Knowledge regarding Menopausal Symptoms & its Association with Select Sociodemographic Variables among Menopausal Women in a Selected Urban Community of Lucknow

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Abstract: _Background: Menopause is the state when women stop menstruating naturally for consecutive 12 months. The health issues related to menopause are increasing among women of menopausal age as the life expectancy is increasing along with better advanced medical care. Method: A cross sectional study was conducted to assess the knowledge regarding menopausal symptoms and its association with select sociodemographic variables among menopausal women in Alambagh area of Lucknow city. A descriptive cross sectional design was used and data was collected by survey approach; a total of 50 samples were selected by two way sampling technique and data was collected by using structured questionnaire. Results: The findings of study revealed the mean age of menopause to be ± 44.8 years. Majority (68%) had poor knowledge regarding menopausal symptoms. It was also found out that major source of information regarding menopausal symptoms were family members and the most common menopausal symptoms were joint pain (56%), hot flashes (48%), insomnia (44%) and low mood (40%).Less common symptoms were headache, frequent urination, vaginal dryness, painful sex, night sweats and chest pain. Lesser symptoms were reported by women who had attained early menarche, late menopause and those who were consuming vegetarian diet and this was statistically found significant._

Keywords: Menopause, menopausal symptoms, knowledge,

1. Introduction

Menopause is an unspoken aspect of a women's life and the majority of health issues begin with menopause in a women's life. Average age of menopause is 47.5 years in Indian women with an average life expectancy of 71 years [1]Menopause is defined as the time when there have been no menstrual periods for 12 consecutive months and no other biological or physiological cause can be identified [2] [3]It is the end of fertility, the end of the childbearing years. A woman may still, however, be able to become pregnant unless 12 consecutive months have passed without a period.

With the transition of life to ageing, menopause brings many changes in a woman's body. As the estrogen level decreases in the body, it starts its mechanism to cope up with these changes. The hormone changes in the woman's body causes many symptoms and these symptoms are hot flashes, night sweats, mood swings, joint pain, headache, excessive crying, insomnia, dyspareunia, frequent micturation , vaginal dryness etc [4]There are about 37.5 million women reaching or currently at menopause worldwide. The average age of menopause is 51 years; however there is a wide age distribution that ranges from 40 years to 58 years. [5]

India has a large population, which has already crossed the 1 billion mark with 71 million people over 60 years of age and the number of menopausal women about 43 million. [6] Projected figures in 2026 have estimated the population in India will be 1.4 billion, people over 60 years 173 million, and the menopausal population 103 million. [6]

2. Review of Literature

Though much has been deliberated on reproductive age of women, the literature related to menopause which is the transition phase in a women's life is limited.

Classic symptoms of menopause are well known colloquially but there are also important systemic effects that impact wellness taking place during menopausal transition into the post-menopausal period. Commonly symptoms of menopause can be clubbed into **Cardiovascular symptoms** like chest pain, palpitations, **Urogenital tract symptoms** like vaginal dryness, Dyspareunia, painful micturation frequent micturation**, Vasomotor symptoms** like hot flashes & night sweats, **Physical symptoms** like joint pain, headache & **Psychological symptoms** like low mood, insomnia and excessive crying [7]

A cross sectional study was done by Ensieh Noroozi et.al (2013) to assess the knowledge and attitudes of non-menopausal women. Stratified, cluster sampling procedure and probability proportional sampling technique was used; data collected by a constructed questionnaire, The majority of subjects (64.8%) evaluated their economic situation as moderate. 73.2% of the subjects had previously acquired information about menopause, and the greatest sources of

information in this field were friends and acquaintances (37%).60.8% had moderate knowledge and only 0.8% had weak knowledge. 81.5% women had positive attitude .The Pearson correlation test showed that there is a meaningful relation between knowledge and attitude scores of people and variables of economic status and education level ($P < 0.001$. Average knowledge score in employed women is meaningfully higher than in housewives ($P < 0.001$). [8]

A cross sectional study was conducted in Tamil nadu by G Ganitha et.al to assess the age of menopause and menopausal symptoms among women in rural area. Simple random sampling technique was used and data was collected by survey method using a structured questionnaire. Total of 500 women were taken for the study. The study showed that mean age of menopause was ±45.75 years. The study also revealed that 87 % women had menopausal symptoms and the common symptoms were psychosomatic symptoms (78%) like mood swings, excessive crying. [9]

Monika Satpathi et.al (2016) studied menopausal symptoms .Research design was cross sectional approach was interview technique using pre-tested and pre-designed questionnaires. In the study mean age of menopause was 44.82 and median 45 years. It reveals varying nature of symptoms with age and vasomotor symptoms being more prevalent with lesser psychological complaints in this region. 60% of women were suffering with common problems of menopause i.e. hot flashes (77%), joint pain (60%), body pain (62%), and increased weight (69%). [10]

A cross-sectional descriptive survey design was conducted by Lt Col Geetha R, Lt Col Laxmi Priya Parida(2013) to assess prevalence of menopausal problems and the strategies adopted by women to prevent them. A total of 100 samples were studied. Information was collected through structured interview schedule. The mean of menopause was 45.26 years (SD + 3.96). Majority of menopausal women experienced joint and muscular discomfort (86%) and physical and mental exhaustion (81%). [11]

A comparative study was conducted by Luron zuro had found that high intake of plant-based foods was associated with fewer and less severe menopausal symptoms. Sample included older females of Peri- and postmenopausal vegans (Vg: n=123), vegetarians (Veg: n=74), and omnivores (Omnivorous: n=248), aged between 45 to 80. The technique for data collection was by survey method by asking structured questionnaire .The study showed that there was a significant difference between diet groups on physical symptoms, adjusted for age and BMI, $F(2, 390) = 12.83$, $p < 0.001$, $p\eta^2 = 0.062$; pair wise comparisons showed that Vg reported significantly lower severity of symptoms than Omnivorous. There was also a significant difference between diet groups on mental symptoms adjusted for social support and age, $F(2, 440) = 3.52$, $p = 0.030$, $p\eta^2 = 0.016$; pair wise comparisons showed that Veg reported greater severity of mental symptoms than Vg. A vegan diet may benefit women who seek a natural menopausal therapy and are willing to modify their dietary choices.

Problem definition

A descriptive cross sectional study to assess knowledge regarding menopausal symptoms and its association with select sociodemographic variables among menopausal women in a selected urban community of Lucknow.

The objectives of the study were as follows:
1) To assess the knowledge of menopausal women regarding menopausal symptoms.
2) To find relationship if any among knowledge & select sociodemographic variables.

3. Methodology

A cross sectional descriptive approach was used in this study conducted in a selected community of Lucknow, Uttar Pradesh. Fifty menopausal women (age group 40 -55yrs), willing to participate in the study, were selected by two way sampling method. As the urban community consisted of different stratas of population with distinct sociodemographic profile, proportionate stratified sampling was used to select proportionate sample number from each strata accordingly. Purposive sampling technique was used to conduct home visits in families of selected respondents for the purpose of data collection.

Tool: The research questionnaire used for the study consisted of following sections:

Section A: A (I) -Questionnaire contains items related to socio-demographic profile which included age, religion, marital status, family type, indulgence in any substance use etc. Modified Kuppuswamy's scale 2018 was used which included educational qualification, occupation, and family income.

A (II) -Questionnaire related to gynecological history which included age of menarche, parity, age of menopause and duration of irregular bleeding.

Section B: Questionnaire related to knowledge of women regarding menopausal symptoms which included knowledge questions like meaning of menopause, causes, common age of menopause, common health issues related to menopause, source of information and common symptoms that occurs in a woman during menopause.

4. Results

A total of fifty (50) women who had attained menopause and were of age group 40-55years were included in the study. The demographic data revealed that out of 50 respondents, **9** (18%) were in the age group of 41-45 years, 13 (26%) were in the age group of 46-50 years and 28 (56%) belong to 51-55 years of age group. Majority of respondents were married 36 (72 %) and only 14 (28%) were widow. There was equality in family type and occupation status 25 (50%) were from nuclear family & 25 (50%) from joint family. It was also seen that 28(56%) were following vegetarian diet and 22 (44%) were following non vegetarian diet. Majority of respondents i.e. 22(44%) were educated till intermediate, 17 (34%) were graduate and only 11 (22%) were illiterate.

Table 1: Socio Economic status of the respondents, n=50

S.no.	Socio-Economic Class	Frequency (No & Percentage)
1.	Upper	9 (18)
2.	Lower Middle (III)	13 (26)
3.	Upper Lower (IV)	23 (46)
4.	Lower	5 (10)
	Total	50 (100)

Data in parenthesis denotes percentage

Table 1 shows data distribution of women as per socioeconomic status based on Kuppuswamy scale. Overall 72% of respondents were earning Rs 18953/- to Rs 31591/- & were in middle class and 18% of respondents were from upper middle class earning RS 47266/- to Rs 63178/- where 10% of respondents had income Rs 6323 /- or less than that & falls into lower class .As per Kuppuswamy scale most of the respondents were in overall lower socioeconomic class

Table 2: Distribution of women as per menstrual data, n=50

S.no.	Attributes	Criteria	Freq	%
1.	Onset of menarche	10-12 yrs	7	14
		13-15 yrs	29	58
		16-17 yrs	7	14
		Don't Know	8	16
2.	Parity	Nil	2	4
		One	2	4
		Two	16	32
		>Three	30	60
3.	Age of menopause	41-45 yrs	38	76
		46-50 yrs	12	24

Table 2 depicts the menstrual history of women. Out of 50 women, 7(14%) had attained menarche at the age of 10-12 years, 29 (58%) at 13-15years, 7(14%) at 16-17 years and 8(16%) were not knowing their age of menarche. Table 2 also shows the parity of women. Out of 50 women 30(60%) had more than 3 children and 18(36%) had one to two children and only 2(4%) were nulli para. It also shows age of menopause where maximum respondents 38(76%) had attained menopause at 41-45 years and 12 (24%) at 46-50 years.

Mean menopausal age from the study came out to be ±44.8 years.

Knowledge of women regarding menopausal symptoms
Figure 1 explains the knowledge of women regarding menopausal symptoms. Out of total respondents, 34(68%) had poor knowledge (<9/19 score), 10(20%) had average knowledge score (10-12/19 score) and 6 (12%) had good knowledge score (13-19/19 score).
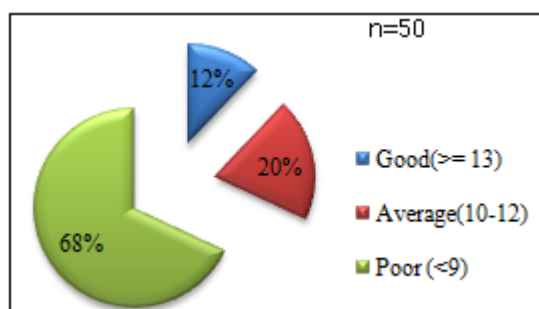
Figure 1: Knowledge score of women regarding menopause

The poor knowledge score were observed across all sociodemographic variables like age, marital status, education, family type, diet and occupation .Table 4 shows knowledge of women as per sociodemographic variables. It shows that knowledge differencces were statistically significant among age group, marital status and education (p<0.001).

Table 3: Knowledge of women as per sociodemographic variables, n=50

Socio Demographic Variables	Attributes	No of respondents	Level of Knowledge Frequency (No & Percentage)			p value
			Poor	Average	Good	
Age	41-45	9	6 (67)	2(20)	1(11)	< 0.001
	46-50	13	8 (62)	3(23)	2(15)	
	51-55	28	20 (71)	5(18)	3(11)	
Marital Status	Married	36	21 (58)	10 (28)	5 (14)	<0.001
	Widow	14	11 (79)	2 (47)	1 (7)	
Education	Illiterate	11	10 (91)	1 (9)	-	<0.001
	5-12	22	15 (68)	3 (14)	4 (18)	
	Graduate & above	17	10 (59)	5 (29)	2 (12)	

Data in parenthesis denotes percentage

Table 4: Knowledge of women regarding cause of menopause, n=50

S.No.	Cause of menopausal symptoms	Freq	%
1.	Illness	15	30
2.	Supernatural cause	19	38
3.	Hormonal changes	16	32

Table 3 depicts the knowledge of women regarding cause of menopause. Only 16 (32%) of respondents attributed menopausal symptom to hormonal change. Majority (68%) believed menopause to be caused by illness and other supernatural reasons like God created, due to low Hb level & long term side effect of child birth etc.

Source of information regarding menopausal symptoms

Figure 2 depicts the source of information regarding menopause. Out of 50 women 29 (58%) viewed family as source of information where 14 (28%) got knowledge from books & media and 7(14%) viewed health care workers as source of information
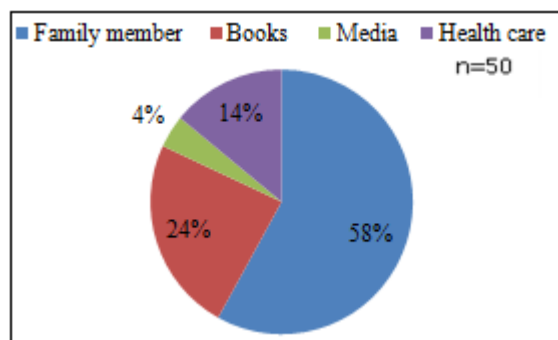
**Figure 2:** Source of knowledge regarding menopausal symptoms

Occurrence of symptoms among women- The study revealed that out of 50respondents, 48(84%) of respondents

had menopausal symptoms and only 8 (16%) did not have any symptoms related to menopause.

Type of symptoms associated with menopause-
Figure 3 depicts distribution of type of symptoms where the most prevalent symptoms associated with menopause among menopausal women were Joint pain (56%), Hot flash (48%)

, Insomnia (44%), Palpitation (42%), Low mood (40%) and the least prevalent symptoms were headache (28%) frequent urination (20%), vaginal dryness (26%), painful sex (20%), night sweats (12%), painful urination(12%) and chest pain (10%).
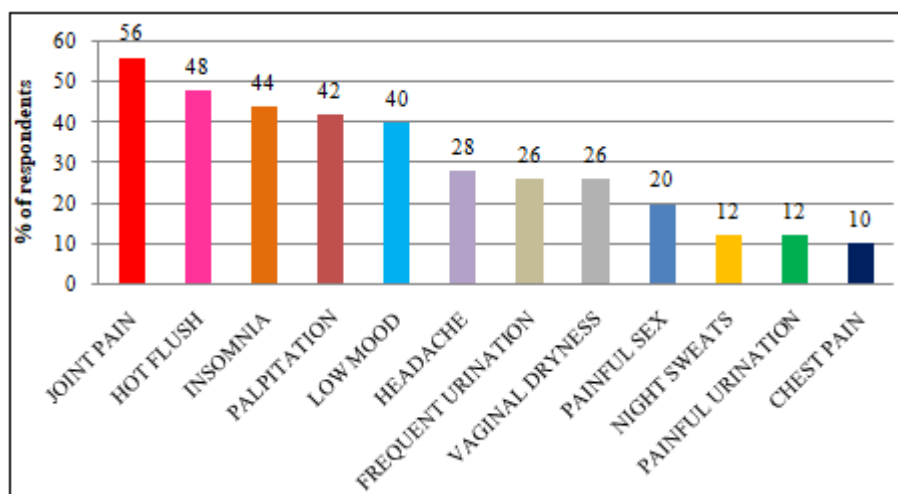
Figure 3: Frequency of occurrence of menopausal symptom

Association of menopausal symptoms with sociodemographic variables
Table 5 depicts the relationship between menopausal symptoms and select sociodemographic variables. The table shows that diet had effect on menopausal symptoms. The respondents consuming vegetarian diet had less symptoms as compared to those consuming non vegetarian diet. 25% respondents with vegetarian diet had more than four menopausal symptoms where as 41% non vegetarian had more than four menopausal symptoms. Fewer symptoms were reported by vegetarian (75%) as compare to non

vegetarian (59%). This finding was statistically significant ($\chi2 = 6.56$ & p <0.02)

Further, as education status increased the number of menopausal complaints increased. The respondents having educational status as graduation and above had more complaints related to menopause as compare to illiterates. A total of 18% illiterate respondents had more complaints as compare to 71% of educated respondents. These findings were also statistically highly significant ($\chi2 = 7.56$ & p <0.002).

Table 5: Relationship between menopausal symptoms with select sociodemographic variables, n=50

Demography	Attributes	Respondents with complaints of >4 Symptoms (multiple symptoms)	Respondents with complaints of < 4 Symptoms (few symptoms)	$\chi2$	p-value
Age	41-45	4 (44)	5 (56)	1.23	0.11 NS
	46-50	4 (31)	9(69)		
	51-55	8 (29)	20(71)		
Marital Status	Married	12 (33)	24(67)	3.26	0.09 NS
	Widow	5(36)	9(64)		
Family Type	Nuclear	7(28)	18(72)	1.11	0.13 NS
	Joint	9(36)	16(64)		
Diet	Veg	7(25)	21(75)	6.56	0.02*
	N/Veg	9(41)	13(59)		
Occupation	Non Working	9(36)	16(64)	3.11	0.08 NS
	Working	8(32)	17(68)		
Education	Illiterate	2(18)	9(82)	7.56	0.002*
	5-12	8(36)	14(64)		
	Graduate & above	6(35)	11(65)		

Data in parenthesis denotes percentage

Association of menopausal symptoms with menstrual history
The women who attained early menopause (41-45 years) had more symptoms as compared to those who attained late menopause (46-50 years). 34 % of respondents who attained menopause in the age 41-45 years had complaints of multiple symptoms as compare to 25% of respondents who attained

menopause at the age of 46-50 years and complaint of same .This finding was statistically significant with $\chi2$ value 9.15 and p value 0.03.

This table also brought out that the women who had late menarche had more multiple menopausal symptoms as compared to the women who had early menarche and

reported lesser multiple symptoms. 43% of respondent who attained menarche at 16-17 years has multiple symptoms as compare to 29% of respondents who attained menarche at 10-12 years. The findings were statistically highly significant with χ^2 value 12.56 and p value 0.001

Table 6: Association of menopausal symptoms with menstrual history

Variable	Attributes	Respondents with multiple symptoms	Respondents with few symptoms	p-value	$\chi2$
		Freq	Freq		
Age of menarche	10-12 yrs	2 (29)	5 (71)	0.001*	12.56
	13-15 yrs	11 (38)	18 (62)		
	16-17 yrs	3 (43)	4 (57)		
	Don't Know	1 (13)	7 (87)		
Age of periods stopped	41-45 yrs	13 (34)	25 (66)	0.03*	9.15
	46-50 yrs	3 (25)	9 (75)		

Data in parenthesis denotes percentage

5. Discussion

This study brought out knowledge of women regarding menopause and menopausal symptoms and relationship of menopausal symptoms with sociodemographic variables.

Mean age of menopause from the study came out to be ±44.8 years which is similar to mean age 46.24 years reported by a study conducted by Akansha Singh et.al in New Delhi (2014) which is almost similar to the cross sectional study conducted by Monika Satpathi (2016) published in IJSR publications, Vol 6 in which mean age of menopause was 44.82 years.

In the present study, majority (68%) menopausal women had poor knowledge regarding menopausal symptoms which is in congruent with the findings of the study carried out by Prof. S Kala Bharthi et.al. The poor knowledge score were observed across all sociodemographic variables like age, marital status, education, family type, diet and occupation. It shows that knowledge findings were statistically significant among age group, marital status and education (p<0.001).

It was also found out that 32 % of respondents attributed menopausal symptoms to be because of hormonal changes & rest 66 % believe it to be due to supernatural reasons like God created & illnesses like decrease in Hb level and long term effect of child birth.

In the study 84% had menopausal symptoms .This resembles to study done in Tamil nadu by I Kannan & G Ganitha where 87% respondent suffered with symptoms related to menopause.

The study also revealed that most prevalent symptoms were joint pain, insomnia and hot flash. The findings were supported by Lt Col Geetha et.al (2013).

The study also showed that dietary pattern had effect on menopausal symptoms. The respondents consuming vegetarian diet had fewer symptoms as compared to those consuming non vegetarian diet. 25% respondents with vegetarian diet had more than four menopausal symptoms where as 41% non vegetarian had more than four menopausal symptoms. Fewer symptoms were reported by vegetarian (75%) as compare to non vegetarian (59%). This finding was statistically significant ($\chi2 = 6.56$ & p <0.02).

Further, as education status increased the number of menopausal complaints increased. The respondents having educational status as graduation and above had more complaints related to menopause as compare to illiterates. A total of 18% illiterate respondents had more complaints as compare to 71% of educated respondents. These findings were also statistically highly significant ($\chi2 = 7.56$ & p <0.002). The reason for this could be that illiterate women may have had very poor knowledge regarding menopause symptoms and may have failed to identify and associate symptoms with menopause.

On further evaluation it was seen that the women who attained early menopause (41-45 years) had more symptoms as compared to those who attained late menopause (46-50 years). 34 % of respondents who attained menopause in the age 41-45 years had complaints of multiple symptoms as compare to 25% of respondents who attained menopause at the age of 46-50 years and complaint of same .This finding was statistically significant with $\chi2$ value 9.15 and p value 0.03.

This study also brought out that the women who had late menarche had more multiple menopausal symptoms as compare to the women who had early menarche and reported lesser multiple symptoms. 43% of respondent who attained menarche at 16-17 years has multiple symptoms as compare to 29% of respondents who attained menarche at 10-12 years. The findings were statistically highly significant with χ^2 value 12.56 and p value 0.001.

The study also brought out that there was a huge felt need of health care workers in this field as only 14% had obtained information from health workers regarding menopause or its symptoms and management. It was also found that very little information on this very common problem was taken from books and media i.e. 28% ; where the major(58%) source of information were female members of the respondents which was similar to the findings of study done at Nigeria by Ibraheem O.M . et.al

6. Recommendations/ Future Scope

Menopausal health demands priority in Indian scenario, reason being rise in population of post menopausal women. As per WHO estimated population of menopausal women by the end of 2018 will be 130 million. So the need to work on menopausal health is much more.

In India, many health programs have been launched for the women in reproductive age group but the post reproductive age of women remains neglected as there are no health programs that caters the post reproductive health needs of the women.

It is clearly understood from the current study that the prevalence of menopausal symptoms is definitely high i.e

84% women had symptoms. There are many misunderstanding about menopausal cause and symptoms among women. The community health nurse working in urban health centre in various capacities can play important role in imparting knowledge regarding menopause to women of community coming to urban health centre.

The roles of community health nurse in educating the menopausal women can be divided into three aspects i.e. for prevention- early diagnosis & health education, for promotion of health- healthy life style and healthy practices related to menopause to the women and for rehabilitation-encouraging healthy coping strategies for menopausal symptoms. A community health nurse should emphasize on menopause during home visits. She can provide medical and non pharmaceutical interventions to the women of the menopausal age. Educational media can be added in clinics for awareness. A community health nurse can organize special women clinics for menopausal women. Health education camps for awareness of all family members can be organized at urban health centre, PHCs , CHCs etc by MPHW, LHV and other support groups.

It is necessary to critically introspect health needs of postmenopausal women and specific components can be incorporated in the National Heath Program. Weekly / monthly / yearly vital statistics being recorded from various urban and rural health centers by community health nurse can sensitize the middle level administration at district level, state level and national level about this issue. Further research studies can be conducted to assess the severity of symptoms and effectiveness of coping strategies. Research studies can be done in different socioeconomic class and in rural and urban area.

A study can be carried out on psycho educational programme for improving attitude and coping. IEC should focus on developing more educational material like videos, pamphlets etc. for display in various health centers both in rural and urban community. Community health nurses along with other members of health team should participate in making educational media more effective to combat the huge knowledge deficit regarding menopause.

7. Conclusion

This study that was undertaken on knowledge regarding menopausal symptoms and its relation with select sociodemographic variables among 40-55 yrs of age group in Alambagh area of Lucknow City. The study revealed that majority of women (68%) had poor knowledge regarding menopausal symptoms and women family members were the major source of information. The study had also brought out that women experience symptoms related to menopause and out of that most common symptoms were joint pain (56%) , Hot flash (48%) , Insomnia (44%) , Palpitation (42%) , Low mood (40%). It also depicts that sociodemographic variables and age of menarche and age of menopause had relation with menopausal symptoms. The also inferred that there was also statistically significant association between onset of menarche, age of attainment of menopause, type of diet and educational status with menopausal symptoms. As the life expectancy of women has increased and they spend their 1/3 rd of their life after menopause. And this topic is unspoken and majority of health programs were for reproductive age group. There is impending need to educate women regarding menopausal symptoms and coping strategies by planned teaching programmed

The role of family members and health care worker is very important regarding providing knowledge for menopause, screening, support facilities, interventions and promoting healthy lifestyle

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