

Knowledge, Attitudes, and Practices Regarding Menopause Among Female Employees Aged 45 Years Old and Above in a Tertiary Government Hospital

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Background: Studies show that employers and healthcare practitioners should be aware of the difficulties women experience during menopause. Cultural norms and social influences may affect each woman's experience during menopause.

Objective: This study aimed to assess the knowledge, attitudes, and practices regarding menopause among female employees working in a tertiary government hospital.

Methods: This is a descriptive, observational, cross-sectional research design, that used a validated and reliable questionnaire.

Results: The mean age of respondents was 51.75±5.06 years. Majority of the respondents belong to the Nursing Department, followed by the Allied Health (30%), Medical (21%) and Administrative Department (9%). Overall, they had a High Level of Knowledge (Mean = 7.59), a Strongly Evident Attitude (Mean = 3.85), and Highly Manifested Practices (Mean=3.85) regarding menopause.

Conclusion: With the knowledge that the respondents have on menopause, the attitude that these women have become is strongly evident. Women who have adequate knowledge on menopause are able to tolerate its complications with a positive attitude and approach. This knowledge also highly manifested in their practices.

Key words: Knowledge, attitude, practices, menopause

Introduction

Menopause is an unavoidable event in a woman's life. By definition, it is the complete cessation of menses for 12 months or more. It is not just the cessation of menses, but also the depletion of ovarian follicles which leads to a decrease in ovarian hormones. In western countries, the average age of menopause is 51 years old. A recent study cited that the average age of menopause among Filipino women is estimated at 48 years with a life expectancy of 72.¹ With these average ages, it shows that more than one third of a woman's life is spent after menopause.² Women experience hormonal,

physical and emotional changes that may impact their quality of life.³

Many women enter the menopausal stage without having adequate knowledge about the variety of symptoms that they have to deal with. Some may perceive it negatively. Several studies are published regarding awareness of menopause among female employees. A study in the United Kingdom by Beck, et al. (2020)⁴ considered women's experiences in menopause to be significant in their workplace. Issues on menopause among female employees are often never discussed in the workplace as cultural norms may perceive it as offensive to talk about. However, it must be stressed that increasing the awareness about menopause in the workplace may help encourage responsible employers to provide support for their female employees transitioning through menopause, and foster a more positive employment relationship.

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Several studies that investigated women's knowledge and attitude towards menopause have already been published. However, there are not enough studies in the Philippines.⁵ In addition, local interest about menopause in the workplace may be limited due to cultural norms and social influences, which made the topic still taboo to discuss. Considering this lack of information, there is a need to conduct this study to investigate Filipino women's knowledge, attitude, and practices on menopause. Results from this study could be useful for policy makers in helping employers create a more progressive working environment for women transitioning through menopause, and help them address their healthcare needs to improve their quality of life. The results of this study will also guide the OB-Gyne resident physicians in handling and providing quality healthcare services for the perimenopausal or menopausal employees in Davao Regional Medical Center.

General Objective

To investigate knowledge, attitude, and practices regarding menopause among female employees aged 45 years old and above, who are working in a tertiary government hospital (Davao Regional Medical Center).

Specific Objectives

1. To determine the profile of menopausal women in a tertiary government hospital in terms of:
 - 1.1 Age
 - 1.2 Civil status
 - 1.3 Educational attainment
 - 1.4 Category of profession
2. To determine the level of knowledge of the respondents regarding menopause.
3. To determine the attitudes of the respondents regarding menopause.
4. To determine the practices of the respondents regarding menopause.

Methods

Research Design

This study is an observational, cross-sectional research design conducted among female employees

aged 45 years old and above in a tertiary government hospital. The study design used a validated and reliable questionnaire to assess the knowledge, attitude, and practices of the respondents regarding menopause.

Study Location

This study was conducted in a tertiary government hospital in Region XI (Davao Regional Medical Center). The respondents were assigned at the Administrative Office, OB-GYN Ward, Delivery Room, Medical/Surgical Ward, Nursing Supervisor's Office, Pharmacy, Laboratory, or Radiology Office.

Inclusion Criteria

1. The female employees who were 45 years old and above.
2. Female employees were in their menopausal stage and gave their consent to participate in the study.

Exclusion Criteria

1. Women with menopause induced by surgery, chemotherapy or radiation.

Estimated Number of Participants

Sample size computation for this descriptive study was done using Epi Info version 7.1.4.0 with the following assumptions: 1) the total population size of female employees aged 45 years old and above was 148, 2) the outcome, knowledgeable about menopause is 38.5 (Noroozi, et al. 2013)⁶, 3) the desired precision is 5%. A sample size of 106 patients was computed.

The computation of the sample size was as follows:

$$n = \frac{N Z^2 P(1-P)}{d^2 (N-1) + Z^2 P(1-P)}$$

Where n = Sample size with finite population correction

N = Population size

Z = Z statistic for level of confidence

P = Expected proportion (if the prevalence is 20%, $p = 0.2$)
 d = Precision (if the precision is 5%, then $d = 0.05$)

Sampling Design

The study utilized stratified random sampling using random number generator of female employees.

Consent Process

Each respondent who qualified based on the inclusion/exclusion criteria was given a written informed consent form. Only those who gave their written informed consent were included.

Significant Variables and its Operational Definition

A. Independent Variables

Sociodemographic Profile. This referred to the categories that were used to describe the respondents of this study. This included the following:

Age: age in years

Civil Status: Single, Married, Separated, or Widow
Educational Attainment: highest educational attainment achieved and categorized as College Graduate or Postgraduate

Category of Profession: Department in the institution the respondent belonged; whether from the Administrative, Medical, Nursing, or Allied Health Department.

B. Dependent Variables: knowledge, attitude and practices

Study Instrument: The research instrument used consisted of two parts. Part 1 was the Data Collection Form which provided the respondent's profile such as age, civil status, educational attainment, and category of profession). Part 2 was a modified research questionnaire adapted from the study of Varuna Pathak, Neetu Ahirwar, and Shruti Ghate.⁷ This questionnaire was modified with the original

author's permission. This consisted of 10 questions to assess knowledge, 5 questions for attitude, and 5 questions for practices. The modified questionnaire was also translated by the researcher in the local dialect intended for the respondents who cannot understand the English language. In answering the questionnaire for level of Knowledge, a rating was used and the following scale and parameters were assigned as shown in table 1. A 5-Point Likert Scale was used to score and quantify the level of Attitude (Table 2) and Practices (Table 3).

Table 1. Scale and Parameters for Level of Knowledge

Mean Range	Description
8.1 - 10	Very High Level of Knowledge
6.1 - 8.0	High Level of Knowledge
4.1 - 6.0	Moderate Level of Knowledge
2.1 - 4.0	Low Level of Knowledge
0 - 2.0	Very Low Level of Knowledge

Prior to data collection, the questionnaire was validated by a team of 3 experts to check its feasibility and suitability. These experts were chosen based on their expertise on the field. Changes made by the validators were on the vernacular version of the questionnaire which included the dialect version of some medical terms.

Thereafter, it was pretested to 15 to 20 female employees who met the inclusion/exclusion criteria. This was done with the respondents' consent, and was administered during their duty hours in the specific department or area where they are assigned. Investigators ensured privacy, proper safety measures, and social distancing. The respondents for the pilot study were not included in the final sample size for the study. The pilot testing discovered aspects that needed fine-tuning and measured the internal consistency of the items prior to the administration of the questionnaire.

Data Collection Procedures

Upon the approval of the Research Ethics Committee and the Department Chair, a letter of permission to the Medical Center Chief was secured to conduct the research. The Head of the Human Resource and Management section and

Table 2. Scale and parameters for level of attitudes.

Mean Range	Description	Interpretation
4.2 – 5.0	Very Highly	The level of attitude is very highly evident.
3.4 – 4.19	Highly	The level of attitude is strongly evident.
2.6 – 3.39	Moderate	The level of attitude is sometimes evident.
1.8 - 2.59	Poorly	The level of attitude is seldom evident.
1.0 – 1.79	Very Poorly	The level of attitude is not evident.

Table 3. Scale and parameters for level of practices.

Mean Range	Description	Interpretation
4.2 – 5.0	Very Highly	The level of practices towards menopause is very highly manifested.
3.4 – 4.19	Highly	The level of practices towards menopause is highly manifested.
2.6 – 3.39	Moderately	The level of practices towards menopause is moderately manifested.
1.8 – 2.59	Low	The level of practices towards menopause is seldom manifested.
1.0 – 1.79	Very Low	The level of practices towards menopause is not manifested.

the affected Unit Heads also received a copy of this approved letter. A letter of invitation from the Human Resources was also secured to allow the respondents to participate in the research during their duty hours. The researcher attached a detailed protocol for their perusal.

The socio-demographic characteristics like age, civil status, educational attainment, and category of profession were included as data for this study. A consent was given prior to answering the questionnaire. The researcher personally facilitated the data collection.

Upon the approval of the study by the research committee and after the validation and pilot testing of the questionnaire, questionnaires were given to the respondents during their duty hours and depending on their designated area of assignment like administrative office, OB-GYN ward, delivery room, Medical/Surgical ward, nursing supervisor's

office, pharmacy, laboratory, or radiology office. This lasted for about 15-20mins. Proper social distancing and usage of face mask and face shield were strictly observed during the entire duration of the survey. Proper sanitation procedures, such as handwashing and use of alcohol and other sanitizers were done before and after the survey.

Information management and Analysis Software

The data were entered and analyzed using the computer software Epi Info Version 7 and SPSS software version 24.

Analysis Plan

For objective 1, descriptive statistics was used such as mean and standard deviation for age and frequency and percent for Sex, Civil status, education

attainment and profession. For objectives 2-4, scores were expressed in terms of mean and standard deviation.

Data Entry, Editing and Management

The independent variables identified in this study were as follows: age, civil status, educational attainment, and category of profession. The responses of the participants in the socio-demographic profile questionnaire were converted into codes and encoded in the Microsoft Excel. The age was encoded as what the respondents indicated during the survey. For answers for “civil status, “Single” was coded as 1, “Married” was coded as 2, “Separated” was coded as 3, and 4 was coded for Widow. For educational attainment, responses to this category were represented as 1 and 2, which corresponded to “College Graduate” and “Postgraduate”, respectively. For the category of profession, responses to this category were represented as 1,2,3, and 4 which corresponded to the respondents belonging to the “Administrative Department”, “Medical Department”, “Nursing Department”, and “Allied Health Department”, respectively. All data were collated using Microsoft Excel. During the editing of data gathered, missing variables and outliers or those with different representation of the variables which corresponded as numbers were closely monitored.

For the dependent variables, the knowledge, attitude, and practices were assessed. There are ten questions which represented the level of knowledge questionnaire. The correct answer was coded as 1 while the wrong answer was coded as 0. Results were then interpreted as Very High Level of Knowledge, High Level of Knowledge, Moderate Level of Knowledge, Low Level of Knowledge, or Very Low Level of Knowledge.

The questionnaire on attitude had five questions which was answered with Strongly Agree, Agree, Neutral, Disagree, and Strongly Disagree. These answers were coded as 5, 4, 3, 2, 1, respectively, with 1 as lowest and 5 as the highest answer. The results were interpreted as Very Highly Evident, Strongly Evident, Sometimes Evident, Seldom Evident, or Not Evident.

The questionnaire on practices also contained five questions answerable with Always, Very Often,

Often, Sometimes, and Never. These answers were coded as 5, 4, 3, 2, 1, respectively, with 1 as lowest and 5 as the highest answer. The results will then be interpreted as Very Highly Manifested, Highly Manifested, Moderately Manifested, Seldom Manifested, or Not Manifested.

All data collected were gathered in a box and stored in a designated cabinet in the Department of OB-GYNE conference room. This box was labelled as Confidential and will be stored for at least three years following the conclusion of this study. Only the authors had access to the files. After the defined time of storage, all hard copies shredded and properly disposed. The electronic copy of the data was stored in the personal computer of the primary investigator and secured with a password only known to the researcher. Electronic copy of the data will be deleted permanently from electronic files simultaneously with the disposal of the hard copy. Only the final output of this study was saved, distributed, and reproduced for the use of the institution, the department, or for publications and paper presentations.

Bias in Data Collection, Measurement, and Analysis

To address selection bias due to lack of proper randomization, the investigators utilized systematic random sampling in the study. The respondents may have not answered accurately to the best of their knowledge, hence, response bias may also be possible. Measurement bias was unavoidable in this study because the statements do not reflect all information needed in assessing the knowledge, attitude and practices towards menopause. Furthermore, analysis bias was eliminated by analyzing the data regardless of the outcome. Appropriate tool test was also used as well as determining and monitoring the cause of outliers in the study.

Limitations of the Study

This study only assessed the knowledge, attitude, and practices on menopause among female employees 45 years old and above in a tertiary government hospital. The severity of symptoms experienced by these women were not included in this study.

Identifying, Managing and Reporting Adverse Events:

There were no reported adverse events of incidents during the study. At the start of the study, the researcher assumed responsibility for any unpleasant events and incidents that may occur related to the conduct of the research.

Ethical Consideration

To ensure the protection of confidentiality, privacy, safety, and welfare of the research participants, the researchers of this study secured an approval from the Research Ethics Committee of the Davao Regional Medical Center before implementing this research study. An informed consent form was given to the respondents prior to answering the questionnaire. Only respondents who signed the informed consent form were included in the study. No proxy consent was allowed.

Informed Consent Process

The principal investigator discussed the study to the respondent before signing the consent. If there were clarifications, the respondent was free to ask questions to avoid misunderstandings.

The following were emphasized during the consent process:

1. Their participation was voluntary. It was their prerogative to participate or not. Whether they participate or not, the services that they will receive in this institution will continue.
2. The respondents may choose to refuse or withdraw from their participation if they feel uncomfortable during the study.
3. There was no compensation or reimbursement of expenses for the participants.
4. The questionnaire was mainly about their knowledge, attitude, and practices regarding menopause and did not include sensitive questions.
5. The participants may choose to skip a question if they do not wish to answer them and proceed to answering the succeeding questions.

6. All the information and data gathered in this study were strictly confidential. Only the researcher and the members of the research committee have access to the collected data information.

Disclosure of Study Objectives, Risks, Benefits, and Procedures

The objectives, significance, benefits and methodology of the study were emphasized and discussed in detail to the respondent. The relevance of their participation and the possible risks (if any) were also discussed.

The study had no direct benefit to the respondents. However, the results of the study were made available to the hospital administration for translation into potential policies

Investigator's Responsibility

The primary investigator conducted the survey and was responsible for the collection of data. The investigator was also responsible for the financial expenses incurred during the conduct of the research. Further, she was responsible for ensuring that the methodology of the approved protocol was implemented correctly, and the research manuscript was completed on time.

The respondents' privacy during the course of the study was an utmost concern. Privacy was given while the respondents were answering the questionnaire. After answering the questionnaire, all the forms were placed in a sealed envelope and kept in a secured file cabinet inside the OBGYN department and labeled as confidential. Only the researcher had the primary access to these data.

Results

A total of 106 respondents were included with a mean age of 51.75 ± 5.06 years old. Based on the results shown in table 4, 10% are single, 81% are married, 4% are separated, and 5% are widowed. One third of the total respondents completed a postgraduate degree. Almost half of the respondents (40%) are from the Nursing Department, followed by the Allied Health Department (30%) and the

Medical Department (21%). Only a few (9%) are from the Administrative Department.

Results in Table 5 reveal a high level of knowledge regarding menopause among all respondents with a mean of 7.59. Of the total number of respondents, the Medical Department has a Very High Level of

Knowledge with a mean of 8.18. The Nursing and Allied Health Department, on the other hand, have a High Level of Knowledge with a mean of 7.48 and 7.72, respectively. However, the results show that the Administrative Department obtained the lowest score with a mean of 6.40.

Table 4. Profile of menopausal women in a tertiary government hospital (N=106).

Variable	Mean (SD)	Frequency (Percent)
1.1 Age		
	51.75 (±5.06)	-
1.2 Civil Status		
Single		11(10.4%)
Married		86(81.1%)
Separated		4(3.8%)
Widow		5(4.7%)
1.3 Educational Attainment		
College graduate		76(71.7%)
Postgraduate		30(28.3%)
1.4 Category of Profession		
Administrative		10(9.4%)
Medical		22(20.8%)
Nursing		42(39.6%)
Allied Health		32(30.2%)

Table 5. Level of knowledge of the respondents regarding menopause (N=106)

Category of Profession	Mean	SD	Interpretation
Administrative	6.40	3.89	High Level of Knowledge
Medical	8.18	2.79	Very High Level of Knowledge
Nursing	7.48	2.36	High Level of Knowledge
Allied Health	7.72	2.39	High Level of Knowledge
Overall	7.59	2.63	High Level of Knowledge

Moreover, of the statements regarding knowledge on menopause, most of the respondents were knowledgeable about the following: lifestyle measures are helpful strategies in alleviating symptoms of menopause, hormone replacement therapy reduces undesirable effects of menopause, and that menopause means loss of fertility. However, they have lower scores on knowledge of menopause as a risk factor for breast cancer and cardiovascular diseases.

Table 6 shows the mean scores for attitude regarding menopause, with an overall mean of 3.85. These findings suggest a positive attitude towards menopause among the respondents. Of the statements on the questionnaire regarding attitude, it is very highly evident to the respondents that menopause is a natural process of aging and

is inevitable. Their attitude that menopause affects sexual life and that it is associated with loss of youthfulness is strongly evident. Meanwhile, their attitude on menopause affecting quality of life is sometimes evident.

Table 7 shows highly manifested practices towards menopause among all the respondents with a mean of 3.85. The practices are highly manifested by the Medical, Nursing, and Allied Health Department, with a mean of 4.08, 3.87, and 4.08, respectively. On the other hand, the practices stated are moderately manifested by the Administrative Department which has a mean of 3.16. These findings suggest that those who have a medical background and consequently, have higher scores on the level of knowledge, are also the ones who highly manifest the practices towards menopause.

Table 6. Level of attitude of the respondents regarding menopause (N=106)

Category of Profession	Mean	SD	Interpretation
Administrative	3.50	0.53	The level of attitude is strongly evident.
Medical	4.10	0.75	The level of attitude is strongly evident.
Nursing	3.92	0.60	The level of attitude is strongly evident.
Allied Health	3.70	0.61	The level of attitude is strongly evident.
Overall	3.85	0.65	The level of attitude is strongly evident.

Table 7. Level of practices of the respondents regarding menopause (N=106).

Category of Profession	Mean	SD	Interpretation
Administrative	3.16	1.23	The level of practices towards menopause is moderately manifested.
Medical	4.08	0.79	The level of practices towards menopause is highly manifested.
Nursing	3.87	0.84	The level of practices towards menopause is highly manifested.
Allied	4.08	0.76	The level of practices towards menopause is highly manifested.
Overall	3.85	0.65	The level of practices towards menopause is highly manifested.

Discussion

Based on the results, the mean age of respondents was 51.75 ± 5.06 years old. The study done by Sultan, et al. (2017)⁸, the mean age was at 48.4 years old, while in another study conducted by Eun Kyung Kwak, et al (2014)⁹, it was 52.06 years old. In the local setting, a study done by Calimbas, et al (2017)¹, in a tertiary government hospital in Luzon, majority of the respondents had menopause at 51 years old, with a mean age of 48.4 ± 3.58 (SD) years.

Results of the study revealed that overall, there was a high level of knowledge (Mean = 7.59) among the respondents. However, among all departments, the Administrative Department had the lowest score with a mean of 6.40. This result can be explained by the fact that women from the Administrative Department are not as exposed to the healthcare setting as compared to other departments. These findings suggest that although the overall result for the level of knowledge regarding menopause is high, those departments who have a medical background can have a much higher score. Current results show that the respondents displayed better knowledge on the symptoms of menopause (84.9%) as compared to other studies. The study of Pathak, et al. (2017)¹⁰ showed that only 32.72% of women have knowledge of menopausal symptoms. Most of the respondents from the study of Pathak were illiterate (55.4%) and belonged to the Modified Prasad's Social Class V (Poor, 59.72%), which most probably explained the low score on knowledge. Another study done by Yasmin, et al. (2009)¹¹ revealed that only 27.8% of the respondents had knowledge of menopause related symptoms. Furthermore, a study done by Nusrat, et al. (2013)¹² also showed a very low percentage of women (15.8%) who knew about the symptoms of menopause. With those studies, it can be inferred that socioeconomic status and educational attainment are important predictors on knowledge about menopause. However, results from the current study showed that profession may also be an important factor on knowledge about menopause, and showed that respondents in the medical field have higher scores. Although overall, there is a high level of knowledge, differences in scores are still noted, with the Administrative Department having the lowest score. A similar study by Taherpour, et al. (2015)¹³ showed that healthcare providers,

who are more knowledgeable on health education, have the most significant role in educating women during menopause.

The level of attitude of the respondents in this study was strongly evident (Mean = 3.85), which means that there is a positive attitude towards menopause. It was noted in the study of Noroozi, et al. (2013)⁶ that 81.5% of women included in their study had a positive attitude towards menopause and only 18.5% had a negative attitude. Conversely, the study of Pathak, et al. (2017)⁷ showed a higher percentage of women (62.29%) with a negative attitude, while only 37.71% had a positive attitude on menopause. Discrepancies on the results of the studies were due to the differences of the respondents' socioeconomic status, educational attainment, and career. Furthermore, based on the same study by Pathak, the knowledge of women with higher education and women who reported a "desirable economic status" was higher and their attitude towards menopause was more positive. In a study by Hamid, et al. (2014)¹⁴, women's attitude towards menopause was mostly positive (60%). This was probably a reflection of the impact of the culture in which women live, and how cultural norms affect the way women perceive and react "positively or negatively" towards menopausal transition or menopause. According to the study, cultural factors affecting attitude include the following: cultural attitudes towards and expectations about the menopause, meanings assigned to menopause, prior health condition, mother's experience of menopause, attitudes toward childrearing and women's roles, marital status/relationships with partners and their attitudes toward symptoms of menopause, social support and the extended family, socioeconomic status, education, career and religious beliefs.¹⁴ In comparison, for the current study, the attitude towards menopause is strongly evident. This positive attitude may be attributed to the respondents' socioeconomic status, education, and career. Their high level of knowledge on menopause also contributed to this positive attitude. Furthermore, a positive attitude toward menopause is also associated with a positive experience of menopause, whereas a negative attitude is associated with a negative experience. Hence, the attitude of women somehow influences their experiences towards menopause.

The results of this study showed that majority of the respondents highly manifested the practices towards menopause (Mean = 3.85). Respondents who very highly manifested sharing of personal experiences on menopause are those women who appreciate peers and counsellors whom they share experiences with, which somehow reduce their vulnerability on the psychological issues associated with menopause. Moreover, a highly manifested practice of seeking consultation, giving a complete history and physical examination for evaluation, and taking treatments for the alleviation of symptoms suggest that they accept and understand the medical implications of menopause and are not taking it for granted. According to the study of Griffiths, et al. (2013)¹⁵, women had a wide range of coping strategies that could help them in managing the onset of menopausal symptoms at work. These include the following: psychological (distraction, making light of matters), social (talking with other women who experienced menopause), informational (reading more to increase knowledge on menopause), practical (double checking work, making notes), organizational (change in working hours, flexible approach to tasks), and lifestyle modification (exercise, sleep, diet). Results of the study of Pathak, et al. (2017)⁷ showed that 34.54% of women have adapted favorable practices towards menopause and 43.63% of them have discussed its symptoms with others. In comparison, among the respondents in the current study, respondents who have a high level of knowledge towards menopause, also have healthy lifestyles and approaches to self-care regarding this matter.

Conclusion

The results of this study showed a high level of knowledge among the respondents which may be attributed to their socioeconomic status and easy access of health information from a tertiary government hospital. Overall, the attitude towards menopause among the respondents was strongly evident which could be explained by their high level of knowledge about menopause. Women who are well-educated and have adequate knowledge about menopausal symptoms are able to tolerate the impact of menopause with a positive approach. The practices regarding menopause among the respondents from the Medical, Nursing, and Allied

health were highly manifested, and can likewise be attributed from their high level of knowledge about menopause.

Recommendation

The researcher recommends doing this type of research in the out-patient/in-patient setting to assess the knowledge, attitude, and practices regarding menopause among patients. This can serve as a baseline data to evaluate the need to put up a Menopause Clinic not just for the staff of this hospital but also for the patients as well.

The researcher also recommends doing this type of research in other healthcare institutions. The results can then be collated to create a larger study population. Results can be used to in creating healthcare programs to educate and to help raise awareness regarding menopause. Institutions can implement policies or activities that can provide better healthcare services for menopausal women.

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