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Low Pre-Conception Health Among Iraqi College Women Linked to Age and Socioeconomic Status

Kesehatan Pra-Konsepsi yang Rendah di Kalangan Perempuan Irak Berkaitan dengan Usia dan Status Sosial Ekonomi

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Abstract

This study explores pre-conception health behaviors among female college students at the University of Baghdad, highlighting a critical gap in non-Western contexts. Conducted from October 2023 to March 2024 with 144 participants, the cross-sectional study assessed pre-pregnancy health behaviors using a validated 5-point Likert scale. Results showed that 74.4% of students exhibited low pre-conception health behaviors, with significant predictors being age ($p = 0.008$), academic grade ($p = 0.041$), and socioeconomic status ($p = 0.035$). The average participant age was 20.63 years, with most in their first academic year and living with parents. The findings emphasize the need for targeted interventions and educational programs to improve pre-pregnancy health awareness and behaviors in this demographic.

Highlights:

1. High Prevalence: 74.4% exhibited low pre-conception health behaviors.
2. Influential Factors: Age, grade, and socioeconomic status significantly impacted behaviors.
3. Intervention Needed: Educational programs essential for improving pre-conception health awareness.

Keywords: pre-conception health, female college students, predictive factors, socioeconomic status, health behaviors

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Introduction

The health behaviors of female students before pregnancy are very critical because they shape the reproductive well-being of a woman as well as her future offspring. While women go for higher education it is important to assess and understand what factors help them to make pre-conception health choices (Searby et al., 2023). The pre-conception period (that is the period before conception) is very important because maternal health behaviors have a direct impact on fertility, pregnancy outcomes, and the future health of the child (Southern et al., 2021). Studies have shown that a young woman who is attending college can make decisions about her lifestyle and health care that will have long-term effects on her reproductive health. That is, the study shows the relationship between pre-conception health behavior e.g. nutrition, physical activity, and substance use, and reproductive outcomes (Caut et al., 2022; Kader & Faraj, 2023).

In addition, the young students may have a different view about their reproductive health and this stand can be profoundly different from the views of the older students. Age is one of the factors that play a role in the knowledge, attitude, and behavior related to preconception health and reproductive health (Niama & Naji, 2022). An example of this is when a student becomes aware that the time for pregnancy might be in a few years. This leads to conscious family planning and healthy behavior. Academic grade level is among the critical things to focus on. As college students go through the upper classes, they may experience modifications in their lives and priorities. Research indicates that academic burden and workload may affect students' health habits (Zaçe et al., 2022; Athbi & Hassan, 2019). Although high grade levels may come with higher academic pressure, it may also affect a student's ability to focus on contraception (JumaElywy & Naji, 2023). The place where a student lives, like whether s/he is in res or not, is also a contributing factor to the health behavior that leads to the preconception. Environmental conditions, availability of health care, and the effect of peers can differ in some results of the residing (Lefkowitz et al., 2022; Faghih et al., 2024). It is demonstrated that college students who are off-campus practice different physical activity patterns in comparison to the ones who live on campus and this signifies that the lifestyle of the students is also another factor that needs to be taken into account when addressing preconception health (Henry et al., 2018).

Economic status is an important factor that has a lot of influence on the behavior of female university students in terms of awareness of preconception health. Financial impediments can reduce the likelihood of education, including healthcare, good nutrition, or wellness programs (Salahshurian et al., 2023). This could result in preconception health being an area in which people from a lower socioeconomic status are disproportionately affected. This would necessitate the development of interventions that are targeted towards addressing disparities in preconception health (Zajacova et al., 2018).

The knowledge of the interrelationships between age, grade, living arrangement, and economic status is critical for developing holistic intervention strategies that are suited to enhance preconception health among female college students. Personalized interventions that take into account those aspects can enable young women to make sound judgment when it comes to their reproductive health and also improve the life of younger generations in the future.

Methods

Design

A descriptive cross-sectional study design was adopted questionnaire based on The Health Beliefs Model (Glanz et al., 2015), was conducted during the period from October 1st, 2023 to March 11th, 2024.

Study sitting

The study was conducted at Baghdad University at the College of Languages, Department of English. Non-probability " Convenience" sampling which is the type of sampling method purposefully considering the accuracy and the representativeness of the data to be collected was employed.

Study instruments

This questionnaire consists of two parts including the socio-demographic characteristics including students' age, grade, living arrangement, and socio-economic status. Preconception healthy behaviors were adopted and modified (Glanz et al., 2015). It is measured on a 5- -Likert scale, the higher average indicates good healthy behavior. The questionnaire was validated by experts and then its reliability was verified through a pilot study The Cronbach-alpha value at current was 0.81 which indicates higher reliability.

Data collection

The researcher interviewed the participants at their setting, explained the instructions, answered their questions regarding the form, urged them to participate, and thanked them for their cooperation. The self-report techniques

were used on an individual basis, and each report (25-30) minutes after taking the important steps that must be included in the study design.

Statistical analysis

Data collection from the sample was carried out using SPSS-24 and MS Excel (2010), which were later analyzed using the statistical analysis tool. The presentation was descriptive and was done through tables, averages, and standard deviation whereby data was presented and analyzed. To determine the average scores, the researcher also created categories using the mean as the foundation and used such terms as poor, moderate, and good. The inferential strategy entailed the performance of the statistical analysis tools including the Simple Linear Regression. The most common significance level was set to be 0.05.

Result and Disscusion

Variables	Classification	No.	%
Age /years	19 years old	19	13.2
	20 years old	77	53.5
	21 years old	15	10.4
	22 years old	10	6.9
	23 years old	17	11.8
	24 years old	6	4.2
	M±SD		20.63±1.362
Grade	1st	93	64.6
	2nd	25	17.4
	3rd	26	18.1
Living Arrangements	With parents	104	72.2
	With mother	28	19.4
	With father	2	1.4
	With relatives	10	6.9
Socioeconomic Status (SES)	Upper lower class	76	52.8
	Lower middle class	63	43.8
	Upper middle class	5	3.5

Table 1. *Socio-Demographic Characteristics*

No. Number; %= Percentage

The study findings indicate that the participants had an average age of 20.63±1.362 years. Notably, a substantial 64.6% were in their first grade. In terms of living arrangements, a significant portion, accounting for 72.2%, resided with their parents. Additionally, over half of the participants (52.8%) belonged to the upper lower class in terms of socio-economic status.

Scale	M	SD	Score	No.	%
Pre-conception Health Behaviors	2.12	0.338	Low	110	76.4
			Moderate	34	23.6
			High	0	0.0
			Total	144	100.0

Table 2. *Overall Pre-conception Health Behaviors*

The study's results suggest that a significant proportion (74.4%) of female colleges were indicated low pre-conceptions health behaviors, as evidenced by low average scores (2.12±0.338).

Factors	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
Age	.055	.021	.221	2.674	.008
Grade	.048	.037	.119	1.226	.041

Living Status	-.001-	.035	-.001-	-.015-	.988
SES	.074	.049	.224	2.504	.035

Table 3. *Relationship between Female Colleges Pre-conception Health Behaviors and their Socio-demographic Variables*

Dependent Variable: Preconception Health Behaviors

Simple linear regression test indicates that the colleges female age (β= 0.221; p= .008), grade (β= 0.119; p= .041) and socio-economic status (β= 0.224; p= .035) were predicted variable of preconception healthy behaviors.

Discussion

The study on preconception health behaviors among female collegians sheds light on important demographic characteristics that can influence health-related choices in this population. The average age of the participants, at 20.63±1.362 years, suggests that the study primarily focused on young adults in the college setting. This age group is crucial for understanding preconception health as it represents a transitional period marked by emerging adulthood and increased autonomy in decision-making. In the same vein, the Al-Rusafa Education directorate confirms the findings of the research, and it was discovered that the age groups of most students in the study cohort were in line with the demographic characteristics of the research (Ahmed & Naji, 2023).

The finding that a substantial 64.6% of participants were in their first grade is noteworthy. This shows that the interviewees were mostly freshmen or first-year students, who might not have been exposed to campus health education activities before. The knowledge of the reproductive health behaviors of young adults at the beginning of the college period is a key component in the design of focused interventions that can improve the outcomes in the long term. The other research in Al-Nasiriyah City, Iraq's College of Education for Pure Sciences, also shows that their language stage was at this stage (Karim & Naji, 2018).

The housing data lend supplementary information to the research. From the fact that 72.2% of respondents living with their parents was highlighted, it can be inferred that a notable percentage of students may be still under the authority of their guardians and family patterns. This factor is crucial when considering the factors that shape health behaviors, as family environments can play a role in the transmission of health-related values and practices. Bringing the research in line with similar findings among students of Baghdad and the University of Mosul demonstrates that such a pattern is a cultural norm for this age and education stage (Raa'd, 2022l Muhealdeen, 2023).

Socioeconomic status, as reflected in the classification of participants into the upper-lower class (52.8%), is another crucial aspect. The economic background of individuals can influence access to resources, healthcare, and educational opportunities. The findings underscore the importance of considering socio-economic disparities when designing interventions aimed at promoting preconception health behaviors. Tailoring strategies to accommodate the specific needs and challenges faced by individuals from different socio-economic backgrounds can enhance the effectiveness of public health initiatives. The study output is evidenced by the same observations in other locations, which proves the existence of interventions designed for the socioeconomic reality of this group (Salih & Noori, 2021; Abed & Abd, 2021).

The research results demonstrate an important trend in the health behaviors of female college students before conception, where 74.4% of females scored low in the assessment of these health behaviors, suggesting that they may have suboptimal health practices. This revelation, however, makes the overall health of these women during the pre-conception period a topic of concern, which is very important for the promotion of women's reproductive health and positive outcomes for both the mother and child. The reasons behind their below-average scores may be explained by ignorance and lack of knowledge on pre-conception health among female college students. Research has proven that such knowledge deficit and misconception about reproductive health can lead to the emergence of sub-optimal health behaviors among the youth population (Lukumay et al., 2021). College campuses may become the epicenter of unplanned pregnancies. Thus, programs that support reproductive health education could be the game changer in addressing this issue and encourage the understanding of the significance of pre-conception health.

Additionally, social as well as economic factors may contribute to the development of health behaviors before pregnancy among female college students. Studies show that the poor as well as those from lower socio-economic backgrounds may find it rather difficult to get the healthcare services they require and to adopt healthy lifestyles (Tan et al., 2019). The findings from the study emphasize the need for the inclusion of socio-economic factors as part of the strategies to be used in designing interventions that target collegegoers in the improvement of pre-conception health.

Given these facts, healthcare professionals and educators have to work together to try and introduce special interventions to help female college students deal with their specific needs and challenges. Tailored educational programs, healthcare services reachable to every individual, and community initiatives to address this group of people will have a positive impact on raising awareness and changing pre-conception habits among them (Barker et

al., 2018).

As the simple linear regression analysis came to an end, the results indicated a significant relationship between some demographic variables and preconception healthy behaviors among female college students. To sum up, the results, female age was a significant predictor of preconception healthy behaviors (β= -0.221, p= 0.008) and negative value. This means that, in particular, college student age, girls' awareness increases, which should lead to the development of preconception healthy behaviors. This finding agrees with other research suggesting that the elderly can become more health conscious because of a greater understanding of their actions and how they will affect their health in the future.

It was also seen that grade is a significant factor in the adoption of preconception good health behavior among female college students as evidenced by the positive beta coefficient (β= 0.119, p= 0.041). This also implies that the higher academic competence is related to the higher probability of preconception health care involvement. The influence of academic achievement on health-related behavior is further revealed in the previous studies, suggesting that education level has a vital role in health-promoting actions (Bull et al., 2020; Qassim et al., 2018).

Furthermore, socio-economic status (β= 0.224, p= 0.035) was also a significant predictor, indicating that personal wealth affects preconception healthy behaviors. This demonstrates that girls who have higher social status are more likely to take healthy behaviors before prematurity. The connection between socioeconomic status and health is well-established by previous studies with people from higher socio-economic status having more tools and information to improve their health-related behaviors (Yasir et al., 2018; Radhi et al., 2023).

Results from the simple linear regression show that female age, grade, and socioeconomic level are key predictors of preconception healthy behaviors among female college students. Such results add up to the existing knowledge about the factors impacting health behaviors in young people and hence, raise the necessity to develop specific health interventions directed to the benefits of preconception health, considering the demographic variations in the college population.

Conclusion

The research shows a notable prevalence of low health behaviors in female college students before pregnancy. Their age and class status highly affect their health behavior. For this reason, it is important to design and implement programs that are specific to these factors to promote preconception health education and positive behaviors in female college students. Strategies should be built with age, class, and grade in mind as key determinants to ensure the implementation of effective interventions for preconception health in this population.

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