



## **School of Physiotherapy and Rehabilitation Sciences**

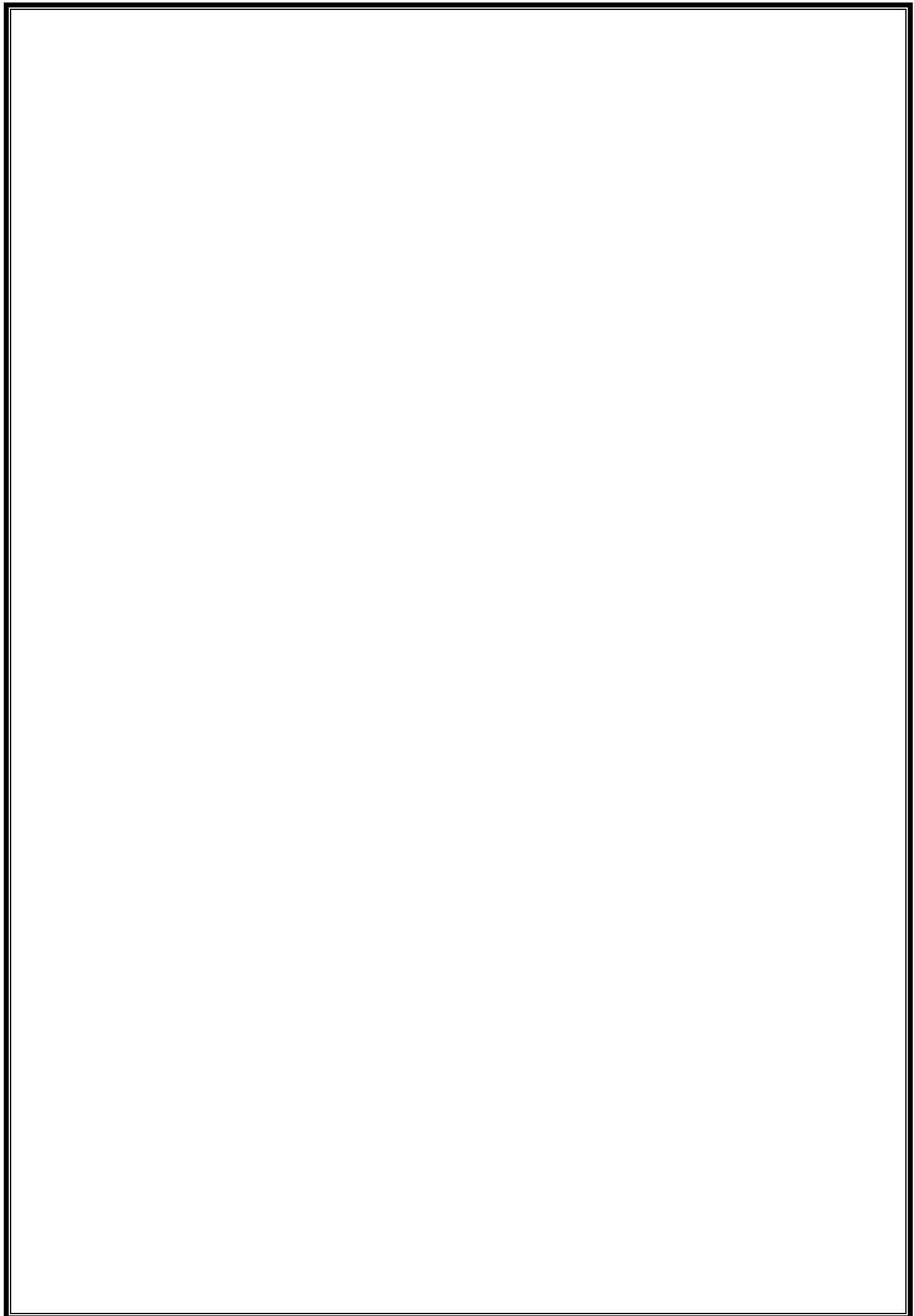
*Analysis of Quality of Life after hysterectomy in rural women of selected villages of Sohna district, Haryana: A case series*



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**Title- Analysis of Quality of Life after hysterectomy in rural women of selected villages of Sohna district, Haryana: A case series**

**ABSTRACT:**

Hysterectomy, the surgical removal of the uterus, is a major, life-altering procedure with profound physical and emotional implications. While common globally, its prevalence and context in rural India, particularly in the state of Haryana, presents a complex narrative shrouded in concerns about informed consent, access to quality healthcare, and socio-economic factors. This topic delves into these complexities, drawing upon relevant research and reports. To shed light on this important public health issue, this research also explores the intricate web of factors influencing hysterectomies in rural Haryana, referencing pertinent sources.

**INTRODUCTION:**

When a woman is close to or has gone through menopause, a hysterectomy—the removal of the uterus—is a popular surgical treatment used to manage gynaecological morbidities like fibroids, cysts, and uterine prolapse [Desai et al., 2023]. Menopause is surgically induced by hysterectomy combined with ovarian excision (oophorectomy), whereas ovarian function declines with uterine excision alone [PG et al., 2011] [CM et al., 2005]. The removal of the uterus, or hysterectomy, has lately come to dominate discussions about health policy in India. State responses to claims that hysterectomy procedures were carried out unethically in Bihar, Rajasthan, and Chhattisgarh were mandated by the Supreme Court in 2013 [HRLN, 2013].

In midlife gynaecology, abnormal uterine bleeding (AUB) or heavy menstrual bleeding (HMB) is one of the most prevalent conditions. It includes deviations from "normal" menstrual flow in terms of regularity, length, frequency, and/or volume of blood flow. Based on empirical measurements of monthly menstrual blood loss, population-based estimates indicate that between 9% and 14% of women who menstruate experience blood loss over 80 millilitres per menstrual cycle; on the other hand, subjective assessments of the prevalence range from 20% to 52%. About 30 to 40 percent of these women have a unique structural uterine reason, which may be identified specifically and requires specialized treatment.

Additionally, families who are determined to be below the poverty level are eligible for inpatient treatment in both public and private hospitals under the publicly funded Rastriya Swasthika Bima Yojna (RSBY) health insurance plan. According to reports, the most common reason women join this plan is for hysterectomy, which raises concerns that profit-driven private physicians are prescribing needless surgeries to women. Because of this, most media articles about hysterectomy portray women as helpless victims: headlines like "Indian women forced into hysterectomies" and "Forced hysterectomies, unscrupulous doctors"

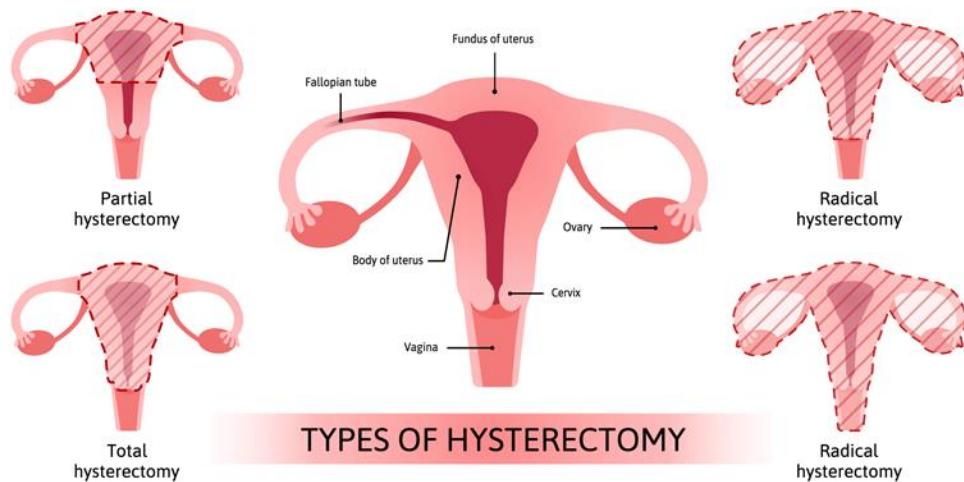
Despite little regard for women's viewpoints, hysterectomy has grown to be a potent weapon for criticizing both privatization and publicly supported health insurance (Desai, 2016).

1. **Prevalence and Patterns:** Studies, like the one by the International Journal of Gynaecology & Obstetrics (2011), paint a worrying picture. Hysterectomy rates in Haryana are reported to be significantly higher than the national average, with some estimates reaching double. These alarming figures are not evenly distributed. Age plays a crucial role, with women in their late 30s and early 40s disproportionately affected. Further research, such as the study by BMJ Open (2015), highlights the prevalence of abdominal hysterectomies, a more invasive procedure, suggesting potential overuse or inappropriate application.
2. **Unravelling the Why:** The reasons behind these staggering numbers are multifaceted and deeply intertwined with the socioeconomic realities of rural Haryana. Patriarchal norms prioritize family planning, often viewing hysterectomies as a permanent solution to prevent further pregnancies. This aligns with findings by the Journal of Biosocial Science (2012), which emphasize the pressure on women to fulfil their reproductive duties and limit family size.
3. **Economic constraints further fuel the trend.** Access to quality healthcare, particularly skilled gynaecologists and family planning resources, remains limited in rural areas. As documented in the Journal of Health, Population and Nutrition (2009), women often resort to hysterectomies due to inadequate information and counselling on alternative contraceptive methods. Additionally, the perceived financial burden of managing future pregnancies, especially in families with limited resources, might push women towards this irreversible procedure.
4. **Medical Considerations:** While not to be disregarded, purely medical factors also contribute to the high rates. Uterine fibroids, endometriosis, and pelvic inflammatory disease are prevalent in this region, and hysterectomies may be deemed necessary in some cases. However, concerns remain regarding the potential for overdiagnosis and unnecessary surgeries, as highlighted by the Lancet in the year 2018.
5. **Navigating the Path Forward:** Addressing this complex issue demands a multi-pronged approach. Empowering women through education and access to comprehensive family planning services is crucial. This aligns with the recommendations of the Indian Journal of Medical Ethics [2013], which emphasizes informed consent and counselling before resorting to hysterectomies. Additionally, strengthening rural healthcare infrastructure by increasing the availability of skilled gynaecologists and promoting awareness about alternative contraceptive methods are essential steps. Finally, research efforts investigating the specific reasons behind high hysterectomy rates in Haryana, along with studies on the long-term physical and psychological consequences of the procedure, can inform effective interventions. The high prevalence of hysterectomies in rural Haryana presents a multifaceted challenge deeply rooted in the region's social, economic, and medical realities. By acknowledging the complex interplay of factors, empowering women, strengthening

healthcare infrastructure, and fostering research, we can navigate a path towards informed choices and improved reproductive health for the women of rural Haryana.

## Hysterectomy cases

Monitoring must go on to assess the influence on women's health and see if the trends that have been seen continue. In the future, hysterectomy surveillance may require data on both inpatient and outpatient surgeries. Menopause tends to start earlier after hysterectomy. This study shows that a menopausal start date that is significantly early relates to hysterectomy combined with unilateral oophorectomy. At one year, surgery—particularly hysterectomy—reduces menstrual bleeding more than medication interventions, although LNG-IUS seems to be just as successful in enhancing quality of life. Longer term comparisons include conflicting and flimsy evidence. For some women, oral medicine is a good long-term solution. **[Figure 1]**



**Figure 1: Types of hysterectomy** (Wright J, Ananth C, Lewis S et al., "Robotically Assisted vs Laparoscopic Hysterectomy among Women with Benign Gynaecologic Disease," *JAMA* 2013; 309(7): 689-98.)

The information in this paper has some limitations. For instance, the denominator was all American women rather than only those who had never had a hysterectomy, which led to an underestimation of the actual hysterectomy rates among at-risk individuals in the country. But if rates don't change, this constraint shouldn't have an impact on the capacity to identify patterns over time. The presumption that the racial distribution of discharges in which race was not recorded is equal to that of discharges in which race was reported constituted another constraint. This assumption is dubious since, according to a recent analysis, race data for white women may be more likely to be missing [Keshavarz et al., 1999]

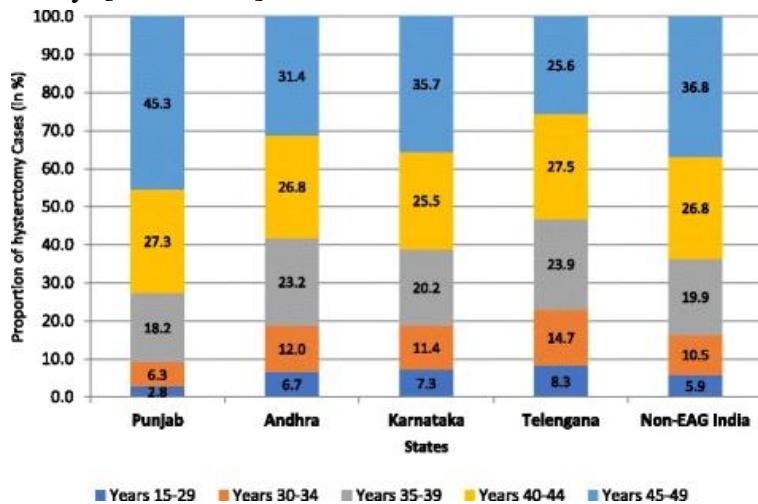
## **REVIEW OF LITERATURE**

Hysterectomy is a leading reason for non-obstetric surgery in many countries. However, the procedure is also found to have adverse health effects on women's physical and socio-psycho health, particularly on pre-menopausal, young women. In India, in recent years there appears to be a surge in hysterectomy cases involving young women. This has led to suspicion on the misuse of procedure. However, there are no population-based studies that provide insights into hysterectomy prevalence and its determinants at the national level. This study makes this contribution using data from District-Level Household Survey-4 which covered a sample of 3, 16,361 married women aged 15–49 years from 21 states and union territories of India. Our findings show that the current median age of the women who had undergone hysterectomy was 42 years. [Prusty, R.K., Choithani, C. & Gupta, S.D. 2019]

One-third of hysterectomized women were below the age of 40 years, and this proportion was higher in Southern Indian states of Andhra Pradesh (42%) and Telangana (47%). Statistical analysis show that hysterectomy is more common among women who had no and/or low education and those from households with health insurance. These findings indicate a need for counselling and education of lowly educated young women on alternative options. Secondly, it appears that health insurance is possibly also leading to unnecessary hysterotomies among young women which warrants a need for better designing of insurance systems. We also note that reasons for hysterectomy are however complex, and there is thus a need for more robust data systems to understand the determinants of hysterectomy more fully. [Prusty, R.K., Choithani, C. & Gupta, S.D. 2019]

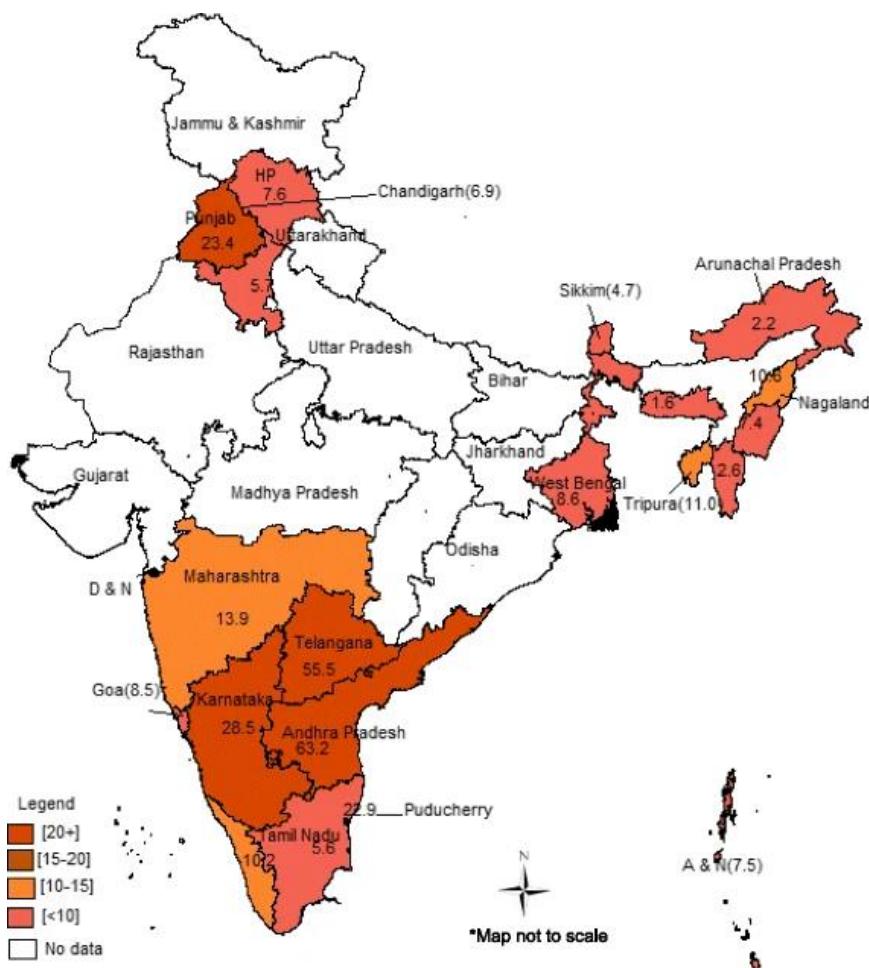
The ongoing middle age of the ladies gone through hysterectomy was 42 years in every one of the states canvassed in the review. It is vital to take note of that numerous ladies revealed going through the medical procedures at more youthful ages: more than 33% (36%) of the multitude of ladies who finished their hysterectomy did as such prior to arriving at 40 years old. Besides, the high hysterectomy pervasiveness territories of Andhra Pradesh and Telangana had a lot higher extent of ladies under 40 years old who had hysterectomy, 42% and 47% individually (Fig. 2). It is critical to take note of that this paper used the data on the

current period of ladies during the overview, and not the age at which ladies went through hysterectomy. This suggests that a greater number of young women will likely undergo hysterectomy. [FIGURE 2]



**FIGURE 2:** Proportion of women who underwent hysterectomy by the age of women in selected Indian states, 2012–13

The average prevalence rate of hysterectomy was estimated to be 17/1000 among ever married women in the ages of 15–49 years. As many as 5567 women out of the total 3, 16, 361 reported having undergone hysterectomy. There were wide variations in the prevalence rates across the different states and union territories in India, ranging from 2/1000 to 63/1000 women. Among the large Indian states, the lowest prevalence rates of hysterectomy were reported in the states of Tamil Nadu and Haryana – nearly 6/1000 women in both states. On the other hand, the state of Andhra Pradesh had the highest prevalence rate of hysterectomy (63/1000 women), followed by Telengana (55/1000), Karnataka (29/1000) and Punjab (23/1000) [Figure 3]



**Figure 3:** Spatial patterns of hysterectomy among women 15–49 years ('000) in India, 2012–13. Source: Authors' work based on DLHS-4 data. HP = Himachal Pradesh; A & N = Andaman & Nicobar; D & N = Dadra and Nagar Haveli

In India, hysterectomy has received increased attention in health policy debates in the past few years. The trigger for increased focus is provided by a series of media reports that have highlighted an unusual surge in the number of women undergoing hysterectomy in many parts of the country, with a significant number of cases involving young and pre-menopausal women from poor families [Byles JE, 2000]. This rising number of young women undergoing hysterectomy has raised suspicions about unscrupulous practices on the part of health care providers for profit reasons. Research evidence from recent studies on hospital facilities and insurance provides some credence to this 'malpractice-for-profit' hypothesis. A study by Kameswari and Vinjamuri (2013) involving a sample of 171 women in Andhra Pradesh found during 2008–2010, 60% of hysterectomies were carried out on women aged under 30 and that 95% of the operations were done in private hospitals; the hospital discharge summaries of these operations were mostly blank, with no information about the procedure or follow-up instructions [Kameswari, S. et al., 2013]. Findings of another study in a low-income setting in Ahmedabad district of Gujarat showed that hysterectomy was a leading reason for hospitalization and insurance claims [Desai S, 2019].

Alarmed by this, in 2013, in response to a public interest litigation filed by Human Rights Law Network, the Indian Supreme Court issued notices to state governments of Bihar, Rajasthan and Chhattisgarh to check this malpractice. States such as Andhra Pradesh have imposed restrictions on private hospitals to perform hysterectomy under public insurance schemes [Devulapalli R. 2016].

Other assessments however suggest that the reasons for hysterectomy are complex. Based on research on women from low-income families in Ahmedabad, Gujarat, Desai (2016) warns against this sole narrative of women as ‘passive victims’ and argues that choice to undergo hysterectomy also reflects ‘pragmatic agency’ of women [Desai S. et al., 2016]. She found that compelled to “earn and care for their families, women balanced their medical options with social responsibilities. In this way, biomedicine and its negotiations were enacted in spheres of work and family, beyond the provider-patient interaction”. Another study from Maharashtra showed that besides prescription by health care providers, other reasons why women opted for hysterectomy included lack of faith in alternative treatments to hysterectomy, fear of cancer and its future consequences, failure of ongoing medical treatment and practical difficulties in living with reproductive health problems [SarDeshpande N. et al., 2014].

The significance of these findings notwithstanding, a comprehensive assessment of hysterectomy prevalence, and its correlates at the national level is missing. The limited evidence on hysterectomy in India comes from the community studies, and to our knowledge there is a no population-based study on the subject matter. Using the data from the fourth round of District Level Household and Facility survey (DLHS), this paper estimates the prevalence of hysterectomy, identifies hysterectomy patterns and examines the underlying socio-economic determinants of hysterectomy in India.

## **METHODOLOGY**

1. A survey was conducted to check the post hysterectomy quality of life changes.
2. Selected students from BPT 2nd, 3rd and 4th year accompanied the principal investigators to collect the responses of the village females.
3. The students were involved in data collection alongwith the faculty members Dr. Shweta Kumar (PT) and Dr. Barnali Bhattacharjee (PT). villagers were given learning on hygiene and understanding about the importance of maintaining quality of life.

## **Inclusion criteria**

Women who underwent hysterectomy and hysteroscopy with the following characteristics: women of reproductive and premenopausal age group with HMB (including both heavy regular periods (menorrhagia) and heavy irregular periods [metrorrhagia]), measured objectively or subjectively refractory to medical treatment. Women having normal or bulky uterus, hyperplasia, endometrial polyp submucous fibroid <5 cm on ultrasound, or previous hysteroscopy finding intended to be treated by hysteroscopic procedure. [discharge summary and preoperative notes of gynaecologist will be used to include this data]

## **Exclusion criteria**

Hysterectomy done for large pelvic masses, adenomyosis, and large fibroids (>5 cm other than submucous variety and pelvic malignancies or for premalignant conditions). Hysteroscopy done for other indications such as infertility and recurrent pregnancy loss. Hysteroscopy suspicious of endometrioid neoplasia, adenomyosis, or malignancy. Patient desiring pregnancy in future. Patients who refused for follow-up survey, associated cervical lesions, and postmenopausal women. [discharge summary and preoperative notes of gynaecologist will be used to include this data]

## **PROTOCOL DESIGN**

The Hajipur, Berka and Bandhwari Villages were selected

The students of BPT alongwith faculty incharges were part of the survey to understand the possible causes of hysterectomy and the quality of life post it

A Questionnaire of SF36 and PAR-Q was filled by women in the select villages

The Villagers were given learning about Hygiene and Care Post Hysterectomy by the Faculty and Student Incharges

The survey was carried out in collaboration with NSS and the participants included faculty incharges and group of 10-15 students from BPT







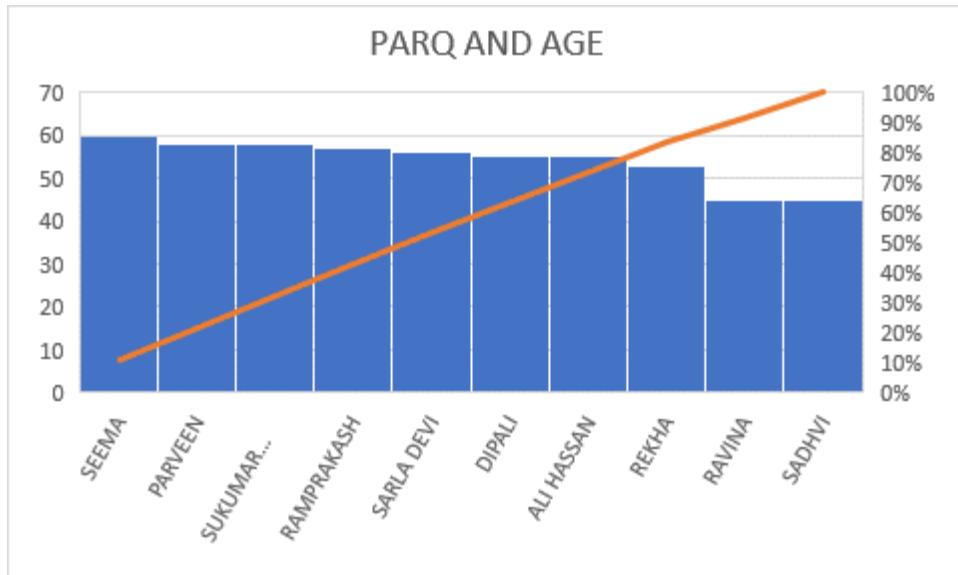
**Figure 2.** Explaining the entire process of data collection with students and faculties of SPRS  
(Dr. Barnali Bhattacharjee and Dr. Shweta Kumar)

## DATA ANALYSIS

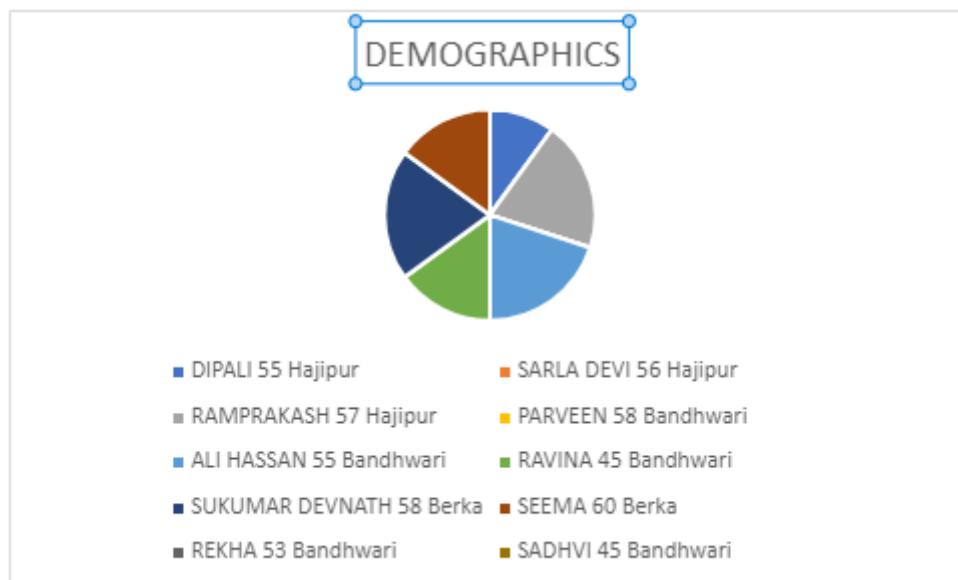
1. The analysis was done based on individual responses on SF36 and PAR-Q data.
2. The case study was formulated as a series of 10 cases that were evaluated on individual basis.
3. The result was further analysed using Karl Pearson coefficient using SPSS 20. VERSION.
  - **Dependent variable:** Women were asked about their current mensuration status. Among those women who reported not menstruating were asked if they had been operated for hysterectomy. This information was used to estimate the prevalence of hysterectomies among women aged 15–49 years.
  - **Independent variables:** Socio-economic and demographic variables like age of women, caste, religion, parity, place of residence, working status, household wealth, household with health insurance, women sterilization and education of women were used as independent variables.

## Data Analysis

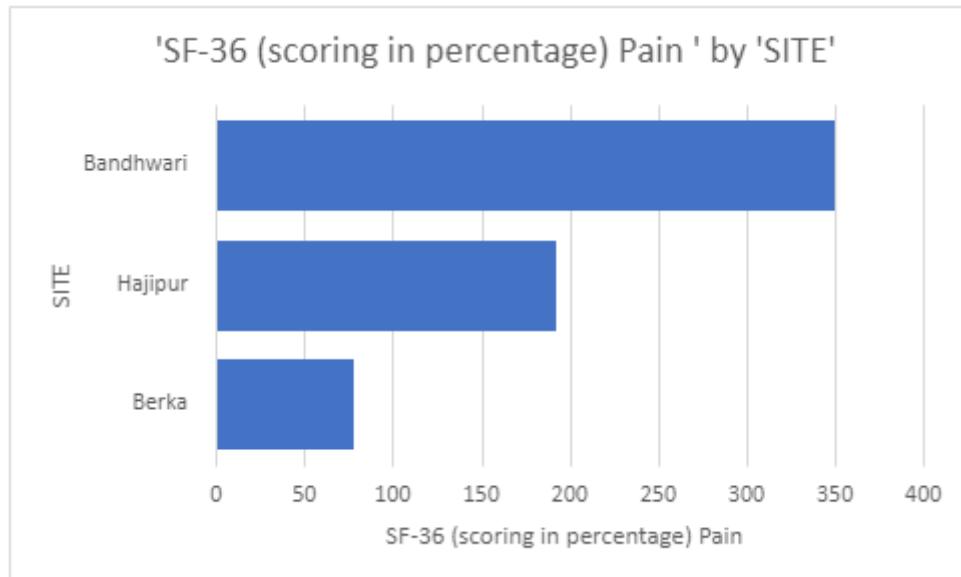
### 1. PAR-Q AND AGE



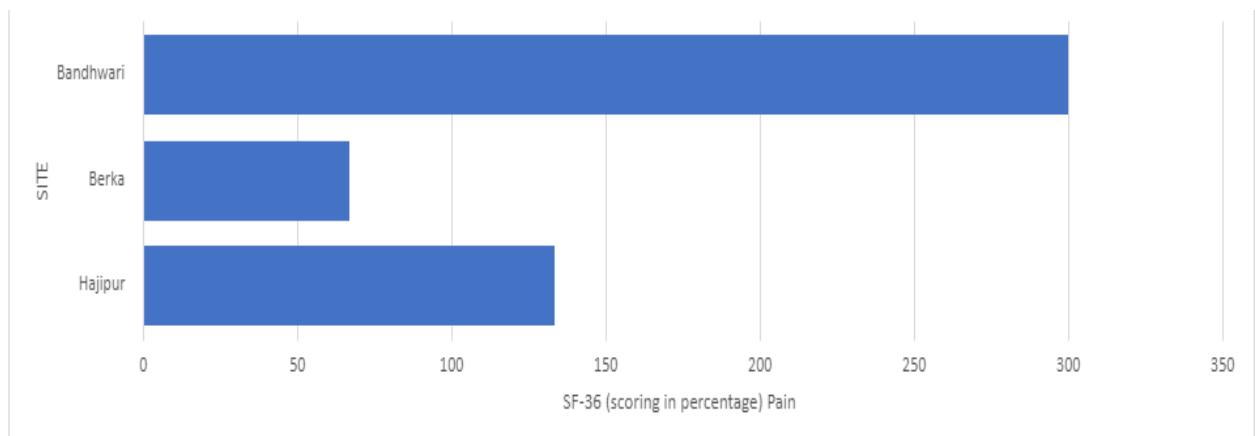
### 2. DEMOGRAPHIC DETAILS



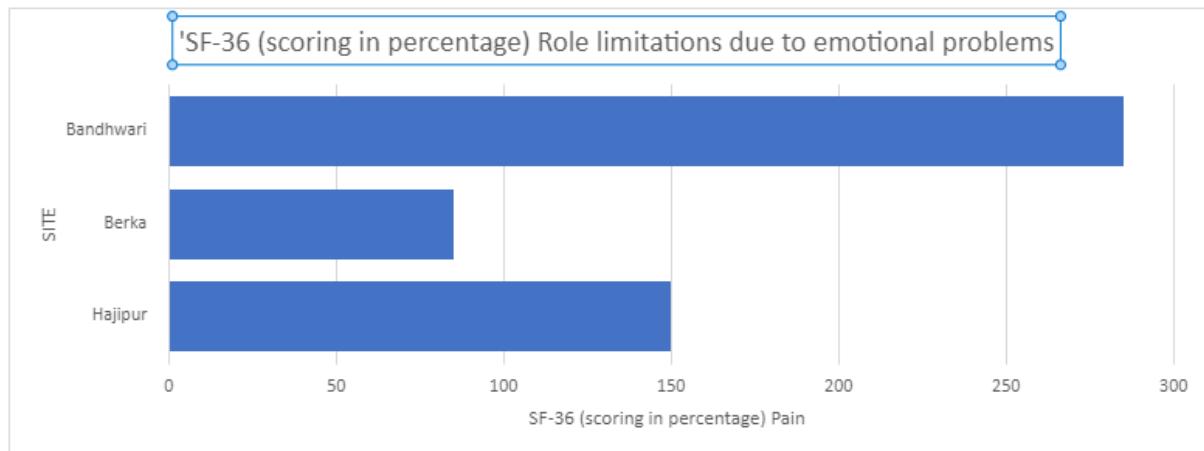
### 3. SF36 AND PAIN



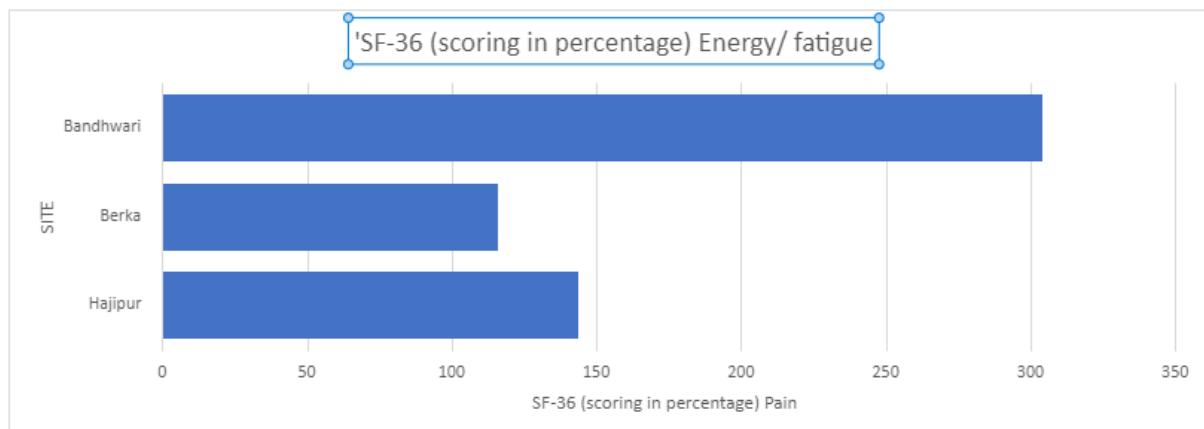
### 4. SF36 AND PHYSICAL FUNCTIONING



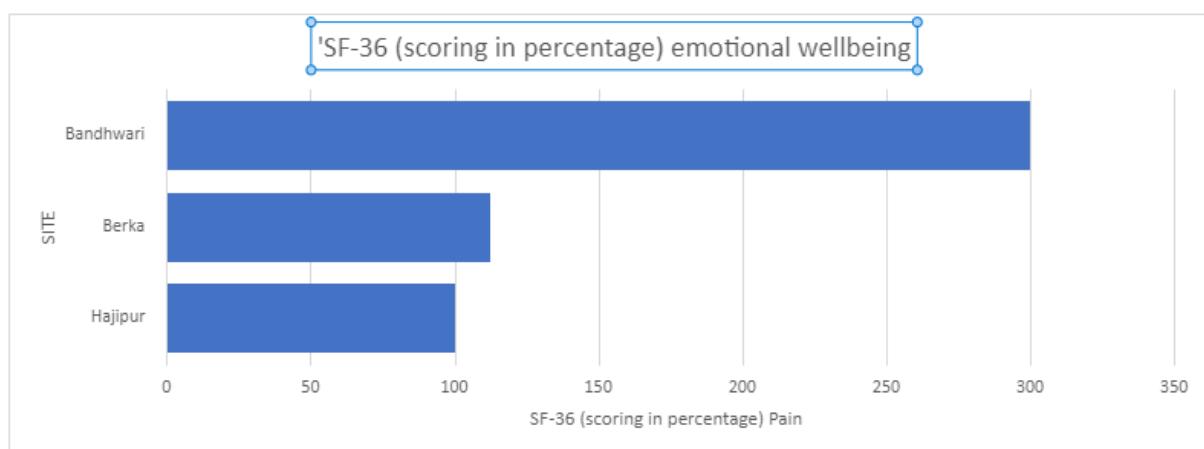
## 5. SF36 AND ROLE LIMITATION DUE TO EMOTIONAL PROBLEMS



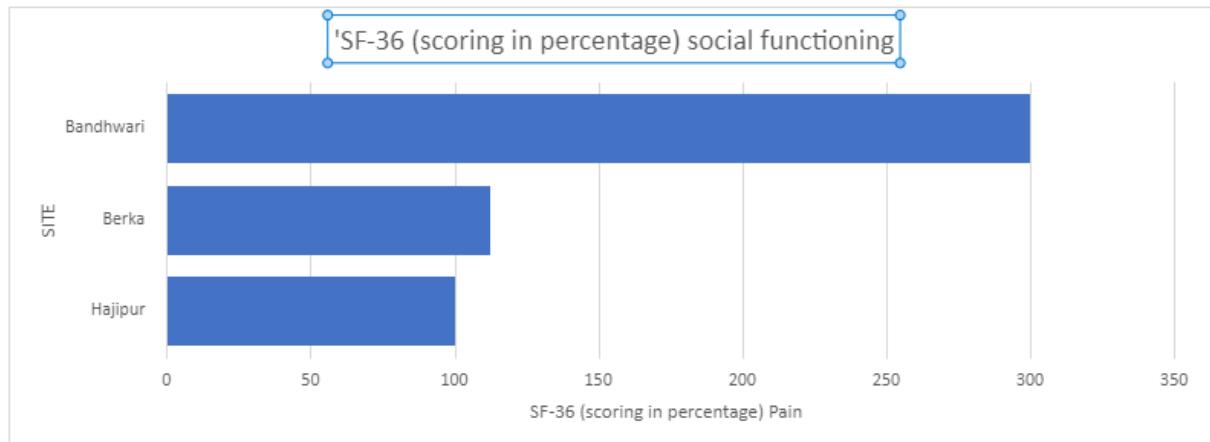
## 6. SF36 AND ENERGY AND FATIGUE



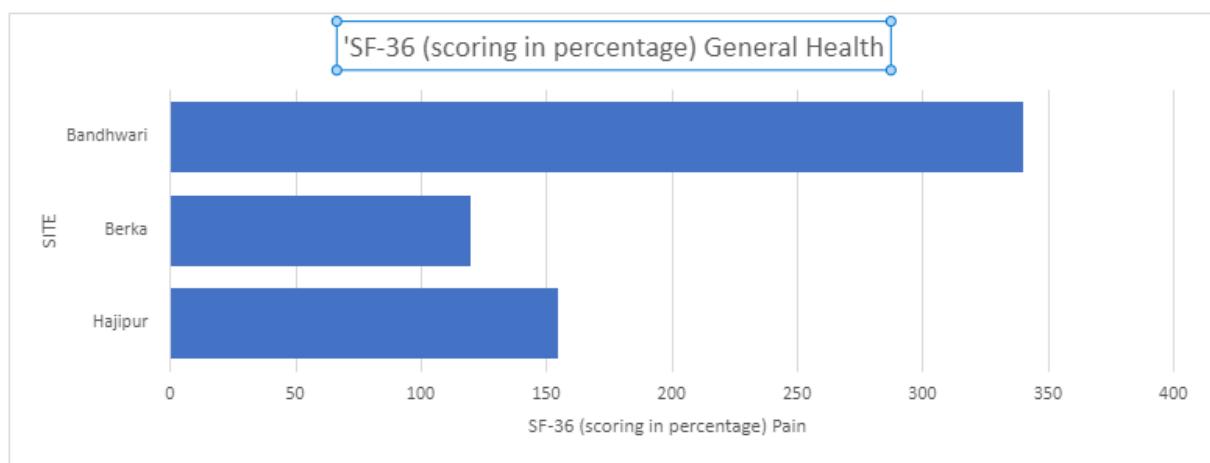
## 7. SF36 AND EMOTIONAL WELLBEING



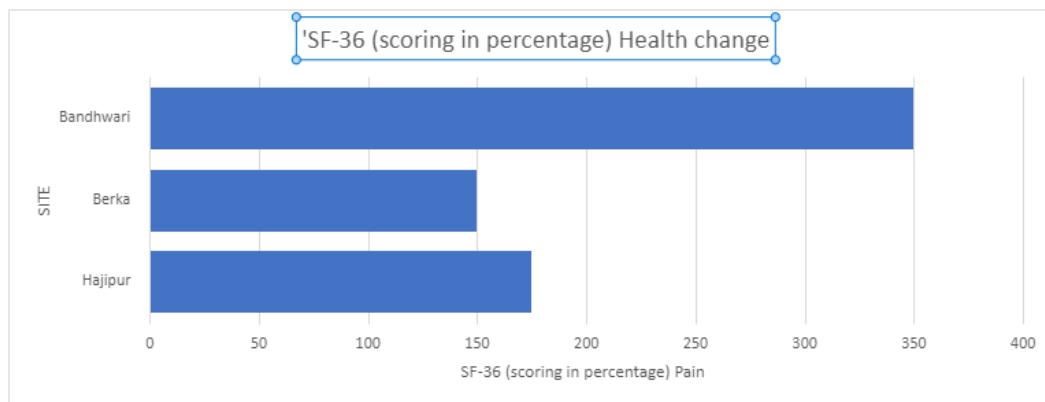
## 8. SF36 AND SOCIAL FUNCTIONING



## 9. SF36 AND GENERAL HEALTH



## 10. SF36 AND HEALTH CHANGE



## Discussion

In the present study, uterine fibroids were reported to be the top reason for hysterectomy among both pre-menopausal and menopausal groups (in 48.78 and 56.00% of cases, respectively). These findings are in concordance with the findings of some recent studies that have reported fibroids to be involved in 34 to 65.5% of hysterectomies in some other states of India. [Nagrani R, et al., 2002] Studies from other countries have also reported fibroids as the main cause of hysterectomies (73% in Hong Kong, 60% in the USA, 23% in South Africa, 48% in Nigeria, and 30.4% in Pakistan).

Further, as per the study by Shekhar et al., 61.3% of hysterectomies in Haryana were performed due to excessive menstrual bleeding/ pain, which is much higher than what has been found in the present study. Among several other states, like Maharashtra, Karnataka, Andhra Pradesh, and Tamil Nadu, more than 50% of women have been reported to have undergone hysterectomies because of excessive menstrual bleeding and pain. [Shekhar C, et al., 2019]

Taking into consideration the high incidence rate of hysterectomy in the study population, it is important to understand the risk factors of hysterectomy. Baseline sociodemographic variables, reproductive trajectories, and cardiometabolic risk factors were investigated as the risk factors for incident hysterectomy. Of the studied sociodemographic variables and reproductive trajectories, none of the variables was found to be significantly associated with incident hysterectomy, except for late age at menarche. Late age at menarche was found to be protective for hysterectomy. This finding is in concordance with other reports

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## **APPENDIX**

### ***SF36 AND or RAND SHORT FORM***

**22) During the past 4 weeks, how much did pain interfere with your normal work (including both work outside the home and housework)?**

Not at all      A little bit      Moderately      Quite a bit      Extremely

**Energy and Emotions:**

These questions are about how you feel and how things have been with you during the last 4 weeks. For each question, please give the answer that comes closest to the way you have been feeling.

**23) Did you feel full of pep?**

All of the time      Most of the time      A good Bit of the Time      Some of the time      A little bit of the time      None of the Time

**24) Have you been a very nervous person?**

All of the time      Most of the time      A good Bit of the Time      Some of the time      A little bit of the time      None of the Time

**25) Have you felt so down in the dumps that nothing could cheer you up?**

All of the time      Most of the time      A good Bit of the Time      Some of the time      A little bit of the time      None of the Time

**26) Have you felt calm and peaceful?**

All of the time      Most of the time      A good Bit of the Time      Some of the time      A little bit of the time      None of the Time

**27) Did you have a lot of energy?**

All of the time      Most of the time      A good Bit of the Time      Some of the time      A little bit of the time      None of the Time

**28) Have you felt downhearted and blue?**

All of the time      Most of the time      A good Bit of the Time      Some of the time      A little bit of the time      None of the Time

**29) Did you feel worn out?**

All of the time      Most of the time      A good Bit of the Time      Some of the time      A little bit of the time      None of the Time

**30) Have you been a happy person?**

All of the time      Most of the time      A good Bit of the Time      Some of the time      A little bit of the time      None of the Time

**31) Did you feel tired?**

All of the time      Most of the time      A good Bit of the Time      Some of the time      A little bit of the time      None of the Time

**Social Activities:**

**32) During the past 4 weeks, how much of the time has your physical health or emotional problems interfered with your social activities (like visiting with friends, relatives, etc.)?**

All of the time      Most of the time      A good Bit of the Time      Some of the time      A little bit of the time      None of the Time

**General Health: How true or false is each of the following statements for you?**

**33) I seem to get sick a little easier than other people**

Definitely true      Mostly true      Don't know      Mostly false      Definitely false

**34) I am as healthy as anybody I know**

Definitely true      Mostly true      Don't know      Mostly false      Definitely false

**35) I expect my health to get worse**

Definitely true      Mostly true      Don't know      Mostly false      Definitely false

**36) My health is excellent**

Definitely true      Mostly true      Don't know      Mostly false      Definitely false