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## General and reproductive health issues of female sugarcane cutters from Beed district

**Bhalerao VS and Mane SA**

#### Abstract

The sugarcane industry plays a crucial role in the agricultural landscape of Maharashtra, employing a significant number of laborers, including a substantial proportion of female sugarcane cutters. This research paper investigates the reproductive and general health issues faced by female sugarcane cutters in Beed District of Maharashtra. An exploratory study was conducted, which included interviews with 80 female sugarcane cutters who had undergone hysterectomy and who had not undergone hysterectomy. The study aims to shed light on the unique challenges and health concerns that vulnerable population encounters due to their occupation. Result revealed that due to poor diet, no health care, unhygienic conditions, poverty, inaccessibility to medical facilities etc, these women were facing many health issues and still they had to continue the arduous work of sugar cane cutting, irrespective of their classification as they had undergone hysterectomy or not. Long working hours, exposure to harsh weather conditions and inadequate breaks contribute to physical stress and fatigue, potentially impacting reproductive health. Poor sanitation and hygiene in the workplace increase the risk of reproductive infections and other health issues. The large strata of the female sugarcane cutters community is suffering due to unawareness and lack of knowledge of future ill effects of the hysterectomy. Keywords: Female sugarcane cutters, Living condition, Reproductive health issues, General health issues.

**Keywords:** Reproductive health issues, general health issues, female sugarcane cutters

#### Introduction

Agriculture plays a vital role in India's economy and 58.6 percent of the population is engaged in agriculture and allied activities. However sugarcane is the main cash crop grown in both tropical and subtropical regions of the country. The sugar industry is the second largest agro based industry in India and this sugar industry relies on migrant workers. These workers are seasonal migrants who migrate mainly from the drought prone areas of Marathwada region, Maharashtra for cane cutting. Almost 50% of the migrant sugarcane workers are women who migrate with their children. About 2, 00, 000 children above 14 yrs were found to help their parents to cut cane during harvesting season. Roughly 40 percent of migrant workers were seen from Beed district (Shukla, SK *et al.* 2017) <sup>[12]</sup>.

Sugarcane cutting is relentless, backbreaking and vigorous work for each couple. The man usually cuts the cane stalk and strips their leaves. The woman clean stalks, ties them together and loads the 40 to 45 kg bundles into truck.

These females work for twelve to fifteen hours in sugarcane field. The female sugarcane cutters merely bother for their diet and their bodies are mostly depleted in energy. They do tiresome work in the farm in extreme cold or heat. They constantly complain stomach ache because of bad nutrition, inability to have access to hygienic care during their menstrual periods, carry heavy loads and insufficient postpartum care. Most of the female sugarcane laborers were found to get married at a very young age and started harvesting sugarcane as young as 16 yrs. The decision to migrate was taken by the head of the household, usually the fathers, father-in-laws or husband (Varadarajan 2021) <sup>[10]</sup>.

The female workers find it difficult to spend money on buying sanitary napkin and therefore resort to use cloth old, torn one during menstruation. Lack of sanitary facilities lead to improper disinfection of the menstrual cloth further increased the chance of reproductive diseases (Chadha 2019) <sup>[1]</sup>.

After undergoing hysterectomy operative process, she no longer menstruate and conceive. But several health issues associated with hysterectomy, being done at a very early stage of life lead to hormonal imbalance, mental health, weight gain, breathing problems and many more associated reproductive problems (Yasmeen & Azad 2020) <sup>[11]</sup>.

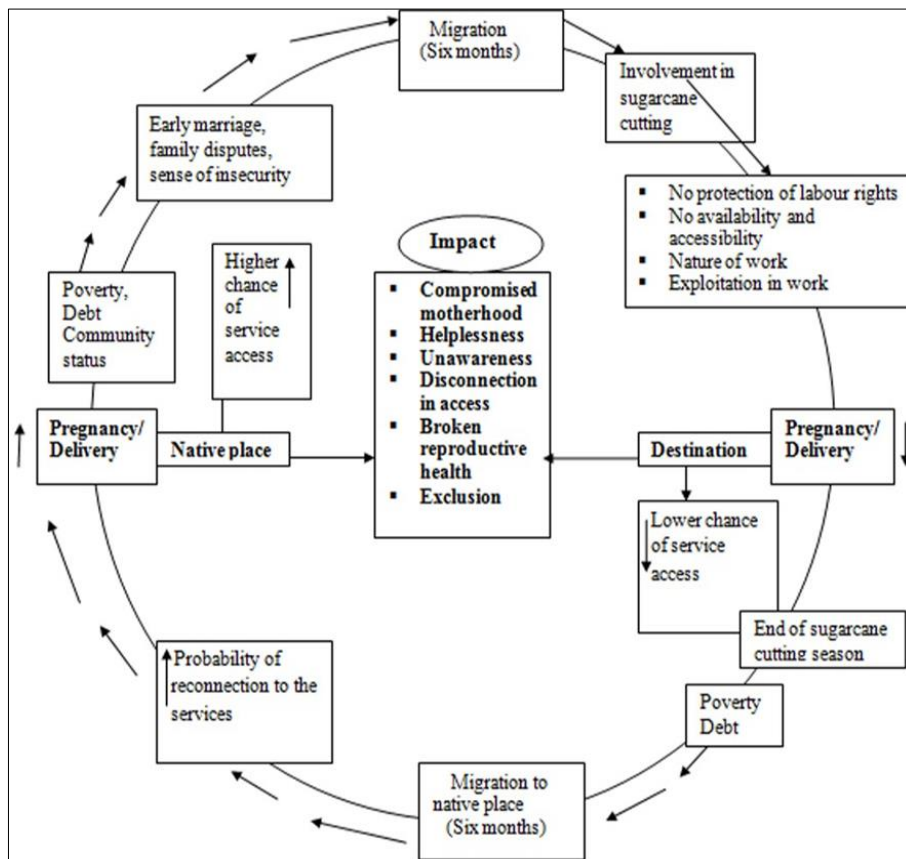
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These women were seen in the worst off condition as they carry large heavy loads and do cane cutting, which is very vigorous process, they do during their menstrual cycle and pregnancy. So to avoid complications of menstrual cycle and pregnancy in the field, they undergo hysterectomy even at the age of 22-25 yrs which is very dangerous for their normal health. Additionally the increase in hysterectomies was found being driven by a deeply rooted belief that the womb of a woman is futile once she has produced children. The 82,309 women sugarcane cutters in Beed district, 13,861 or 17 percent of them had undergone hysterectomy, as per data provided by the Public Health Dept (Sah 2022) [7].

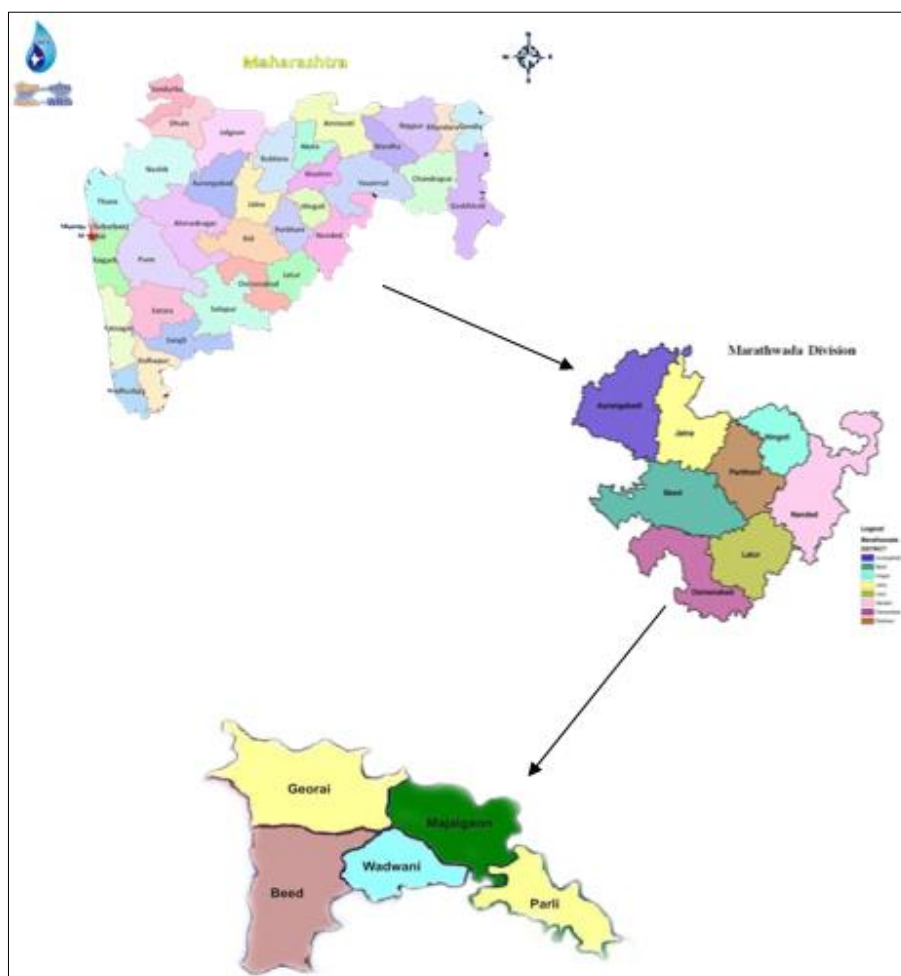
These sugarcane cutter women constantly complain stomach ache because of bad nutrition, inability to have access to hygienic care during their menstrual periods, carry heavy loads of sugarcane stalks and insufficient postpartum care. Due to these complications, these women take the steps towards hysterectomy and get hysterectomy done, many of them take a loan of about Rs 50,000 from contractors. Their surgeries were often performed by quacks, which may lead to serious health hazards like abdominal pain, vaginal infection, cervical problems and also cancers at a young age (Varadarajan 2021) [10].



**Materials and methods**

The research study was carried out in randomly selected 10 villages from 5 talukas of Beed district on the basis of percentage of female sugarcane cutters namely Parli, Majalgaon, Wadvani, Beed and Georai from Marathwada region of Maharashtra State. A study was conducted by taking the in-depth interviews of 80 female sugarcane cutters (22-45 yrs) who had undergone hysterectomy (n=40) and who had not undergone hysterectomy (n=40) with the help of structural

interview schedule, informal talks with Mukadam’s (team leaders) and observations during the sugarcane harvesting season (October to March). Z test was applied to compare the percentages of the various responses of the different parameters with regard to the involvement of female sugarcane cutters who had undergone hysterectomy and had not undergone hysterectomy as per the standard procedure given by Sharma, 2005 [13]



## Result and Discussion

**Table 1:** General health problems encountered by female sugarcane cutters

General health problems	Frequency of female sugarcane cutters		Z value
	Not undergone hysterectomy (n=40)	Undergone hysterectomy (n=40)	
Blurring of vision	36 (90.00)	40 (100)	2.108*
Abdominal pain	33 (75.00)	40 (100)	3.65**
Body aches	36 (90.00)	38 (95.00)	0.85 <sup>NS</sup>
General weakness	34 (85.00)	37 (93.00)	1.15 <sup>NS</sup>
Blood pressure	13 (32.50)	15 (75.00)	0.53 <sup>NS</sup>
Cramps in legs	37 (93.00)	34 (85.00)	3.00**
Skin problems	34 (85.00)	36 (95.00)	1.51 <sup>NS</sup>
Frequent urination	38 (90.00)	40 (100)	2.11*
Urinary tract infection	37 (93.00)	34 (85.00)	0.67 <sup>NS</sup>
Breathlessness	38 (90.00)	38 (95.00)	NS
Chest pain	37 (93.00)	37 (93.00)	NS
Sun stroke	39 (98.00)	35 (88.00)	1.78 <sup>NS</sup>
Diabetes	8 (20.00)	10 (25.00)	0.53 <sup>NS</sup>
Headache	37 (93.00)	39 (98.00)	1.08 <sup>NS</sup>
Back pain	34 (85.00)	40 (100)	2.66*

Figures in parenthesis indicate percentages \* $p < 0.05$  level \*\* $p < 0.01$  level NS –Non -significant

Table 1 and fig 1 shows the general health problems encountered by female sugarcane cutters during sugarcane cutting season.

The comparative data was studied to know the general health problems of female sugarcane cutters who had not undergone hysterectomy and who had undergone hysterectomy (40 each).

The female sugarcane cutters who had not undergone hysterectomy reported mostly they faced general health problems like sunstroke and frequent urination (98% each)

breathlessness while working (95%), cramps in legs while working or during sleep, chest pain, urinary tract infection & headache (93% each), blurring of vision, body ache, skin problems (90% each). Eighty five percent of them reported to be having back pain, general weakness, while 75% of them were having abdominal pain. The chronic health issues like blood pressure (39%) & diabetes (20%) were also found among them.

The higher percentages of female sugarcane cutters who had undergone hysterectomy had reported about their various

general health problems. Almost all of them reported about the abdominal pain and blurring of vision (100% each), followed by headache (98%), breathlessness, frequent urination, body ache (95% each), general weakness, chest pain (93% each), sunstroke during summer (88%), followed by cramps in leg, skin problems, urinary tract infection (85% each).

The significant differences were noted between the general health problems of female sugarcane cutters who had not undergone hysterectomy and who had undergone hysterectomy with regard to abdominal pain, cramps in legs, blurring of vision, frequent urination and back pain.

The studies of Leite M.R (2018) [2] were found in similar line with these results indicating many health issues were found among the female sugarcane cutters.

This data indicate that very higher percentage of female sugarcane cutters were undergoing physical stress whether they had done hysterectomy or not. It can be said that due to poor diet, no health care, unhygienic conditions, poverty, inaccessibility to medical facilities etc. these women were facing many health issues and still they had to continue the arduous work of sugar cane cutting, irrespective of their classification as they had undergone hysterectomy or not.

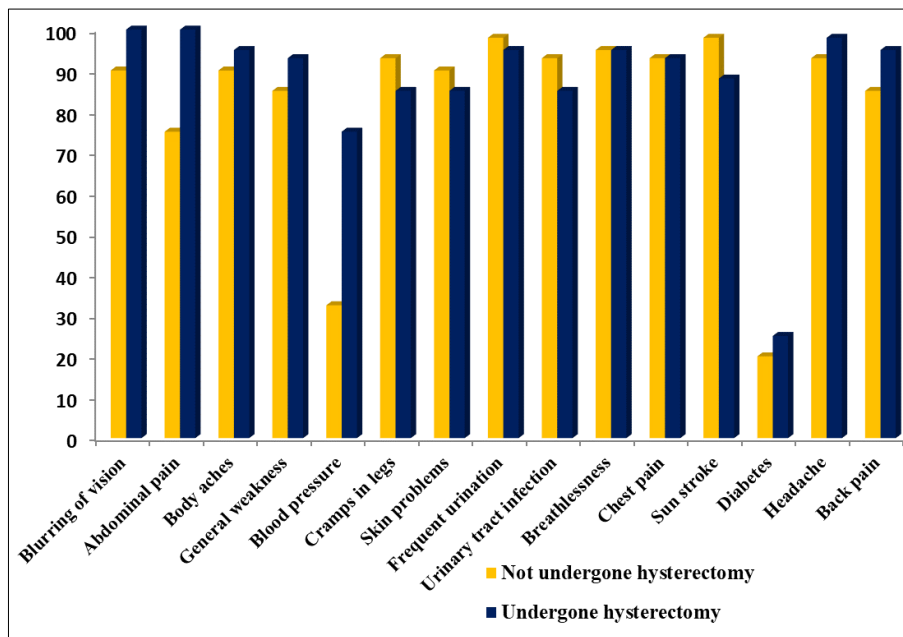


Fig 1: General health problems of female sugarcane cutters

Women cane cutters are required to work for 13 to 18 hours a day without any weekly rest day. They work even during illness, menstruation, pregnancy or delivery, which affects their health. At their sugarcane cutters workplace there is no water or light and they sleep in a dark hovel. The women workers are disadvantaged more so as they carry the burden of work, running a household as well looking after children.

Women work for an average 15 hours a day, says the study (Menon 2020) [3].

Early marriages, lack of awareness on women’s health issues, poverty, lack of pre and post counselling, water scarcity and absence of menstrual hygiene and toilets have been enlisted by the committees as the cause for the mass scale of hysterectomies in the Beed district (Mulye 2019) [4].

Table 2 Reproductive health problems encountered by female sugarcane cutters

Reproductive health problems	Frequency of female sugarcane cutters		Z value
	Not undergone hysterectomy (n=40)	Undergone hysterectomy (n=40)	
Severe abdominal pain	25(62.50)	38(95.00)	3.99**
Vaginal discharge	10(25.00)	23(58.00)	3.17**
Unbearable pain during menstruation	17(43.00)	27(68.00)	2.32*
Excessive and longer period of bleeding in menstruation	14(35.00)	30(75.00)	3.92**
Urinary tract infection	3(7.50)	5(12.50)	6.52**
Swelling on uterus	4(10.00)	15(38.00)	3.10**
Fibroid/cyst in uterus	3(7.50)	10(28.00)	4.14**
Pelvic infection	2(5.00)	3(8.00)	2.96**
Prolapse uterus	1(2.50)	2(5.00)	2.96**
Chances of cancer of ovary/uterus/cervix	2(5.00)	4(2.50)	4.33**

Figures in parenthesis indicate percentages \* $p < 0.05$  level \*\* $p < 0.01$  level NS –Non -significant

Table 2 and fig 2 reveals the information on reproductive health problems encountered by female sugarcane cutters before undergoing hysterectomy.

The female sugarcane cutters who had not undergone hysterectomy expressed major issues of severe abdominal

pain (62%), unbearable pain during menstruation (43%) followed by excessive and bleeding for longer period during menstruation (35%) and vaginal discharge (25%).

The corresponding percentages for these problems among female sugarcane cutters who had undergone hysterectomy

were 95%, 68%, 75%, 58% respectively. A considerable percentage of female sugarcane cutters showed problem of swelling on uterus (38%) and fibroid /cyst on or in uterus (28%). The female sugarcane cutters also complained for urinary tract infection (12.57%), pelvic infection (8%), prolapse of uterus (5%), chances for cervical, uterine or ovarian cancer (10%) before undergoing hysterectomy.

It is revealed that long working hours, exposure to harsh weather conditions and inadequate breaks contribute to physical stress and fatigue, potentially impacting reproductive health of female sugarcane cutters. Poor sanitation and hygiene in the workplace increase the risk of reproductive infections and other health issues.

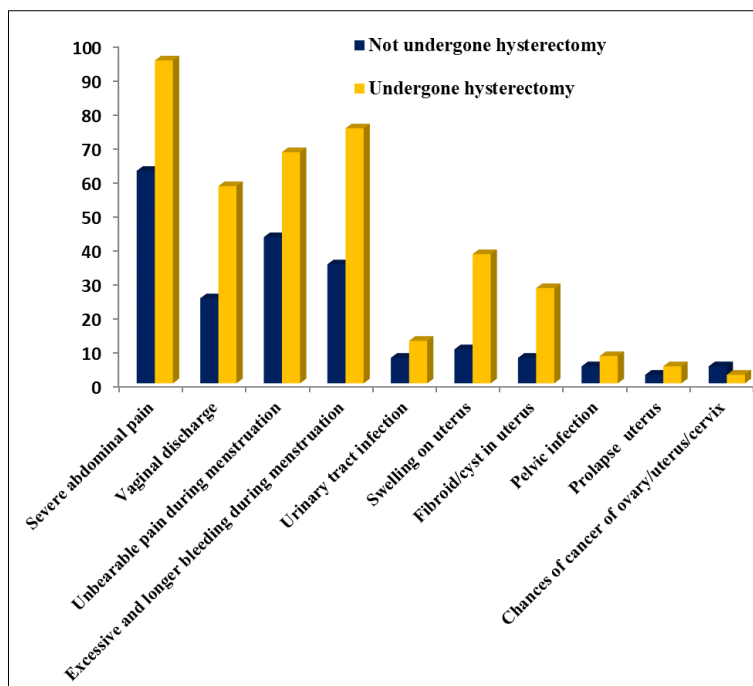


Fig 2: Reproductive health problems encountered by female sugarcane cutters

The women sugarcane cutters of Beed, were in a race to make India the number one sugarcane exporter, beating Brazil, to earn their bread and butter. This however, comes at the cost of giving up their womb by undergoing a hysterectomy. The practice among these women exists due to lack of information about the menstrual cycle (Panji 2021) [14]. Shinoli (2022) [8] reported that women sugarcane workers in

Maharashtra’s Beed district deal with side effects of hysterectomy. This study found that among 13,861 cane cutters in Beed who had undergone hysterectomy, over 45 percent later experienced mental and physical distress. Dr. Chavan, a gynecologist and consultants expressed that hysterectomy is complicated procedure with adverse consequences on the woman’s health in short and long terms.

Table 3: Problems encountered by female sugarcane cutters after undergoing hysterectomy

Problems encountered	Percentages of female sugarcane cutters (n=40)
<b>Current Age (Yrs)</b>	
22-30	17 (21.25)
30-38	36 (45.00)
38-45	27 (33.75)
<b>Age at the time of hysterectomy</b>	
22-30	10 (25.00)
31-38	26 (65.00)
39-45	4 (10.00)
<b>Physical problems</b>	
Body ache	40 (100)
Knee pain	40 (100)
Cramps in leg	40 (100)
Weight loss	40 (100)
Skin dryness	40 (100)
<b>Emotional problems</b>	
Insomnia	40 (100)
Anxiety	39 (97.50)
Stress Nervousness	39 (97.50)
Irritation	40 (100)
Uneasy feelings	39 (97.50)
Hot flushes	40 (100)
Swinging moods	35 (87.50)

Aggression	30 (75.00)
	37 (92.50)

Details on problems encountered by female sugarcane cutters after undergoing hysterectomy are enlisted in table 3.

With regard to age of female sugarcane cutters, a higher percentage of them were found in the age group 31-38 yrs followed by 39-45 yrs. A large strata of female sugarcane cutters were undergoing hysterectomy in between 22-38 yrs age range, which are very critical and sensitive yrs of life influencing their overall health at higher risk.

It was seen that almost all female sugarcane cutters reported that they find various physical problems like body ache, knee pain, cramps in legs, skin dryness, weight loss after undergoing hysterectomy. While with regard to emotional

problems, expressed a insomnia, uneasy feeling and nervousness while working. A very high percentage of them expressed irritation (50%), aggression (92.50%) in their day to day life due to heavy burden of work and health issues they undergo.

More than 75 percent of them reported problem of hot flushes, swinging moods. They started these problems after undergoing hysterectomy.

It can be said that the large strata of the female sugarcane cutters community suffer from various physical and emotional problems due to unawareness and lack of knowledge of future ill effects of the hysterectomy.

**Table 4:** Correlation between selected aspects of reproductive and general health issues of female sugarcane cutters and their background variables

Background of variables of female sugarcane cutters	No of general health problems		No of reproductive health problems		Overall (n=80)	
	Undergone hysterectomy (n=40)	Not undergone hysterectomy (n=40)	Undergone hysterectomy (n=40)	Not undergone hysterectomy (n=40)	General Health Problems	Reproductive health problems
Age	0.37**	0.09 <sup>NS</sup>	0	-0.11 <sup>NS</sup>	0.01 <sup>NS</sup>	-0.03 <sup>NS</sup>
Type of Family	-0.04 <sup>NS</sup>	0.13 <sup>NS</sup>	0	0.31 <sup>NS</sup>	0.11 <sup>NS</sup>	0.06 <sup>NS</sup>
Education	0.08 <sup>NS</sup>	0.02 <sup>NS</sup>	0	-0.02 <sup>NS</sup>	0.03 <sup>NS</sup>	0.16 <sup>NS</sup>
Age at menarche	-0.15 <sup>NS</sup>	0.13 <sup>NS</sup>	0	0.07 <sup>NS</sup>	0.06 <sup>NS</sup>	-0.007 <sup>NS</sup>
Age at marriage	0.12 <sup>NS</sup>	-0.18 <sup>NS</sup>	0	0.15 <sup>NS</sup>	0.02 <sup>NS</sup>	0.18*
Age of starting work	-0.09 <sup>NS</sup>	0.10 <sup>NS</sup>	0	-0.29*	-0.01 <sup>NS</sup>	-0.18*
Age at hysterectomy	-0.23*	0	0	0	0.09 <sup>NS</sup>	-0.68*
Family monthly income	0.02 <sup>NS</sup>	0.07 <sup>NS</sup>	0	0.16 <sup>NS</sup>	-0.11 <sup>NS</sup>	0.00
Age at first pregnancy	0.01 <sup>NS</sup>	0.16 <sup>NS</sup>	0	0.09 <sup>NS</sup>	0.05 <sup>NS</sup>	0.007 <sup>NS</sup>

\* $p < 0.05$  level \*\* $p < 0.01$  level NS-Non-Significant

Table 4 shows correlation between selected aspects of reproductive and general health issues of female sugarcane cutters and their background variables.

It was found that general health problems of the female sugarcane cutters, who had undergone hysterectomy had no correlation with various background variables except their chronological age and age at hysterectomy done. It indicated that highly significant correlation was found between the age of the respondents and increase in no of health problems.

It was seen that there was inverse correlation between the incidence of general health problems and their age of hysterectomy. It reveals that the selected female sugarcane cutters who had undergone hysterectomy at earlier age, they had more problems and vice versa.

The correlation between reproductive health problems occurred in female sugaane cutters who had not undergone hysterectomy showed negative significant correlation with their age of starting sugarcane cutting work indicating lesser the age of starting sugarcane cutting, more frequency of reproductive health problems.

When the overall reproductive health problems were studied for findings correlation between their background variables it was noted that age at marriage, age of starting cane cutting work and age at hysterectomy were negatively correlated with frequency of reproductive health problems occurred. It clearly depicted that earlier the age of marriage, starting cane work in field and doing hysterectomy, the reproductive health issues faced by female sugarcane cutters were more.

**Conclusion**

The research findings highlight the intricate relationship between the occupation of sugarcane cutting and the

reproductive and general health of female sugarcane cutters in Beed district. Migrant cane cutters especially women are most vulnerable and continue to suffer from a number of health and security risks. The vulnerable working conditions and demand of hard labour work affects the health of female sugarcane cutters. The study throw a spotlight to reveal a range of health hazards and social vulnerability in migrants' life. It can be said that due to poor diet, no health care, unhygienic conditions, poverty, inaccessibility to medical facilities etc; these women were facing many health issues and still they had to continue the arduous work of sugar cane cutting, irrespective of their classification as they had undergone hysterectomy or not. Long working hours, exposure to harsh weather conditions and inadequate breaks contribute to physical stress and fatigue, potentially impacting reproductive health. Poor sanitation and hygiene in the workplace increase the risk of reproductive infections and other health issues. The large strata of the female sugarcane cutters community is suffering due to unawareness and lack of knowledge of future ill effects of the hysterectomy.

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