

# Self-reported menopausal symptoms among postmenopausal women- A cross-sectional study in an urban slum of Odisha, India

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## Abstract:

**Introduction:** Women live more than one-third of their life in their menopausal period. Syndrome of the psychological, physical as well as vasomotor together with sexual problems is common in this age. In Indian scenario, menopausal health need is a priority among slum women.

**Objective:** *To identify the commonly reported menopausal symptoms alongside linked threats to urban slum women.*

**Methods:** *The study has been taken based upon a cross-sectional population conducted among 104 postmenopausal women in an urban slum during September and October 2019. Women who had menopause more than 12 months were inducted in the study. Data have been collected by using predesigned and pretested schedule and tested upon the modified Menopause Rating Scale (MRS) . Data analysis has been conducted by means of SPSS version 20 software.*

**Results:** *In this study mean age was  $50.92 \pm 3.2$  years, among them all were Hindu, 75% belonged to general caste and 50% had nuclear family. The age group of  $47.29 \pm 2.98$  years is considered for menopause. The most frequent symptom described was joint / muscular discomfort by 94.2% women, followed by irritability, anxiety, and corporeal as well as mental exhaustion (92.3%). Hot flushes were reported by 63.5% respondents. Most of the participants (61.5%) reported moderate symptoms followed by mild (19.2%). Physical activity was low among 63.5% participants. MRS score was significantly higher among women more than 50 years of age, literate women, middle socioeconomic group, women who had attained menopause after 50 years, who had attained menopause naturally, exposed to second hand smoke and women with comorbidities ( $P < 0.05$ ).*

**Conclusion:** *The occurrence of menopausal indication is high and interventions should be targeted to reduce these symptoms.*

**Key Words:** *Menopause, Climacteric period, MRS*

## 1. INTRODUCTION:

A woman's entire life is full of drastic physical as well as psychological ups and downs appeared in menarche and menopausal period. Though menarche considered as the beginning of the reproductive age, menopause brings end to the reproductive capacity of a woman. Menopause occurs when ovaries stop functioning that resulting continual amenorrhea<sup>1</sup> and according to World Health Organization, one year of amenorrhea only can ratify of natural menopause without any pathological reason.<sup>2</sup> Surgery, chemotherapy, or radiation are also the causes of menopause.<sup>3</sup> Now women survive more than one-third of their life in their menopausal period attributed to increased life expectancy<sup>4</sup> and in the upcoming years, worldwide approximate 1.2 billion women are going to reach in their menopausal period by 2030.<sup>5</sup>

Psychological, corporeal, and vasomotor issues along with sexual dysfunction are common in this age.<sup>6</sup> Hot flushes, excessive sweating, sleep disturbance of sleep pattern, drowsiness and depression are complained by 50-80% of women.<sup>3</sup> Due to hormonal deficiency the risk of age related diseases are very commonly seen in women postmenopausal period . The diseases like osteoporosis, heart related ailment, blood pressure, low metabolism, and breast cancer increases in postmenopausal period. Various types' socio-psychological issues are also common in this stage such as feeling isolated & neglected, loneliness, forgetfulness, madness, irritation, aggression etc.<sup>7</sup>

In Indian scenario, menopausal health need is a priority among slum women and continuous efforts are necessary to educate and make these women aware of these symptoms. It will help to prevent from the diseases related to these symptoms and if required they can take proper medical treatment.<sup>8</sup> By keeping these things in mind this study was conducted with postmenopausal women in an urban slum of Bhubaneswar city with the objective to find out the commonly reported menopausal symptoms and related health issues among urban slum and small town women.

## 2. MATERIALS AND METHODS

The undergoing study has been go along with cross-sectional in nature and surveyed among postmenopausal women of an urban slum of Bhubaneswar, Odisha during September and October 2019. Women who had menopause more than 12 months and they are 60 years old were involved in the current study by simple random sampling technique. Sick and terminally ill women were kept out from the study. The study code of conduct was validated by Institutional Ethics Committee. The size of sample for calculation was 104 by taking prevalence rate of hot flushes as 81.8% from a previous study by Joseph et al.<sup>9</sup> A total of 206 women were contacted by door to door survey to meet the required sample size. Modified Menopause Rating Scale (MRS) has been used to as the pretested, well defined interview sessions was organised to assess the socio demographic profile, reproductive history, lifestyle pattern including physical activity, diet, tobacco, alcohol use and menopausal symptoms. To evaluate the socioeconomic status of the participants BG Prasad scale for urban areas was applied.<sup>10</sup>

Menopause rating scale (MRS) depends upon a questionnaire as a basis for evaluate menopausal symptoms. MRS is a technique which is self- administered for validating scale and has been used in many studies, to evaluate the acuteness of menopausal symptoms.<sup>11</sup> In the MRS there are 11 components and is allocated into three sub scales: Somatic- high body temperature, heart uneasiness/palpitation, sleep difficulty and joint discomfort. Psychological- low feel, mood swing, stress, anxiety and physical tiredness and mental fatigue. Urological- sexual dysfunction, bladder distress and dry vagina. Every indication is a menopausal symptom which is graded on a 5- point Likert scale with a minimum count of 0 and maximum of 4. Every symptom is graded from 0 to 4 as “no symptom,” “mild symptom,” “moderate symptom,” and “severe symptom,” and “very severe symptom”. The English MRS questionnaire translated into the vernacular Odia language. After taking written informed consent they were asked about any symptoms within 1 month to measure its severity.

The collected data analysed by using SPSS type 20 software. Chi-squared test, Unpaired T test, ANOVA test and Pearson co-efficient of connection were used for statistical examination.

### 3. RESULTS

The current study comprises, the average age of the participants have been  $50.92 \pm 3.2$  years ranging from 46-59 years.

Table 1: profile of the Socio-demographic participants ( $n = 104$ )

Variable	Number (%)
<b>Age</b>	
45-50	<b>56 (53.8)</b>
50-55	<b>36 (34.6)</b>
55-60	<b>12 (11.6)</b>
<b>Religion</b>	
Hindu	<b>104 (100)</b>
<b>Caste</b>	
General	<b>78 (75)</b>
SC	<b>26 (25)</b>
<b>Type of family</b>	
Joint	<b>52(50)</b>
Nuclear	<b>52(50)</b>
<b>Marital Status</b>	

Married	<b>82 (78.8)</b>
Widow	<b>22 (21.2)</b>
<b>Education</b>	
Primary (up to 7th std.)	<b>68 (65.6)</b>
Secondary (8th to 10th std.)	<b>8 (7.7)</b>
Higher Secondary(12th)	<b>4 (3.8)</b>
No Schooling	<b>24 (23.5)</b>
<b>Occupation</b>	
Housewife/ Home maker	<b>76 (73.1)</b>
Wage earner	<b>16 (15.4)</b>
Private Job	<b>02 (1.9)</b>
Others	<b>10 (9.6)</b>
<b>Socio-economic status</b>	
Upper Class	<b>10 (9.6)</b>
Middle Class	<b>94 (90.4)</b>

Majority, 53.8% have been in the age segment of 45-50 years, all sample has been included from Hindu, 75% belonged to general caste and 50% had nuclear family. Majority of the participants were married (78.8%) and 21.2% were widow. The economic status was categorized based on per capita monthly income as per modified BG Prasad socioeconomic classification scale (2019).<sup>10</sup> In this study 9.6% of the sample size belonged to upper class, 50% are taken from upper-middle class, 38.5% to middle and only 1.9% to lower-middle socioeconomic background (Table 1).

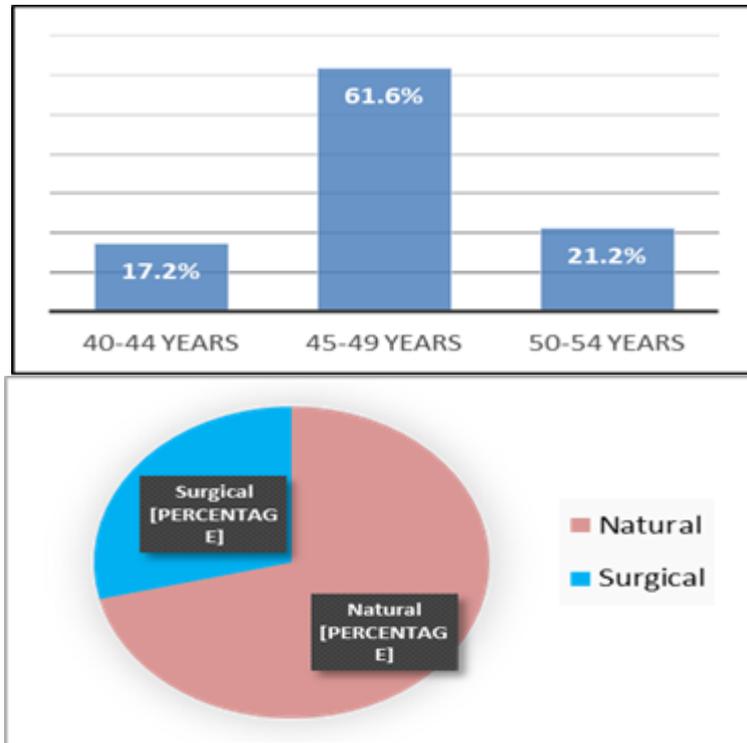
Table 2: Reproductive and Menstrual Characteristics

<b>Characteristics</b>	<b>Number (%)</b>
<b>Age of Menarche (years)</b>	
9-11	<b>4 (3.8)</b>
12-14	<b>80 (76.9)</b>
15 & above	<b>20 (19.3)</b>
<b>Age of Marriage (years)</b>	
12-15	<b>16 (15.3)</b>
16-18	<b>66 (63.5)</b>
19 & above	<b>22 (21.2)</b>
<b>Number of Child</b>	
No child	<b>4 (3.8)</b>
1 or 2 children	<b>46 (44.2)</b>
More than 2	<b>54 (52)</b>
<b>Miscarriage/ Clinical abortion</b>	
Yes	<b>54 (51.9)</b>
No	<b>48 (46.2)</b>
<b>Mode of delivery</b>	
Normal	<b>88 (84.6)</b>
Caesarean section	<b>12 (11.5)</b>

Out of 104 women interviewed, 76.9% had menarche between 12–14 years of age and the average age of menarche was  $13.2 \pm 1.3$  years. The age of matrimonial alliance for most (63.46%) was in between 16–18 years and the normal age of marriage was  $17.1 \pm 2.3$  years.

The age of 1<sup>st</sup> pregnancy for majority of the participants was 42.3% (n=44) at 18-19 years. In this study 88.5% participants had regular menstruation and only 28.8% of women had any complication during their periods like abdomen cramps (26.9%). Most of the respondents said that they did not experience any complication during their pregnancy (88.5%) and child delivery (80.8%) (Table 2).

Figure-1: Age at Attaining Menopause Figure-2: Types of Menopause



The average age of menopause was fall in  $47.29 \pm 2.98$  years range and the age of menopause for maximum women (61.6%) was between the age of 45-49 years. (Figure-1). Most of the women (71.2%) of postmenopausal women were having menopause naturally. (Figure-2)

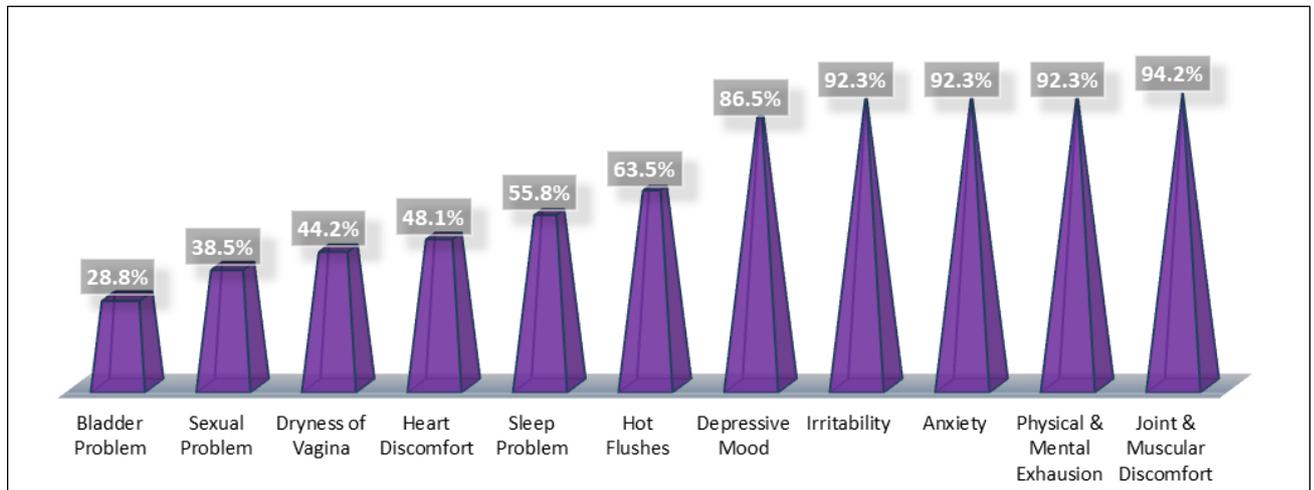
A small proportion of women (11.5%) were taking vegetarian food in their regular diet and majority (88.5%) had mixed diet. 67.3% women were not taking fruits or taking rarely in a typical week and 25% consume only 1–2 servings/week which is inadequate as per WHO recommendation of 2–3 servings/day. Those who were taking mixed diet, 73.1% of them take nonveg items 2-3days in a week and 55.8% participants were taking fish. Most of the respondents (65.4%) were taking outside food more than three days in a week. In this study 90.4% participants were drinking 3-4 litres water per day and the average water intake of the participants was  $3.23 \pm 0.61$  litres per day. Among them 80.8% of participants was taking 1-2 cups tea daily. None of the participants were doing regular exercise or walking, only 36.5% participants were doing regular moderate household activity. Tobacco chewing was found among 42.3%, exposure to passive smoking was 73.1% and none of them had never used alcohol. In this study, a major part of the participants had (65.4%) one or more morbid conditions. Most common problems expressed were as follows: Hypertension (26.8%), Diabetes (11.5%) and in others problems (32.6%) like generalized weakness, acidity knee pain, and gastritis. Among them 36.5% were not taking regular medication. This study showed that the average sleeping hours of the participants was  $5.56 \pm 0.83$  hours per night.

Table 3: Menopausal symptoms and Severity according to Menopausal Rating Scale(MRS)

Menopausal	No	of	No sign	Mild	Moderate	Severe
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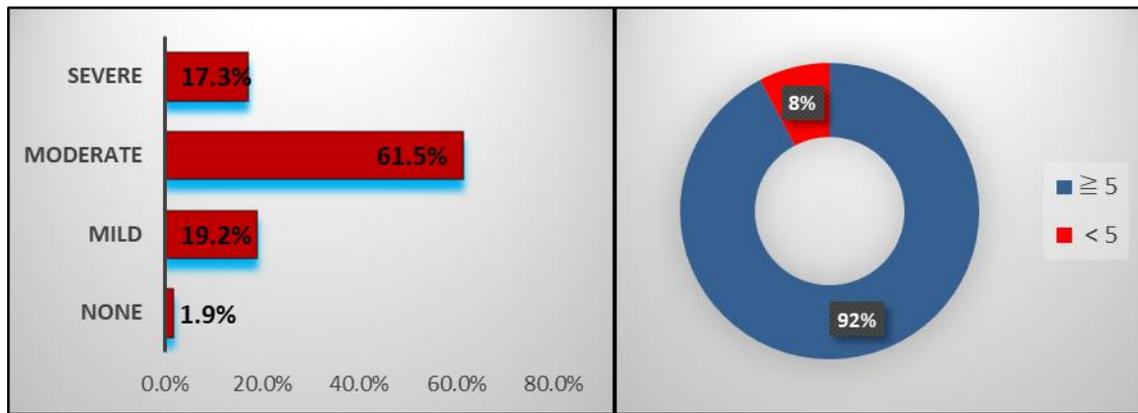
Symptoms	Participants				
Hot Flashes	66(63.5%)	38(36.5%)	16(15.4%)	48(46.2%)	2(1.9%)
Heart Discomfort	50(48.1%)	54(51.9%)	30(28.8%)	18(17.3%)	2(1.9%)
Sleep Problems	58(55.8%)	46(44.2%)	38(36.5%)	20(19.2%)	0
Depressive mood	90(86.5%)	14(13.5%)	54(51.9%)	36(34.6%)	0
Irritability	96(92.3%)	8(7.7%)	46(44.2%)	50(48.1%)	0
Anxiety	96(92.3%)	8(7.7%)	54(51.9%)	40(38.5%)	2(1.9%)
Physical & Mental Exhaustion	96(92.3%)	8(7.7%)	56(53.8%)	40(38.5%)	0
Sexual Problems	40(38.5%)	64(61.5%)	22(21.2%)	18(17.3%)	0
Bladder Problems	30(28.8%)	74(71.2%)	22(21.2%)	8(7.7%)	0
Dryness of Vagina	46(44.2%)	58(55.8%)	28(26.9%)	18(17.3%)	0
Joint & Muscular Pain	98(94.2%)	6(5.8%)	8(7.7%)	50(48.1%)	40(38.5%)

Figure-3: Menopausal Symptoms



The most normal symptom was joint and muscular discomfort has been reported by 94.2% women, that all lead by irritability, anxiety, physical and mental exhaustion (92.3%). Hot flashes were reported by 63.5% respondents. (Table 3 & Figure-3)

Figure-4: MRS scores of Menopausal Symptoms Figure-5: Frequency of Symptoms



Majority of women (61.5%) reported moderate symptoms followed by mild (19.2%). (Figure-4) Most of the participants (92.3%) had five and more than five menopausal symptoms. (Figure-5) The mean score of menopausal symptoms was  $11.58 \pm 3.98$  by Menopause Rating Scale. However a significant association was found among menopausal symptoms and educational status of participants with the mean number of symptoms increasing with increasing educational status. MRS score was significantly higher among literate women ( $p= 0.000$ ).

Table 4: Factors associated with Menopausal Symptoms

Factors	Total Participants	Mean MRS Score	P Value
Age (in years)			
45-50	56 (53.8%)	$10.50 \pm 4.01$	0.007
50-55	36 (34.6%)	$13.11 \pm 3.48$	
55-60	12 (11.6%)	$12.00 \pm 3.95$	
Education			
Illiterate	24 (23.1%)	$9.00 \pm 3.20$	0.000
Literate	80 (76.9%)	$12.35 \pm 3.88$	
Occupation			
Housewife	76 (73.1%)	$11.82 \pm 4.16$	0.32
Others	28 (26.9%)	$10.93 \pm 3.43$	
Socio-Economic Status			
Upper Class	10 (9.6%)	$7.60 \pm 4.19$	0.001
Middle Class	94 (90.4%)	$12.00 \pm 3.74$	
Age of attaining menopause			
40-45	18 (17.2%)	$7.56 \pm 3.94$	0.000
45-50	64 (61.6%)	$11.66 \pm 3.47$	
50-55	22 (21.2%)	$14.64 \pm 2.32$	
Types of Menopause			

Natural	74 (71.2%)	12.22 ± 3.75	0.009
Surgical	30 (28.8%)	10.00 ± 4.15	
Type of diet			
Veg	12 (11.5%)	10.83 ± 2.04	0.49
Mixed	92 (88.5%)	11.67 ± 4.17	
Tobacco use			
Yes	44 (42.3)	12.00 ± 3.61	0.356
No	60 (57.7)	11.27 ± 4.24	
Exposure to second hand smoke			
Yes	76 (73.1)	12.42 ± 3.74	0.000
No	28 (26.9)	9.29 ± 3.76	
Comorbidity			
Present	68 (65.4%)	12.26 ± 3.89	0.01
Absent	36 (34.6%)	10.28 ± 3.88	

Total score in menopausal rating scale was establish to be considerably higher among women more than 50 years of age, literate women, middle socioeconomic group, women who had attained menopause after 50 years, among those who had attained menopause naturally, those exposed to second hand smoke and women with comorbidities (P<0.05).In our study, there was noteworthy positive correlation found between age of attaining menopause and MRS score(r=0.548 P=0.000) (Table 4).

#### 4. DISCUSSION

Ageing is an unavoidable process which is associated with many physical and psychological condition. Menopause is one of among these biological event for every women. The age of menopause according to Indian Menopause Society (IMS) in India is 47.5 years.<sup>12</sup>In our learning the average age of menopause falls in the range of 47.29 ± 2.98 years, which is similar to their findings and also similar to various studies of India.

Mean age of women attaining menopause in various studies of India.

Studies	Mean age at attaining Menopause	Study Area
Present Study	47.29 ± 2.98 Years	Slum Area of Bhubaneswar, Odisha
Kaulagekar <sup>13</sup> (2011)	45.8 ± 4.3 Years	Urban Area of Pune, Maharashtra
Satpathy <sup>14</sup> (2016)	43.94 ± 5.03 Years	Rural area of Western Odisha
Joseph <i>et al.</i> <sup>15</sup> (2017)	45.69 ± 4.35 Years	Hilly Area, Idukki, Kerala
Khatoonet <i>al.</i> <sup>16</sup> (2018)	50.33 ± 5.26 Years	Urban Area of Lucknow, UP

The most frequent symptom of our study was joint as well as muscular pain (94.2%). This finding was similar with many other studies<sup>9,14,16,17</sup> where the same problem was found to be prevalent. In a study of western Odisha by Satpathy and Joseph *et al.* also found joint and muscular pain as the predominant symptom. An important finding of our study was 38.5% postmenopausal women reporting that they had severe symptoms of joint and muscular pain. One more interesting finding was the low frequency of sexual and urogenital symptoms among postmenopausal women. Only 38.5% and 28.8% of women reported about their sexual and urogenital symptoms. It may be due to our societal norm that women should not clearly discuss about their sexual issues. Thus, our findings are associated with previous studies.<sup>18,19</sup> It was observed that the prevalence of menopausal symptoms was high, and the harshness of these symptoms been moderate to mild in the present study. This finding was contradictory with the survey by Nisar *et al.* where most women reported mild symptoms.<sup>20</sup>

In current research, there was noteworthy difference between menopausal symptoms and social demographic factors like age, education and status (Table 4). Age between 50-55 years the menopausal symptoms were high among the postmenopausal women ( $P=0.007$ ). This result was different from the study by Joseph *et al.*<sup>9</sup> that there was no association between menopausal symptoms and age. But the same study found that the score of menopausal symptoms were highly significant among literate women, which was analogous to our learning ( $P=.000$ ). In a prominent study by Lee *et al.*<sup>21</sup> shown that low socio-economic status could be a factor for menopausal symptoms. Our study also agreed with the result that middle class postmenopausal women had significantly high MRS score ( $P=0.001$ ).

In our observation, there was important positive correlation found in the age of attaining menopause and MRS count ( $r=0.548$ ,  $P=0.000$ ). As the age of menopause was increasing the menopausal symptoms were increasing. Comparison among the average score of menopausal symptoms and different age of attaining menopause found significant difference ( $P=0.000$ ). Another important finding of our study was MRS score was significantly higher among women with natural menopause ( $P=0.009$ ). This may be due to treatment with hormonal therapy among women with surgical menopause. In this study most of the participants (92.3%) had five and more than five menopausal symptoms. This finding was not related to a study by Kaulagekar.<sup>13</sup>

There was no important difference found flanked by symptoms of menopause and types of diet like vegetarian and non-vegetarian food. ( $P=.49$ ) A study by Yanikkerem E *et al.* said that different culture, food and life style played an major role in the prevalence of menopausal symptoms.<sup>22</sup> According to an Australian study<sup>23</sup> finding physically dynamic women have less menopausal complication than have non-active women. In our study, we could not compare as all women were taking low fruits and vegetables and were not physically active. A cross-sectional study by Khatoon *et al.*<sup>18</sup> said that sedentary lifestyle and poor nutritional status must be reasons of increasing menopausal symptoms among women. In our study, majority of postmenopausal women in our study had sedentary lifestyle and poor dietary habit like low fruits and vegetable intake and taking outside food more than three days in a week. MRS score of the postmenopausal women was significantly high among women with comorbidity ( $P=0.01$ ).

## 5. CONCLUSION

Menopausal symptoms and high MRS score was a matter of concern among slum women. Joint and muscular discomfort and psychological symptoms were the predominant menopausal symptoms in our study. To improve their menopausal health, psychological and physical symptoms can be minimized effectively by health education programs and behaviour change communication activities in the slum. Interventions like encouraging

physical activity, yoga, dietary advice and healthy lifestyle can be practiced to reduce these symptoms.

Financial support and sponsorship: Self-funded

Conflicts of Interest: There are no conflicts of interest.

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