



Evaluation of knowledge, attitude and practice of pregnant women toward exercise during pregnancy in teaching hospital Lahore

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Abstract

Background: Physical inactivity during pregnancy raises the risk of complications connected to pregnancy. Every day, many pregnant women in world have passed due to pregnancy related complication. However to prevent these health problem women have enough awareness about physical activity during gestational period. Therefore these study was conduct to evaluate the awareness, attitude and practice of pregnant women toward antenatal exercise.

Method: It is a cross-sectional descriptive analysis in which a questionnaire for the evaluation of awareness, attitude and practice (KAP) was used to collect data from 186 pregnant women.

Result: Among 186 pregnant women 100 (53,8%) had adequate knowledge, and 147(79.0.0%) have a positive attitude, and 84(46.2)only females was practice the antenatal exercise. Performed exercising including Brisk walking (22.0%),relaxation exercise (5.9%), breathing exercise(7.0%) pelvic floor exercise (2.2%) and (3.8%) yoga. 93.5% belief that pregnant women should perform exercise if health care provider recommend them. (43.5%) think that ANEx suit to our culture.

Conclusion: This research shows that most of the participants were knowledgeable and more than half had a positive behaviour towards exercise during pregnancy and a very poor level of prenatal exercise practice. Therefore to reduce pregnancy-related risks, health care providers and other appropriate organizations should increase the awareness about the benefits of exercise during pregnancy.

Key words: knowledge, attitude, practice, antenatal exercise, pregnant women

INTRODUCTION

Women should keep their exercise routine during pregnancy because these are very important for both mother and their fetus.It is important to enable the pregnant female to sustain the activities which are good for their well being and antenatal care during pregnancy(Obstetricians 2015).

The lifestyle improvement programme for pregnant women has the effects of a cost-effective risk prevention approach on adverse pregnancy outcomes. Pregnant women are nervous and worried about the adverse effects of maternal activity due to lack of information about health complication during pregnancy.The need to educate women to gain sufficient awareness can help them establish an effective approach about health during pregnancy(Walasik, Kwiatkowska et al. 2020).

In order to promote physical fitness, it should be understood that social and cultural values have an impact on it and, consequently, on health outcomes(Coll, Domingues et al. 2017)

Guidelines for the National Institute for Health and Care Excellence (NICE) and the American Obstetricians and Gynecologists Congress (ACOG), said that exercise during pregnancy provide a lot of benefits and reduce complications. According to ACOG weight loss by regular activity for 30 minutes on most days of the week decreased the risk of gestational diabetes mellitus (GDM) and social well-being.. (Gibson, Castleman et al. 2020).

A women life passes through different stages like pregnancy, childbirth and postpartum..Women face a lot of changes in their body during pregnancy. Discomfort, complications, and difficulties in physical activity are the common changes during pregnancy. Therefore, they should

be strong enough to beat these changes by doing some better physical activities or exercise. Physical activity is important for mother and child. It may reduce the risk of adverse maternal, fetal, and neonatal complication. It may also help to overcome pregnancy-related complications and maintain proper physical fitness(Kovac, Cruikshank et al. 2016).

There is also a significant link among the cultural background and knowledge of parental exercise among pregnant female. Regular exercise during pregnancy strengthened the muscle. It also improve women psychological health, reduce GDB and control excessive weight gain. During pregnancy lumbago reduce through stretching and yoga. Antenatal exercise decrease duration of labour and Caesarean section rates. Antenatal exercise reduce the recovery time after baby birth. Regular walk improve the circulation and keep the blood pressure normal(Albright 2016).

Tummy exercise should be performed to avoid overstretching of the abdominal muscle. It also facilitate closing of the separation after birth. Pelvic floor exercise avoid leakage from the bladder and intestine(Hasan, Zahid et al. 2019).

During pregnancy strengthening abdominal muscles help to decrease consequence of stress and help to cope during childbirth, relaxing the pelvic floor muscles helps the vagina to wide for birth process more quickly. Furthermore, they also helpful for both before and after gestational period, to avoid urinary incontinence. Antenatal exercise reduce the pressure during pregnancy on the lower back by strengthen the back muscle.To improve circulation, prevent further complications foot and leg exercise should be recommended(Wijesiriwardana, Gunawardena et al. 2016). While most women in good health will engage comfortably during their pregnancy in aerobic exercises and other types of physical activities. According to medical advice, women should perform physical exercises. In encouraging exercise routine, correct and sufficient awareness and positive attitudes about prenatal workouts among pregnant mothers have been shown to be critical.(Wijesiriwardana, Gunawardena et al. 2016).

In the planing of any educational intervention to encourage the women for parental exercise, it is imperative to consider the current awareness among pregnant mother as well as to understand the attitude toward exercise during pregnancy.

Aim of the study:The goal of the research was to evaluate the knowledge, attitudes and behaviors of pregnant women to exercise during pregnancy at the Lahore University Hospital.

Objective

To identify the awareness of pregnant women toward ANEx

To determine the attitude of pregnant women toward antenatal exercise

To assess the practice of pregnant women toward antenatal exercise

Significance

There is the following significance of the study; it generate the information toward the awareness, attitude and practice of female having pregnancy about ANEx.This study also identify the misconception of pregnant women toward exercise during pregnancy. The result acquire from this study indicate that to making possible intervention depending on findings. This research further provides the health care worker with information about the implementation of maternal health programs for future preparation and antenatal exercise guide line. Ultimately, This thesis would be an open door and provide preliminary data to researchers in this field.

Problem statement

Maternal motility remain a problem in the world. Sedentary lifestyle and inactivity during pregnancy draw a negative impact on mother health and neonatal outcome. It has been observed that antenatal exercise practice among Pakistani mother is poor which lead to high morbidity and mortality among mother and fetus or neonatal.

LITERATURE REVIEW

The definition of Physical exercise is that of all the stages of life, any body movement generated by a contraction in muscle tissue preserves and enhances aerobic pulmonary function, lowering the chance of obesity and its associated complications, and helps in higher reliability.

The WHO recommendations recommend at least 150 minutes a week of moderate intensity physical exercise for stable pregnant and postpartum female should perform (i.e., equivalent to brisk walking)(Organization 2016).

The study of Mzur M et al.The level of understanding of the value of exercise in the gestational period and time of start of exercise, their frequency and type was much higher in the category of women over 30 years of age, married, with a high level of education, multiparas and those attending childbirth education classes than in the group of women mentioned above.(Mazur, Machaj et al. 2020).

Banys J. et al. study proved that exercise during pregnancy was rarely observed during pregnancy. In this study 50% of pregnant women maintain or increase their physical activity level and 50% of them decrease their physical activity level. Before and after pregnancy, the most common activities among respondents were: swimming, walking, yoga exercise, pilates, running and gymnastics. 75% of respondents, who were physically involved before birth, responded that they avoided exercising in the first trimester, 20.83% in the third trimester, 4.17% in the second trimester, 20.83% in the third trimester(Banyś, Bukowska et al. 2016).

Moderate exercise activity was found to promote or sustain physical health through gestational period. Data-based survey have shown advantages for women who exercise during breastfeeding, such as decreased GDM, decreased chance of cesarean or operating normal birth. It also facilitate postnatal healing period and it reduced low-back

pain. Research has also shown that exercising during gestational period will lower the amount of glucose or help avoid preclampsia in women with GDM, reduce unnecessary weight gain during pregnancy, and also decrease the complication of macrosomic infant delivery. It helps to boost cardiorespiratory endurance, physical fitness, emotional well-being and shortens labor duration.(Wang, Zhu et al. 2015).

In Brazil, the incidence of aerobic exercise between respondents during gestation were lesser (20.1 percent) compared to the pre-pregnancy age on a training pattern or related factor. Due to pregnancy, half of the females interrupted physical activity. In the first (13.6 percent) and third trimesters, the lowest incidence of exercise was found (13.4 percent). During antenatal appointments, less than half of respondents (47.4 percent) offered physical fitness advice and 14.9 percent were recommended to avoid exercise. Individualized meetings or interactions with a doctor during prenatal treatment is the most popular recommendations (95.2 percent).Groups, posters, photographs, and health practitioners were limited in their sources of information. Walking was the popular physical activity recorded in 3rd trimesters. It also highest level during the 1st trimester (2.2 percent). Water aerobics was the 2nd most frequent exercise, only with highest duration between both the second half of pregnancy. Many documented forms of exercise are walking, strength training, relaxation, dancing, weight training, walking, swimming, prenatal aerobics, or lower back workout.(Nascimento, Surita et al. 2015).

In addition, a relative analysis of awareness, understanding and attitude towards the role of physical therapy was performed in India among 106 pregnant women, only 46 percent of them knew about prenatal exercises. The primary source for their data regarding antenatal exercises was family and friends (40 percent). Study participants were mindful of pilates (28 per cent), back-care (20 per cent) and abdominal workouts (21 per cent), pelvic floor exercises (13 per cent), rehabilitation or relaxation practice (21 per cent) as maternal activities, etc. Consequently, the participants (80 per cent) either did not realize or did not know the usefulness of various forms of pregnancy activity accessible. 60% of the participants also has positive antenatal well being view. However only 30% of the respondents had adequate knowledge of deep breath (Nayak, Paes et al. 2015).

A meta-analysis research in Australia discovered challenges to bodily exercise.

Fatigue, lack of time, lack of information and maternity awkwardness was primarily intrapersonal. The plurality of facilitators provided maternal and fetal (intrapersonal) health services, social assistance (interpersonal) and initiatives unique to breastfeeding. Furthermore, few environmental variables, such as regulation, usability and service availability, have been identified. There was no evidence on behaviors, obstacles and physical exercise

enablers for pregnant women with gestational diabetes mellitus who are at risk of physical inactivity.(Harrison, Taylor et al. 2018).

A survey of 110 pregnant women in Colombo, Srilanka, found that most (72.7 percent, n=80) have low awareness about ANEx and 27.3 percent of respondents were competent. Just 6.4 percent (n=7) understood the value of workouts to strengthen the pelvic floor. 51.8% (n=57) of pregnant women were recommended to undergo pregnancy prenatal activities. A majority participant (48.2%, n=53) was advised to stroll, while 30.9% (n=34) were advised to execute activities on the ankles and toes. 49.1 percent and 35.5 percent had very positive attitudes towards it and 5.5 percent had negative attitudes towards it. The average activity was 'bad' (86.4 percent, n=95). Just 45.5 percent (n=50) of pregnant mothers did 'rolling' more than three days a week as a workout. Just about one fourth of pregnant mothers (23.6 percent, n=26) exercised. Written media (49.1 percent) and accompanied by electronic media (48.2 percent) were their sources of information)(Wijesiriwardana, Gunawardena et al. 2016).

STUDY GAP

Most studies done to assess knowledge, attitude and practice regarding antenatal exercise in other countries while very few studies are done in Pakistan.there is no published study were done in university of Lahore teaching hospital regarding antenatal exercise.. There is a need to conduct this kind of research study in university of Lahore teaching hospital

METHODOLOGY

MATHOD AND MATERIAL

Area of the study: It was teaching hospital Lahore Pakistan **Design of study:**the design of the study was descriptive cross sectional

Study time period

Study will be done from September 2020 to December 2020

Population of the study:

The population of the study was all pregnant women who were visit to the teaching hospital Lahore

Sample size

Sample size of study was 186

Solvin formula:

$N=349$ (gynae ward and gynae OPD)

Sample size calculated by Slovin's formula

$n = N / 1 + N (e)^2$

$n = 349 / 1 + 349(0.05)$

$n = 349 / 1 + 349(0.0025)$

$n = 186$

Tool for data collection:

A questionnaire include KAP study question were used for the collection of data.Questions used for data collection was adopted from(Nkhata LA,2014 and Ribeiro CP, 2011).

ETHICLE CONSIDERATION

The research was performed in the hospital after receiving a letter of approval from the Institutional Examination Board of the University of Lahore. Any of the participants in this survey was dealt with in the respective manner. The material was received from participants kept secret.

DATA COLLECTION PROCEDURE

The present study will use a self structured questionnaire to collect data. The informed consent will be taken from all participant and data were collected. The questionnaire translate into Urdu so that the participator feel comfortable for participants.

DATA ANALYSIS PROCEDURE

The was put into (SPSS)21. the descriptive statistic are frequencies and percentages.

ELIGIBLE CRITERIA

Inclusion criteria

All pregnant women who are capable to participate in the study attending the antenatal care in university pf Lahore teaching hospital

Exclusive criteria

All pregnant women who have cardiac and lung disease. Other women who are multiple gestation, placental abruption, premature labour and ruptured fetal membrane.

VARIABLES

Dependent variable

Knowledge attitude and practice are dependent variable

Independent variable

Pregnancy, antenatal, exercise

CONCEPTUAL DEFINITION

Pregnancy

A process in which a baby develop in the womb of mother is called pregnancy

Exercise

A body activity that increase and maintain physically and mentally health and wellness

Knowledge

Information acquiring through experience and education

Attitude

A way of thinking or feeling about something

Antenatal exercise

Antenatal exercise is a process to preventing from complication of pregnancy and increase physical and mentally preparation for delivery

CONCEPTUAL DEFINITION

Knowledge

Any "expertise, and skills" that a person may have gained either by experience or through education(Carayannis and Campbell 2019).

Attitude

Attitude is a mental concept, a psychological and emotional phenomenon that inherits or characterizes an individual. They are dynamic, and with practice they are an acquired condition. It is the predisposed state of mind of the person with respect to value, and it is precipitated by a sensitive gesture toward oneself.(Perloff 2020).

Practice

The process of rehearsing action again and again, or participating in conduct over and over the intention of enhancing or enhancing it like in the term 'practice, makes it better.(Darlack 2016).

Pregnancy

Pregnancy, commonly defined as conception, is the period in which one or more offspring grow within an individual.(Hasan, Rahman et al. 2018).

Exercise

Exercise is any physical activity that improves or preserves fitness levels and general health and wellbeing(Vinu, Mozhi et al. 2019).

RESULT

Demographic data

Table no1 show the demographic data in which one half of the participants have age group from<25, 25 to 35 and >35,(n=60)(32.3%),(n=90)48.4%and (n=36)(19.4%), mostly people were educated, have an extended family(n=135)72.6 and more than half were job holder(n=141)75.8%. More than half participants know that ANEx prevent uterus from contraction.

Variables		Frequencies	Percentage
Age	<25	60	32.3%
	25-35	90	48.4%
	>35	36	19.4%
Education	Uneducated	21	11.3%
	Primary school	27	14.5%
	Secondary school	36	19.4%
	University	102	54.8%
Family income	<25000	57	30.6%
	25000-35000	66	35.5%
	>40000	63	33.9%
Type of family	Extended	135	72.6%
	Nuclear	51	27.4%
Occupation	House wife	45	24.2%
	job	141	75.8%
Residence	Urban	132	71.0%
	rural	54	29.0%

Obstetrical history

Table no:2 shoe the Obstetrical history in which mostly participants have 2(48.4)(n=90) or more than 2(n=84)45.2% children and only 6.5%(n=12)have first baby. It also show that more than half 61.3%(114)have labour mode of delivery and 38.7%(72)have caesarean delivery. 91.9%(n=171)have no history of miscarriage and 8.1%(15) have miscarriage.

Variable		Frequencies	Percentage
No of children	1	12	6.5%
	2	90	48.4%

	>2	84	45.2%
Gestational period	1 st trimester	72	38.7%
	2 nd trimester	84	45.2%
	3 rd trimester	30	16.1%
Mode of	labour	114	61.3%

Knowledge of pregnant women about exercise during pregnancy

Table no3 show the Assessment of the knowledge about exercise during pregnancy in which mostly female have knowledge about antenatal exercise 53.8%(n=100) and 46.2%(n=86) do not know. 61.3%(n=114) participants know that exercise during pregnancy reduce the risk of GDB and 38.7%(n=72) do not know. 41.9%(n=78) have knowledge that ANEx reduce the risk of prenatal and post

delivery	Caesarean	72	38.7%
Place of delivery	Hospital	105	56.5%
	Home	15	8.1%
	PHC	66	35.5%
Any miscarriage	Yes	15	8.1%
	No	171	91.9%

natal back pain and 58.1%(108) do not know. 41.9%(n=78) were know that ANEx help to cope with labour pain and 58.1%(n=108) don't know. Third half of participants said that individual exercise are safe and best. More than half participants know that ANEx prevent uterus from contraction69.4%(n=129) and 30.6%(n=57) were know.64.5%(n=120) believe that exercise during pregnancy are good for fetus health and 35.5%(n=66)were said that ANEx not good for baby health.

Variables	Yes		No	
	Frequency	%	Frequency	%
Do you know about ANEx	100	53.8%	86	46.2%
Do you know that exercise during pregnancy Reduces the risk of gestational diabetes?	114	61.3%	72	38.7%
ANEx enhances energy and stamina?	117	62.9%	69	37.0%
ANEx strengthens the pelvic floor muscle?	63	33.9%	123	66.1%
ANEx reduces risk of perinatal and postnatal back pain ?	78	41.9%	108	58.1%
ANEx helps to cope with labour pain?	78	41.9%	108	58.1%
ANEx reduces postnatal abdominal muscle weakness?	75	40.3%	111	59.7%
ANEx Prevents excessive weight gain?	108	58.1%	78	41.9%
ANEx reduces risk of HTN?	126	67.7%	60	32.3%
ANEx enhances post-natal recovery?	69	37.1%	117	62.9%
Individualized exercises are safe and best?	78	41.9%	108	58.1%
ANEx reduces the risk of post-natal depression?	120	64.5%	66	35.5%
ANEx reduce chest pain during pregnancy?	81	43.5%	105	56.5%
ANEx reduce Abdominal pain during pregnancy?	60	32.3%	126	67.7%
ANEx prevent Back pain during pregnancy?	66	35.5%	120	64.5%
ANEx prevent Uncontrolled HTN during pregnancy?	126	67.7%	60	32.3%
ANEx prevent Uterine contractions ?	57	30.6%	129	69.4%
ANEx Prevent Premature labor?	54	29.0%	132	71.0%
ANEx reduce dizziness during pregnancy?	117	62.9%	69	37.1%
ANEx provide benefits to general health and development ofthe baby?	120	64.5%	66	35.5%

Attitude of pregnant women toward exercise during pregnancy

Table no4 show of the attitude of pregnant women toward exercise during pregnancy in which only 30.6%(n=57) participants think that exercise during pregnancy is necessary, 14.5(=27) think that ANEx risky for fetus and 93.5%(n=174)participants think that exercise during pregnancy should be performed under the supervision of health care professionals.

Variable	Yes		No	
	frequency	%	frequency	%
Do you think physical exercise during pregnancy is necessary?	57	30.6%	129	69.4%
Do you feel physical exercise during pregnancy is risky to the fetus?	27	14.5%	159	85.5%

Does antenatal exercise suit with our culture?	81	43.5%	105	56.5%
Do you belief pregnant women should perform exercise under the guidance of health care professionals?	174	93.5%	12	6.5%
Do you think antenatal exercise can reduce pregnancy-related complications?	87	46.8%	99	53.2%
Do you feel exercise during pregnancy helps in post-delivery recovery?	72	38.7%	114	61.3%
Do you feel the exercise helps you get back to your shape?	54	29.0%	132	71.0%
Do you have family support	153	82.3%	33	17.7%
Do you have enough time to do exercise	63	33.9%	123	66.1%

Practice of pregnant female toward ANEx

Table no5 show that 54.8%(n=102)participants were not involve in the practice of ANEx due to lack of time 32.3(n=60)and 30.6%(n=57) lack of information

Variables		
Type of current antenatal exercise	Frequencies	%
cRelaxation exercise	11	5.9%
Breathing exercise	13	7.0%
Walk	41	22.0%
Aerobic exercise	8	4.3%
Pelvic floor exercise	4	2.2%
yoga	7	3.8%
Nothing	102	54.8%
Is the exercise evacuate during pregnancy		
Yes	147	79.0%
No	39	21.0%
Barrier to practice ANEx		
Lack of time	60	32.3%
Lack of information	57	30.6%
Feel uncomfortable	39	21.0%
Family member advise not to do	30	16.1%

DISCUSSION

The research was carried out at the University of Lahore teaching hospital in Pakistan to determine the level of awareness, attitude and experience of prenatal exercise among pregnant women. In this sample, there were 186 participants. More than one-third of respondents had completed high school and 54.8 percent (n=102) had completed college or university, which is incomparable with the research seen in Nigeria (69.4 percent) who had tertiary education(Mbada, Adebayo et al. 2014). Study respondents were conscious of back-care exercises (41.9%), abdominal exercises (40.3%), and pelvic floor exercises (33.9 percent). In India, back treatment exercises (20%)

and abdominal exercises (21%), pelvic floor exercises are unparalleled research. (13%)(Nayak, Paes et al. 2015). Participants in this sample were practice of prenatal activity (22.0 percent) walking, (5.9 percent)relaxation and (7.0 percent)breathing and (4.3%)aerobics as forms of physical exercising during breastfeeding. This is inconsistent with a research conducted in Nigeria (31.2%) and (59.8%) of the respondent heard aerobics and aerobics Relaxation / breathing exercises(Wang, Zhu et al. 2015).This difference may be attributed to lack of guidance from health care professionals regarding antenatal exercise, lack of knowledge, and the participant in the sample was less likely to be literate relative to studies from other countries that

were more literate and consulted about antenatal exercise. Generally, that may be attributable to the lack of Recommendations for the accessibility of antenatal exercise and antenatal exercise class. More than half 180 (64.5%) of pregnant people have a positive outlook towards antenatal exercise with respect to the attitude of pregnant women to physical exercise throughout pregnancy. This finding is similar to a survey carried out in Nigeria (85%) of respondents had a positive approach to exercise.(Ribeiro and Milanez 2011). Nevertheless, it is comparable with a study reported on India (51%) had positive attitude towards exercise in pregnancy(Sujindra, Bupathy et al. 2015). The rationale for a low degree of positive attitude towards prenatal exercise may be attributed to

Most of the respondents were literate, heard and informative about prenatal exercise, safety concern for their fetus, lack of understanding and insufficient level of knowledge of the respondents comparing the study reported in Brazil and Nigeria.The study also reported that they used a single question to measure the level of attitude of their respondents in these countries. In this survey, a few of the respondents felt that antenatal exercise is important (30.6 percent) but 93.5 percent of pregnant women assumed that pregnant women can conduct exercise under the supervision of health care professionals. The impact of understanding and experience of antenatal exercise on attitude may be the explanation for low favorable attitude over all.

The study indicates that during their current pregnancy (46.2 percent) of the respondents performed antenatal exercise. Although this result is almost incomparable with a research performed in India (22.0%), it is compare with a recorded in Nigeria (84.7%) and higher than that reported in Canada (29.0%) and Brazil (31%) (29.0 percent) (Mbada, Adebayo et al. 2015). This disparity may be attributed to low level of knowledge, lack of understanding and experience of physical activity before birth, lack of incentive and counselling for health care providers, relative to other study countries, their respondents were more educated, directed by health care providers, about prenatal exercise.Other people were often inspired and advised to do physical activity during breastfeeding, and most respondents were accustomed to physical exercise before pregnancy. This research found that walking, breathing/relaxation and ankle, toe.

The findings of this research found that prenatal exercise experience was substantially high in pregnant female with a high level of learning. This result is comparable to the research published in Zambia and Brazil.(Ribeiro and Milanez 2011)

Finally, the most commonly mentioned reasons why pregnant women should not engage in. In the current pregnancy, approximately 30.6 percent, 32.3 percent and 16.1 percent of antenatal exercise were lack of awareness, lack of counseling from health care providers and unsafe for the fetus, respectively. The reasons cited are consistent with research from Australia, Brazil and Canada. (Harrison,

Taylor et al. 2018). Therefore, all concerned bodies should consider about possible intervention of this problem.

Limitation of the study

This study included only pregnant women attending ANC at private health institution. Government health institution were excluded. this study was not include qualitative data, specially cognition and experience of physical exercise of pregnant women.

Conclusion

The outcome of the study indicates that most pregnant women were not aware of the actual benefit of prenatal exercise in complications related to prevention of pregnancy and its Contraindication. The level of practice of exercise during antenatal care was very low.In addition, experience of antenatal exercise among pregnant women was discovered as a determinant of the attitude and experience about exercise during pregnancy. In addition, the high degree of income, awareness and experience of physical activity prior to pregnancy and knowledge of prenatal exercise were predictors of prenatal exercise practice.. Finally, lack of information and lack of health care recommendation and fear of fetal risk was among the most common reasoned or barriers reported why they did not engage in physical exercise in current pregnancy

Recommendation

The academic institutions and other organizations working on maternity areas should work on the awareness of their students and health care provider about the advantages and contraindication of physical exercise in pregnancy time. they include antenatal exercise in their curriculum and giving training for health care provider.

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