https://africanjournalofbiomedicalresearch.com/index.php/AJBR
Afr. J. Biomed. Res. Vol. 27 (October 2024); 946-951

Research Article

Locus of Control among Pregnant Adolescents and Its Relation to Health Outcomes

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Abstract

Background: Adolescent pregnancy is a global societal issue that affects mothers and their unborn children, particularly in underdeveloped nations. The danger of teenage in both industrialized and developing nations, pregnancy and its consequences continue to be a public health concern because they increase the risk of morbidity and mortality in mothers and newborns. **Aims:** This study aims to identify the level of control of pregnant adolescents regarding their health and pregnancy outcomes, to identify different and effective ways used by adolescents pregnant to control about health and pregnancy outcomes, and to identify the complication results from pregnancy in adolescents' age.

Methodology: Descriptive, cross sectional study, Researchers made questionnaire about assess the pregnant adolescents about control of their health and pregnancy outcomes was given sample of (100) pregnant adolescents from Private clinics in Al-Nasiriyah City, the collection data analysis by using SPSS, Descriptive result were expressed as frequency and percentage Means score, SD, p-value and correlation.

Results: Our study revealed that average age for pregnant adolescents is 17.7±1 year, the majority of participants 52% of them within age group of 18-19 year, and there is a significant association between locus of control and previous abortion among pregnant adolescents at p-value=.031.

Conclusion: Based on the results presented in the article, it can be concluded that Pregnant adolescent girls display a complex set of beliefs about controlling fetal health outcomes, Pregnant adolescent girls are associated with moderate levels of internal beliefs related to coincidence, Pregnant adolescent girls show high levels of beliefs regarding powerful others.

Recommendations: Based on the results of the present study, the researcher recommends tailored interventions because Interventions aimed at supporting pregnant adolescents should take into account their beliefs about control over fetal health outcomes.

Keywords: Locus of Control, Pregnancy, Health, Outcomes.

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Receiving Date: 18/10/2024 Acceptance Date: 24/10/2024

DOI: https://doi.org/10.53555/AJBR.v27i3.3188

Introduction

Over recent decades, an increase has been seen in pregnancy rates among young people in developing countries. Adolescent fertility has been associated with various health risks including spontaneous abortions, prematurity, low birth weight, pregnancy-induced hypertension, obstructed labor, surgical delivery, and hemorrhage [1]. In many underdeveloped countries, one of the leading causes of death for girls between the ages of 15 and 19 is pregnancy and motherhood. When girls become pregnant, their social status, access to education,

and economic prospects may be adversely affected [2]. Pregnant adolescents may have more ambivalence or positive attitudes about pregnancy and less subjective norms towards condom use than others, which may be related to a higher number of unintended pregnancies [3]. However, girls who become pregnant during adolescence are a heterogeneous group that includes both adolescents who did not desire the pregnancy and adolescents who desired to become pregnant. What has been less studied, and is the main focus of this paper, is the locus of control among pregnant adolescents [4]. Locus of control is a psychological construct, reflecting people's beliefs regarding the control of their destiny. Locus of control could play an important role in influencing adolescents' reproductive behavior, particularly among those who have not accidentally become pregnant. An internal locus of control is theorized to support self-empowerment and healthy psychological functioning [5]. Locus of control has been related to various health outcomes among adolescents. While literature on locus of control and pregnancy was only found in populations of women, rather than a sample comprised exclusively of pregnant adolescents, findings from this literature provide a theoretical basis for our inquiry. Given that an internal locus of control has been shown to be associated with positive health behaviors in adolescents, it could be that this same association impacts the pregnancy prevention efficacy or birth outcomes of adolescents [6]. Until we understand whether a locus of control, either internal or external is associated with adolescent pregnancy and childbearing, we cannot explore how, or how much of a difference, the construct may make. Our study is the first to assess whether the locus of control between adolescents who have a desirable/best outcome pregnancy and adolescents who have an undesirable pregnancy are different. It describes the biopsychosocial and environmental differences, just one of which is encompassed by locus of control, among this childbearing population. Our study of pregnancy, locus of control, and adolescent females is particularly relevant in understanding adolescent pregnancy [7].

Methods

A descriptive cross-sectional study questionnaire-based study was carried to study "Assessment the locus of control of pregnant adolescents regarding their health and pregnancy outcomes "from the period November, 15th, 2023 to April, 4th, 2024.

Study Instrument

Based on previous relevant studies, questionnaire of two sections prepared by researchers and then displayed to experts for take their opinions and advices The demographic section was the first section and contained information regarding (Age, residence, economic status, whether you have previous births, whether you have previous miscarriages and educational level), the second and final part of the questionnaire, including the question about the assessment the locus of control of pregnant adolescents regarding their health and pregnancy outcomes.

Statistical Analysis

The statistical package of social sciences (SPSS) version 26, which included the functions for frequency, percent, arithmetic mean, standard deviation, mean of the score (MS), P-values, df, and x^2, was used to analyze the data.

Results

Table 1: Distribution of Pregnant Adolescents according to their Sociodemographic Characteristics

No.	Characteristics		f	%
1	Age (year) M±SD= 17.7±1	16 – 17	48	48
		18 – 19	52	52
		Total	100	100
2	Residency	Urban	19	19
		Rural	81	81
		Total	100	100
3	Socioeconomic status	Very good	3	3
		Good	18	18
		Moderate	37	37
		Poor	42	42
		Total	100	100
4	Previous Birth	Yes	29	29
		No	71	71
		Total	100	100
	Previous abortion	Yes	35	35
		No	65	65
		Total	100	100
	Level of education	Illiterate	21	21
		Read & write	30	30
		Primary school	14	14
		Intermediate school	20	20
		Secondary school	15	15
		Total	100	100

No= Number, f= Frequency, %= Percentage, M= Mean, SD=Standard Deviation

This table shows that mean age for pregnant adolescents is 17.7±1 years in which 52% of them seen within age group of 18-19 year and 48% within age group of 16 – 17 year. The residency refers that 81% of pregnant adolescents are resident in rural while only 19% of them are resident in urban. The socioeconomic status reveals that 42% of pregnant adolescents are associated with poor socioeconomic status and 37% associated with moderate level. Regarding previous birth, only 29% of pregnant women reported that they have while 71% have no previous birth. Concerning previous abortion, only 35% of pregnant adolescents have previous abortion and 65% have no previous abortion. Considering level of education, the highest percentage refers to 30% of those who are read and write and 21% of those illiterate pregnant adolescents.

Table 2: Overall Levels of Fetal Health Locus of Control among Pregnant Adolescents

Locus of control	f	%	M	SD	Assessment
Low	0	0	68.05	9.120	
Moderate	45	45			
High	55	55			
Total	100	100			

F=Frequency, %=Percentage M=Mean for total score, SD=Standard Deviation for total score Low=18 – 42, Moderate=42.1 – 66, High=66.1 – 90

This table shows that pregnant adolescents associated with moderate to high fetal health locus of control as reported among 45% with moderate level and 55% with high level.

Table 3: Assessment the Level of Fetal Health of Control related to "Internality Domain" among Pregnant Adolescents

List	Internality	Mean	SD	Assess
1	By attending prenatal classes taught by competent health professionals, I can greatly increase the odds of having a healthy, normal baby	4.43	.902	High
2	I would research the precise things I should and shouldn't do before getting pregnant in order to have a healthy, normal baby.	4.49	.628	High
3	If my baby is unhealthy or abnormal, nature intended it to be that way	2.80	1.491	Moderate
4	Having a miscarriage means to me that my baby was not destined to live	3.67	1.138	High
5	Health professionals are responsible for health of my unborn child	3.25	1.077	Moderate
6	My baby's health is in the hands of health professionals	3.25	1.234	Moderate
Grand mean*		21.89	3.484	Moderate

SD: Standard Deviation Low=1– 2.33, Moderate=2.34 – 3.66, High=3.67 – 5* Low=6– 14, Moderate=14.1 – 22, High=22.1 – 30

This table shows that pregnant adolescents associated with moderate internality fetal health locus of control as reported by grand mean (21.89± 3.484).

Table 4: Assessment the Level of Fetal Health of Control related to "Chance Domain" among Pregnant Adolescents

List	Chance	Mean	SD	Assess
1	My unborn child's health can be seriously affected by my dietary intake during pregnancy	4.46	.797	High
2	Developing self-care skills prior to getting pregnant aids in the healthy birth of my child.	4.33	.753	High
3	Regardless of my actions during my pregnancy, the laws of nature dictate whether or not my child will be typical.	2.97	1.473	Moderate
4	Fate determines the health of my unborn child	3.25	1.359	Moderate
5	The health of my unborn child is a result of the care I receive from medical professionals.	3.24	1.138	Moderate
6	The only people who are qualified to advise me on how to behave during my pregnancy are doctors and nurses.	3.68	1.109	High
Grand mean*		21.93	3.940	Moderate

SD=Standard Deviation Low=1– 2.33, Moderate=2.34 – 3.66, High=3.67 – 5* Low=6– 14, Moderate=14.1 – 22, High=22.1 – 30

This table shows that pregnant adolescents associated with moderate chance related to fetal health locus of control as reported by grand mean (21.93± 3.940).

Table 5: Assessment the Level of Fetal Health of Control related to "Powerful Others Domain" among Pregnant Adolescents

List	Powerful others	Mean	SD	Assess
1	If I get sick during pregnancy, consulting my doctor is the best thing I can do to protect the health of my unborn child	4.61	.650	High
2	What I do right up to the time that my baby is born can affect my baby's health	4.40	.765	High
3	Not matter how well I take care of myself during my pregnancy—destiny will decide if my unborn child is normal or deviant.	3.56	1.183	Moderate
4	God will determine the health of my child	4.39	.815	High
5	My baby will be born healthy only if do everything my doctor tells me to do during pregnancy	3.57	1.037	Moderate
6	It is only appropriate for licensed healthcare providers to advise me on what to do and not do while I am pregnant.	3.70	1.078	High
Grand mean*		24.23	2.867	High

SD: Standard Deviation Low= 1– 2.33, Moderate= 2.34 – 3.66, High= 3.67 – 5* Low= 6– 14, Moderate= 14.1 – 22, High= 22.1 – 30

This table shows that pregnant adolescents associated with high powerful others related to fetal health locus of control as reported by grand mean (24.23± 2.867).

Table 6: Significant Relationship among Levels of Fetal health Locus of Control and Sociodemographic Characteristics of Pregnant Adolescents

Variables		Locus of Control				Significant Relationship
		Low	Moderate	High	Total	
Age (year)	16 – 17	0	23	25	48	r = .171
	18 – 19	0	22	30	52	P-value= .089
	Total	0	45	55	100	Sig= N.S
Residency	Urban	0	1	11	19	r= .039
	Rural	0	37	44	81	P-value= .697
	Total	0	45	55	100	Sig= N.S
Socioeconomic status	Very good	0	1	2	3	r = - .291
	Good	0	5	13	18	P-value= .003
	Moderate	0	11	26	37	Sig= H.S
	Poor	0	28	14	42	
	Total	0	45	55	100	
Previous birth	Yes	0	10	19	29	r = .196
	No	0	35	36	71	P-value= .051
	Total	0	45	55	100	Sig= N.S
Previous abortion	Yes	0	13	22	35	r = - .215
	No	0	32	33	65	P-value= .031
	Total	0	45	55	100	Sig= S
Level of education	Illiterate	0	15	6	21	r = .043
	Read & write	0	8	22	30	P-value= .674
	Primary school	0	9	5	14	Sig= N.S
	Intermediate	0	7	13	20	
	Secondary	0	6	9	15	
	Total	0	45	55	100	

r=Correlation Coefficient, P=Probability, Sig=Significance, S=Significant, N.S=Not significant

According to this table, there is a substantial correlation (p-value =.003) between the socioeconomic position of pregnant teenagers and the fetal health locus of control, as well as a significant correlation (p-value =.031) between the locus of control and prior abortion among pregnant adolescents.

Discussion

The results indicate that a significant proportion of pregnant adolescents associate with moderate to high levels of fetal health locus of control. Specifically, 45% reported a moderate level, while 55% reported a high level. This suggests that a majority of pregnant adolescents in the sample believe they have a considerable degree of control over the health outcomes

of their fetus. This finding is in line with existent literature that paints a picture of pregnant adolescents as having a significantly higher score of internal locus of control with regard to their pregnancy and health of the unborn baby. For instance, Chęć et al., discovered that there is significant and positive relationship where by the higher the mothers attitude of acceptance, the higher the internal LOC of the adolescent [8]. Locus of control and pregnancy outcomes have been reasonably reported in the previous literature. Schempf & Strobino reported, pregnant women with high level of controlled pregnancies are likely to attend childbirth classes and or to quit smoking, caffeine or drug abuse. From the study it can be understood that the locus of control in pregnant adolescent is critically needed in designing interventions and support programs. Outcomes related to health of pregnant adolescents can be improved through interventions that increase the internal LOC [9]. Internality of the fetal health locus of control is slightly above average among pregnant adolescents with a grand mean of 21.89+3.484. This could mean that on average pregnant adolescents are somewhat certain of the health status of their fetus but not overly convinced. This finding is consistent with previous research that suggests pregnant adolescents tend to have a moderate level of internality in their locus of control regarding pregnancy and fetal health. For example, a study by Chibuike et al., mention that Individuals with an internal locus of control are typically forceful and always assume that their acts and other events are a result of their abilities. Internals have the mindset that everything that occurs around them is within their power because they feel that they should be accountable for the outcomes that are certain to arise from any situation. They typically have a positive sense of who they are and a high sense of self-worth [10]. The moderate level of internality in fetal health locus of control among pregnant adolescents has implications for intervention and support programs. While these adolescents may believe they have some control over fetal health outcomes, they may also benefit from interventions that strengthen this belief and promote healthy behaviors during pregnancy. From the current study findings that pregnant adolescents have a moderate level of chance-related fetal health LOC, with a grand mean of 21.93 ± 3.940, there is an interesting twist on how pregnant adolescents react towards pregnancy outcomes. This finding supports prior studies investigating the complex relationships between the concepts of locus of control beliefs borne by pregnant adolescents. Personal beliefs about chance helped determine pregnancy psychological well-being. That is why pregnant adolescents, who expect that pregnancy outcomes depend on chance factors only, may have increased stress and anxiety level that influence the whole organism and pregnancy outcomes [11]. The conclusion that pregnant adolescents demonstrated high powerful other–related beliefs on the facet of fetal health locus of control as depicted by the grand mean of 24.23±2.867 points to the reality that external might have a strong influence on their pregnancy related perceived control system. Health-care workers and members of family form the primary sources of information and support for pregnant adolescents. This reliance on powerful others is argued on the basis that these powers have lots of influence on fetal health outcomes [12]. Pregnant adolescents need the sort of support that takes into consideration the presence of powerful others in adolescents' lives. Further, it stands necessary to involve clients but also significant others in the life of adolescents to affect pregnancy outcomes [13]. Cross-sectional assessments of the present study indicated that there are plausible associations between fetal health LOC and some factors among pregnant adolescents. In fact, the data depicted here have proven that health locus of control of the fetus depicts a highly significant correlation with socioeconomic status ($p < .003$) and control type with previous history of abortion $p < .031$. The implications of these research findings for such participation are that these factors could potentially impact pregnant adolescents' perceived control of fetal health outcomes in some way. Socioeconomic Status (SES): Large and significant correlation between fetal health locus of control and socioeconomic status indicate that adolescent from different SES have different belief about control over fetal health. These findings accord with other studies that have established SES as having an effect on health cognition and practices. Previous Abortion: The difference and significant correlation of locus of control with previous abortion suggest that adolescents who have been involved in an abortion may have different perception of control to fetal health than those who have not. This finding is significant as it confirms that past experiences should be considered for explanatory purposes to analyze or predict health beliefs and practices. Implications for Intervention: The study underscores the approach that gives consideration to Socio economic status and previous experiences as factors affecting pregnant adolescents' perceptions of control over fetal health outcomes. It might therefore be worthwhile to target these aspects in due course of any interventions aimed at enhancing positive pregnant women health behaviors. Therefore, the findings presented in the table indicate that there is the relationship between fetal health locus of control and socioeconomic status as well as between the locus of control and previous abortion among pregnant adolescents. These outcomes highlighted the required for interventions that focus in the impact of these factors in the health beliefs and behaviors during pregnancy.

Conclusion

This study found that pregnant adolescents exhibit a complex set of beliefs about control over fetal health outcomes. The study highlights that pregnant adolescents associate with moderate levels of internality and chance-related beliefs, indicating a belief in their ability to influence outcomes while also recognizing the role of external factors and chance. Additionally, the study shows that pregnant adolescent's exhibit high levels of beliefs related to powerful others, such as healthcare providers and family members, suggesting a significant influence from external sources on their perceptions.

Acknowledgments

The authors would like to sincerely thank every youngster who participated in this study; they much appreciate your assistance. The current study was approved by the University of Thi-Qar College of Nursing Ethics Committee.

Financial support and sponsorship
The study is entirely funded by the researchers; no outside entity provides funding.

Conflicting Interests: The authors have reported no conflicts of interest.

References

Skakkebæk NE, Lindahl-Jacobsen R, Levine H, Andersson AM, Jørgensen N, Main KM, et al. Environmental factors in declining human fertility. Nature Reviews Endocrinology. 2022 Mar; 18(3): 139-57.

Noori N, Proctor JL, Efevbera Y, Oron AP. The effect of adolescent pregnancy on child mortality in 46 low-and middle-income countries. BMJ Global Health. 2022 May 1; 7(5): e007681.

Tseng YH, Cheng CP, Kuo SH, Hou WL, Chan TF, Chou FH. Safe sexual behaviors intention among female youth: the construction on extended theory of planned behavior. Journal of advanced nursing. 2020 Mar; 76(3): 814-23.

Makino M, Ngo TD, Psaki S, Amin S, Austrian K. Heterogeneous impacts of interventions aiming to delay girls' marriage and pregnancy across girls' backgrounds and social contexts. Journal of Adolescent Health. 2021 Dec 1; 69(6): S39-45.

Silva AF, Lopes MHBM. Locus of control, knowledge, attitude and practice for contraception among adolescents. Revista Brasileira de Enfermagem. scielo.br. 2020

Pedron S, Schmaderer K, Murawski M, Schwettmann L. The association between childhood socioeconomic status and adult health behavior: The role of locus of control. Social science research. 2021 Mar 1; 95: 102521.

Delale EA, Novokmet N, Fuchs N, Dolanc I, Mrdjen-Hodžić R, Karelović D, et al. Stress, locus of control, hope and depression as determinants of quality of life of pregnant women: Croatian Islands' Birth Cohort Study (CRIBS). Health Care for Women International. 2021 Dec 17; 42(12): 1358-78.

Chęć M, Rachubińska K, Konieczny K. The importance of parental attitudes for locus of control among adolescents. Pomeranian Journal of Life Sciences. 2024 Jan 1; 70(1): 46-52.

Schempf AH, Strobino DM. Drug use and limited prenatal care: an examination of responsible barriers. American journal of obstetrics and gynecology. 2009 Apr 1; 200(4): 412-e1.

Chibuike OB, Chimezie NB, Ogbuinya OE, Omeje CH. Role of locus of control on assertive behavior of adolescents. Research on Humanities and Social Sciences. 2013 Apr 1; 3(4): 137-45.

Dunkel-Schetter C, Lobel M. Psychological reactions to miscarriage: A pilot test of a theoretical model. Social Science & Medicine. 1991; 33(6): 775-789.

Hohmann-Marriott B. Adolescent Pregnancy and Parenthood: Research and Reviews. Journal of Research on Adolescence. 2011; 21(1): 202-205.

Jones A, Fox J, Babenko-Mould Y. The lived experiences of pregnant adolescents: a systematic review of qualitative evidence. JBI Database of Systematic Reviews and Implementation Reports. 2015; 13(11): 94-123.