.938	[0.648, 1.600]	1.04	0.284	0.897	[0.595, 1.809]
Family type								
nuclear family [ref.]	1.00				1.00			
Joint family	0.74	0.082	<0.001	[0.632, 0.871]	0.83	0.118	0.115	[0.658, 1.046]

Note: Any chronic disease prevalence calculation includes the older people who reported as suffered from any specified disease such as cataract, high blood pressure, heart disease, diabetes, cancer, asthma, paralysis and mental illness in the last year before the date of survey; OR = odds ratios CI = confidence interval; [ref.] = reference category; SCs = Schedule Castes; STs = Scheduled Tribes; OBCs = Other Backward Classes; [1] = for caste variable, others category includes Brahmin and others; [2] = for religion variable, others category includes Christian, Sikh, Buddhist, Jain, Tribal, Others and None; [3] = for marital status variable, others category includes single, separated/divorce, sp. absent, no gauna; Source: IHDS, 2004-05.

Educational attainment was significantly associated with elderly reporting any chronic disease, while higher odds were evident with reporting any chronic disease for both rural and urban older population among literate in comparison with illiterate. Though, the odds were higher among all educational categories than the reference category, but it is highest among elderly with 1-4 years (OR = 1.61, p = <0.001, 95% CI = [1.384, 1.876]) of education among others, and it is true in case of urban (OR = 1.61, p = <0.001, 95% CI = [1.287, 2.006]) elderly also. The likelihood of reporting any chronic disease was significantly higher among richer rural (OR = 1.26, p = <0.001, 95% CI = [1.128, 1.408]) and richer urban (OR = 1.56, p = <0.001, 95% CI = [1.219, 1.984]) elderly than among poor rural and poor urban elderly, respectively. Older rural and urban population residing in joint family were less likely to report any chronic disease than those in the nuclear family. However, the odds of any chronic disease were significantly lower among rural elderly living in joint family (OR = 0.74, p = <0.001, 95% CI = [0.632, 0.871]).

Discussion and Conclusion

This study highlights socioeconomic factors that affect the rural-urban difference in chronic diseases among older population in India. Several earlier studies from different parts of the world have shown the higher vulnerability of urban population in suffering chronic diseases compared to their rural counterparts (Poulter NR, *et al.*, 1985; Opie LH and Seedat YK, 2005; Puoane T, *et al.*, 2002; Bourne LT, *et al.*, 2002; Douglas JG, *et al.*, 2003; Bovet P, *et al.*, 2002). The results of this study also confirmed the findings from other studies that a higher proportion of urban older population reported chronic disease compared with rural older population in India (Desai S, *et al*, 2010; Golandaj JA and Jain K, 2015; Yadav PN, *et al.*, 2014). The chronic diseases also termed as the disease of longevity are associated with adoption of sedentary lifestyle and deleterious health behaviours, which is more prevalent in urban areas, leads to the atherosclerotic diseases (Pearson TA, 2003; Wong MD, *et al.*, 2002). It has also been argued that urbanisation is associated with more stress, dietary changes and acculturation (Poulter NR, *et al.*, 1985; Seedat YK, 2000). The study reveals a strong significant positive association of reporting of any chronic disease with the age, social group, education, wealth status marital status and type of family.

Overall, the results suggest that, the place of residence in relation to chronic disease prevalence is equally determinants. It clearly points out the older population who are residing in urban area are the vulnerable population. These results would allow policymakers to better address needs for the more vulnerable older populations, to design proper policies and educational programmes and health schemes that could help in bringing out the desired behavioural change in the population.

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Migration and Rural Elderly

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Abstract *: Migration acts as a barometer of changing socio-economic and political conditions at regional, national and international levels. Migration from one area to another in search of improved livelihood is a key feature of human history. Of late, there is a widespread occurrence of temporary and seasonal migration for employment purposes in India. It is one of the most important livelihood strategies adopted by the poorest people of the country. The present study was conducted on one such seasonal migration in a border area of Karnataka-Maharashtra. The study focused on implications of migration of youngsters on elderly people.*

Objectives: *1. To know the socio-economic profile of the elderly. 2. To understand the consequences of migration of young breadwinners on elderly.*

Major findings: *The present study focused on the migration and its effects on the elderly. The results show that, majority of elderly were out of the work force, and totally dependent solely on remittances of young migrants. Non-migrant elderly respondents suffer from multiple health problems. Negligence by their family members was one of the main factors for deteriorating health conditions of the elderly. They were overburdened by the family responsibilities at this age. Looking after household chores as well as grandchildren was difficult and herculean task for elderly. The feeling of insecurity and empty nest syndrome was evident among elderly.*

Introduction :

In recent times migration has become a popular livelihood strategy in rural areas. It is generally believed that, globalization process all over the world has accelerated the migration trend, in search of survival, fulfilment and a better life for themselves and their families (Hazra, 2010). Of late, there is a widespread occurrence of temporary and seasonal migration for employment purpose in India. The present study focused on implications of migration of youngsters on elderly people.

The present study has been conducted in Katral village of Bijapur District, Karnataka State. Katral is situated on the border areas of Karnataka- Maharashtra. People in these border areas are bilingual. The villages situated in these border areas do not have proper civic amenities. Lack of employment opportunities, low wages due to backwardness, food shortage and infertile/abandoned land forced people to leave the place. It is a drought prone area, due to lack of rain, scarcity of water resources, people do not grow anything in their field, the landless labourers face severe problems in their mundane life, hence, it is inevitable for the youngsters to cope up with the livelihood challenges, so migration is the only way out to combat the problem. The elderly parents hardly get migrated due to their age and disability. The aged people in their evening of life were facing the empty nest syndrome. The problems pertaining to aged parents, who were unable to migrate is an important issue of this paper.

Migration not only has an impact on physical, mental and emotional health and well-being of migrants themselves, but also on those left behind in the place of origin. Migration of youngsters impinge on the socio-economic, health and well being of the elderly. Thus, the present study

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concentrated on the woes of elderly people who have left behind by their migrant youngsters.

Objectives:

1. To know the socio-economic profile of the elderly.
2. To understand the consequences of migration of young breadwinners on elderly.

Methodology:

The study is exploratory in nature. It is based on primary data, collected from aged respondents through interview schedule. The study was conducted in Katral village of Indi taluka. Total population of Katral is 1850, which comprises of 130 households. Out of 130 households only 72 households consisted of elderly persons, whose children migrated in search of job. All 72 households have been selected for the study. However, researcher could not take information from 12 respondents due to their ill health, non availability, not interested in and sharing the information. Finally 60 elderly respondents were selected for the study.

Review of Literature:

There are host of studies conducted on migration and its effects on various segments of the population. In the same vain there have been studies on problems and challenges of elderly. However, there are no studies on implications of migration on elderly.

Francisca M. Antman (2011) has mentioned in his study by taking the sample of adult children migrants to US and Mexico cities. The effects of migration on the education and health of non-migrant children, as well as the labour supply of non-migrant spouses were highlighted. Author concluded that elderly parents received less care from the migrated children.

Diana Cheianu, et.al (2011), have taken 29 in-depth individual interviews with children deprived of parental care and 26 in-depth individual interviews with the elderly deprived of their family members care. They opined that, migration influences the psycho-emotional development of children, deprivation of parental care, their health, education and socialization process as well as affecting the psychological conditions of the elderly left behind by the children they raised. In this study, authors pointed out that the elderly are affected by decreasing ability to cope with everyday tasks, worsening health conditions, personal security issues etc.

Sochanny Hak, et.al (2011), conducted study in Cambodia by surveying 265 respondents aged 60-70 shows that migration of adult children is common in households with older persons in rural Cambodia.

Marcus Bohme, et.al (2013), interviewed 3539 households in 129 communities. Out of which 2175 households have a member aged 60 or older in Moldova. Even though migration has negative effects on older people's mental and physical health, but due to the remittances the elderly receives by their

young ones they accept migration. Migration allows elderly people to eat more diverse diet and to spend more time on leisure and sleep instead of working in subsistence farming.

Socio -Economic profile of the Respondents

Under socio-economic profile of the respondents the vital issues of sex, age, category, educational status and marital status have been analysed.

Table 1. Socio-Economic profile of the Respondents

Sr. No.	Variable	Frequency
1	**Sex**	
	Male	22
	Female	38
2	**Age (in years)**	
	60-69	34
	70-79	16
	80-89	08
	90 & above	02
3	**Educational status**	
	Illiterate	43
	Up to 4th standard	08
	Up to 7th standard	06
	Matriculation	03
4	**Category**	
	SC	29
	ST	13
	OBC	18
	Total	**60**

Table No 1 shows that, out of 60 respondents 22 males and 38 were females. Feminization of ageing is evident in the sample. When we look at their marital status, 36 were widows and 15 were widowers and nine of them have their aged spouse. It indicates that 75% of the respondents do not have life partners which certainly affect their day today life. According to National Sample Survey (NSS) 42nd round there were 654 widows and 238 widowers per 1000 old persons in rural areas. The respective figures were 687 and 200 for urban areas. When the researcher observed the age pattern of respondents, majority of respondents (34) were between the ages of 60-69 and 16 respondents were below the age group 70-79 years. Eight respondents were between the ages of 80-89. Only two respondents were above the age of 90. Overwhelming majority of the respondents (43) were illiterate and only three of the respondents have completed their matriculation.

When we observed the caste/category of the respondents, overwhelming majority of the respondents were from SC and ST communities. OBCs were also more in number and no upper caste respondents found in the study. It is because, upper caste people have their own cultivating land and their livelihood

status is somewhat better and they do not migrate for livelihood purposes. Whereas the rates of migration among the landless labourers were more and these landless labourers belong to scheduled castes and other backward classes. When we look at the nature of the house, majority of the respondents were residing in the permanent or thatched houses, some of the respondents were living in the Government land and they do not know when they will be asked to vacate the area. Thus, socio-economic status of the elderly were miserable in the study area.

Table 2. Reasons Quoted by Elderly for not Migrating

Sr. No.	Reasons quoted by elderly for not migrating	Frequency
1	Elderly are not allowed at the workplace	17
2	Disability	10
3	Ill health	21
4	To look after the grand Children	12
	Total	**60**

In India migration usually takes place due to marriage, employment, education, and livelihood; young and educated migrate more often than old and uneducated. The respondents were asked to quote the reasons for not migrating with their youngsters. Table No 2 deals with reasons given by the respondents. 21 respondents pointed out that, due their ill health they did not migrate. It is difficult for them to migrate due to their illness because they may not get good medication at the migrated area. 17 respondents said they were not encouraged at the workplace due to their illness. Family members have to pay greater attention to care them instead of eke out so the children were not interested to take their parents along with them and 12 of them were left behind to look after the grand children. Ten respondents opined that they suffer from vision problem and other physical disabilities so they did not migrate.

Living arrangement pattern is an important issue due to rapid changes occurring in basic institutions of society. **Jayashree (1999)** in her study pointed out that, the pattern of living arrangements have changed due to various socio-economic and demographic factors like greater geographical mobility, increase in employment opportunities for women, individualism in life and fewer children etc.

Thus, migration is one the strong determining factors of living arrangements. The state of the elderly will be in a dilemma whether to follow their children as a non productive group or to stay back in their villages by taking care of grandchildren and livestock. Present study (Table No: 3) indicated that, 22 elderly lived with their grandchildren, 15 elderly lived with their aged spouse and 11 of them resided with their relatives seven resided with the neighbours because they do not have spouse/relatives/grandchildren. Seven respondents were staying alone as they do not have anyone. Residing with the neighbour and living alone is a clear implication of migration. Older person living alone is a real social challenge and a policy issue. Those living alone are suffering from social isolation. During illness/disability they need lot of assistance. For the world as a whole, the proportion of the population aged 60 or over who live alone is estimated to be 14 per cent (World Population Ageing, 2007). On average one out of every 14 persons aged 60 or over in the less developed nations and one out of every four lives alone in more developed nations. Gender gap in solitary living is widely seen in almost all countries of the world. Globally 19 per cent of women aged 60 are living alone whereas only eight percent men are living alone. Widowhood is the prominent reason for this imbalance. **(NFHS-II, 1998).**

Table 4. Feelings of elderly on migration

Sr.No	Feelings of elderly on migration	Frequency
1	Migration of youngsters is inevitable	17
2	Feeling of insecurity	12
3	Burdensome to look after the grandchildren	10
4	Deteriorating health conditions	21
	Total	**60**

Table No 4 indicates the feelings of elderly on migration of youngsters. Out of 60 respondents, 21 elderly opined that due to migration of youngsters, their health conditions were deteriorating. They even feel tired to do their daily activities. They were incapable of managing themselves. 17 respondents said that, migration was inevitable because there was no source of income for the family, if youngsters do not migrate and earn for the family the very survival becomes impossible. 12 respondents said, due to the migration of youngsters they feel insecure, lonely and isolated. Only ten

respondents replied that, looking after grandchildren has become burdensome. It is difficult to manage the family responsibility and schooling of the grandchildren. Though grandchildren help them in their routine activities sometimes they do not listen and give lot of trouble which elderly could bear.

Table 5. Problems of elderly

Sr. No.	Problems of elderly	Frequency
1	Ill health	21
2	Difficulty in doing routine activities	14
3	Feeling of insecurity	11
4	Difficulty in looking after grand children	09
5	Elder abuse	02
6	Financial problems	03
	Total	**60**

Table No 5 deals with the problems of elderly, when the respondents were asked to reveal about their general problems, 21 elderly reported that ill health was the main problem which affects their life and 14 respondents said that, they face lot of difficulties in doing their day today activities like cooking, washing, managing household affairs. 11 elderly reported that they feel insecure and nine of them said they face difficulty to look after their grandchildren as they hardly listen to them. Some of the elderly respondents pointed out that, their migrated children do not send money in time/Delay in sending and sending insufficient money were common among youngsters.

Impact of migration on health of the elderly

Health being an important facet of human life, determines the wellbeing of elderly. As age advances heath care needs of the elderly will be more. They require long term care so, migration of youngsters have negative effects on elderly health. Studies on the consequences of migration on elderly health and well being, indicated that, due to migration elderly suffer from loneliness, isolation and they deprived from closely knitted social contacts. One such study was conducted by **Ramesh Adhikari, et.al (2011)** opined that, out-migration of adult children was highly associated with poor mental health but it was not associated with the physical health of the elderly left behind. Out-migration of children was also highly associated with higher utilization of health facilities by the elderly. More than two-thirds of the elderly had at least one migrant child. About three-fifths reported that, they had at least one symptom of poor mental health. Almost three in five elderly rated their health as poor. About two-thirds of the elderly got sick during the five years preceding the survey. An

overwhelming majority of elderly (88.00%) who got sick during the five years preceding the survey had sought treatment for their last illness.

Table 6. Major Health Problems

Sr. No.	Major Health Problems	Frequency
1	Vision disability	20
2	Arthritis and backache	12
3	Respiratory disorders/Asthma	11
4	Cardiac diseases/ liver problems	08
5	Other diseases	09
	Total	**60**

Table 6 reveals the major health problems of elderly. Respondents were asked to reveal their health problems depending on its severity. 20 respondents reported vision disability. 12 elderly have arthritis and backache problems. 11 respondents suffered from respiratory diseases like asthma and cough. Nine elderly were suffering from diabetes and other related problems. Eight respondents reported cardiac and liver related diseases.

Table 7. Medication patterns of the respondents

Sr.No.	Medication patterns of the respondents	Frequency
1	Self medication	24
2	Local doctors	13
3	Primary Health Centers (PHC)	07
4	Do not visit the hospitals	16
	Total	**60**

Table No 7 deals with the medication pattern of the respondents. 24 respondents said that, they depended on self medication and followed ayurvedic/herbal/home based medicines instead of visiting hospitals. The researcher found that, elderly was not ready to report their illness because they attributed their illness to old age. They usually visit the local doctors and majority of these doctors were quacks. PHC is located four to five kms. away from the village and they need to take their grandchildren or some neighbour for the treatment and have to bear both the medical expenses and travel expenses hence, they preferred self medication. 16 respondents never visited the hospitals. 13 respondents

consulted local doctors and only seven respondents visited the PHC. Due to disability and lack of transportation facilities they neglected their health. Lack of awareness regarding the health care, cost of medication and distance were the major factors which led to deteriorating health conditions of these respondents.

Findings of the study clearly revealed that, because of unavoidable reasons respondents stayed back in their original place. Their living conditions were miserable with ill health and lot of agony. Below given two case studies have revealed the sufferings and distress of the respondents.

Case study1: Rukamabai Loni, a 67 year old lady was suffering from arthritis and she was obese she could not work for longer duration. She had to cook for her two grandsons as they hardly listen to her words and they will be out of the home all the time. She had fallen down twice, once while fetching water and while doing household work. During her ill health one of the far relatives had come to her rescue and looked after her. She was disappointed when her son who migrated just spoke to her over phone but did not attend to her during her ill health.

Case study2: Bhimarao Walikar, a 79 year old man was suffering from multiple health problems, he was suffering from asthma, respiratory disorders and vision disability. During rainy and winter season his health further deteriorates and will be in hospital for at least two to three days in a month. His aged wife was not able to manage his hospital expenditure. He said, his migrated family members instead of attending his health problems; they assigned it to relatives/ neighbours. Whenever son comes to village he hardly stays with his father, he takes him to hospital and return back to work. This old respondent desperately disappointed and said, instead of caring, they abuse and grumble about the illness and do not send money for treatment. He shared his inner feelings and said in kannada *"Jeevana byasara aagaitiri, aarogyanu sari irangilla, bare aaram tappataiti, maga, sosi nodaaku barangillari. Nanu bare kemmu, nagadi jwara anta andra baitar. Nin davakhani kharchin saluvaagi saakagaiti antaar. Kharchigi rokkanu kodudilla. Laguna devara kann mucchali ankotiniri."***(**I feel disappointed about life, I am not healthy, and my son and daughter-in -law do not come to see me. If I complain about cold, cough, fever, they just scold me for my illness. They complaint that, they were fed up with my medical expenditures. God should take me soon).

Major findings:

The present study focused on the migration and its effects on the elderly. The results show that majority of elderly were out of the work force, totally dependent solely on remittances of young migrants. Elderly suffer from multiple health problems. Negligence by their family members was one of the factors for deteriorating health conditions of the elderly. They were overburdened by the family responsibilities at this age. The feeling of insecurity affected their health and empty nest syndrome is evident among elderly.

Conclusions and Suggestions:

The non migrant elderly and grandchildren both fall under unproductive age groups and totally depended on the remittances for the fulfilment of basic needs, but the migrants hardly attended to these basic needs. Neither children's education nor elderly health has given importance. The YERALA project, which gives basic incentives for non migrants in Maharashtra, may be extended to some of the villages situated on the borders of Karnataka and Maharashtra. The family of migrants should be included in this programme.The mobile healthcare services should be provided at least once or a twice in a month to villages where migration is vibrant and rampant.

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