

An Assessment of Health System Interventions Addressing Teenage Pregnancy in a Government Hospital

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ABSTRACT

This descriptive-correlational study assessed health system interventions and maternal care utilization among 100 pregnant adolescents in an anonymized government hospital. A validated questionnaire measured clinical profile, prenatal registration, visit frequency, services availed, timeliness, continuity, and documentation. Frequency, percentage, weighted mean, standard deviation, and Pearson correlation were used. Most respondents were 16-17 years old (80%), primigravida (75%), nulliparous (98%), and in the third trimester (85%). Utilization was rated Agree ($M = 3.20$), with services availed highest ($M = 3.58$) and consistent follow-up lowest ($M = 1.79$). Interventions were rated Strongly Agree ($M = 3.44$), led by documentation ($M = 3.58$). Utilization was strongly associated with interventions ($r = .742$, $p < .001$). The proposed TEEN CARES program emphasizes early registration, appointment tracking, confidential adolescent-friendly care, referral coordination, and documentation audit.

Keywords: *Teenage pregnancy, health system interventions, adolescent maternal care, prenatal care, health system responsiveness*

INTRODUCTION

Adolescent pregnancy remains a health-system concern because stigma, delayed pregnancy recognition, limited autonomy, and difficult clinic navigation may postpone care. Despite declining adolescent pregnancy, Philippine antenatal-care gaps persist (PSA, 2026). Hospitals must provide prompt, confidential, respectful, coordinated, and continuous services. WHO responsiveness domains and Philippine adolescent-health standards emphasize timeliness, dignity, privacy, trained providers, referral, and monitoring (WHO, 2000; DOH, 2017).

Statement of the Problem

The study determined the clinical profile, maternal care utilization, health system interventions, their relationship, and a proposed management program.

Scope and Delimitations

The study involved 100 pregnant adolescents aged 13-19 years in one anonymized Metro Manila government hospital. Purposive sampling and self-reported data were used. Long-term outcomes and qualitative experiences were excluded; the cross-sectional design establishes association, not causation.

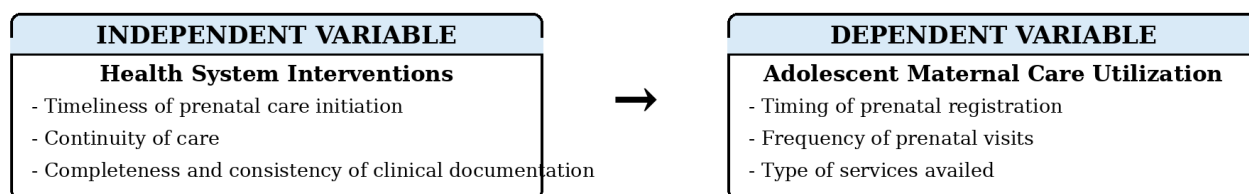
Review of Related Literature

Early antenatal care supports screening, counseling, birth preparedness, and referral. Adolescent-friendly services require confidentiality, respectful communication, trained providers, convenient access, and complete records for continuity and quality improvement (WHO, 2015, 2016).

Theoretical Framework

The WHO Health Systems Responsiveness Framework guided the assessment of timeliness, continuity, and documentation.

Conceptual Framework



METHODOLOGY

This quantitative study described pregnant adolescents and tested the relationship between maternal care utilization and health system interventions in a government hospital.

Research Design

A descriptive-correlational design was employed. The descriptive component summarized clinical characteristics and respondent ratings. The correlational component determined the direction and strength of association between composite utilization and intervention scores without manipulating the clinical setting.

Research Steps

The study followed these steps: identification of the problem; review of related literature; development of the theoretical and conceptual framework; construction and expert validation of the questionnaire; institutional and ethical approval; participant recruitment; supervised administration; checking, coding, and data entry; statistical analysis; interpretation according to the research questions; and development of the TEEN CARES management program.

Data Collection and Sample Selection

Non-probability purposive sampling was used. Eligible participants were pregnant adolescents aged 10-19 years who had received maternal services from the selected hospital, could understand the questionnaire, and voluntarily agreed to participate. The final sample comprised 100 respondents. Incomplete or unreliable questionnaires were excluded. For minors, parental or guardian consent and adolescent assent were secured.

Data were gathered in a private and respectful setting. The researcher explained the purpose, voluntary nature, confidentiality safeguards, and approximate completion time. Completed instruments were checked, assigned codes, and encoded without names or direct

identifiers. The researcher-made questionnaire had three parts: clinical profile; 15 items on timing of prenatal registration, visit frequency, and services availed; and 15 items on timeliness of initiation, continuity, and documentation. Three qualified experts reviewed relevance, clarity, alignment, and appropriateness. A four-point scale was used: 4 = Strongly Agree, 3 = Agree, 2 = Disagree, and 1 = Strongly Disagree.

Data Analysis Methods

Frequency and percentage were used to describe the clinical profile. Weighted mean and standard deviation summarized the Likert-scale domains. Composite means were interpreted as 3.26-4.00, Strongly Agree; 2.51-3.25, Agree; 1.76-2.50, Disagree; and 1.00-1.75, Strongly Disagree. Pearson product-moment correlation tested the relationship between maternal care utilization and health system interventions at $\alpha = .05$. Software outputs reported as .000 were written as $p < .001$.

Research Hypothesis and Validation

The null hypothesis stated that there was no significant relationship between maternal care utilization and health system interventions. It was rejected when $p < .05$. Content validity was strengthened through expert review and direct mapping of each questionnaire domain to the Statement of the Problem and conceptual framework.

Study Limitations and Ethical Considerations

Administrative permission and ethics review preceded data collection. Participation was voluntary, withdrawal carried no effect on access to services, privacy was protected during administration, and results were reported only in aggregate. Minor participants were protected through parental or guardian consent and adolescent assent. Interpretation must consider the purposive sample, single-site setting, self-report measurement, possible recall and social-desirability bias, and the inability of a cross-sectional correlation to establish causation.

RESULTS AND DISCUSSION

SOP 1-3. Clinical Profile, Maternal Care Utilization, and Health System Interventions

Most respondents were 16-17 years old (80%), primigravida (75%), nulliparous (98%), and in the third trimester (85%). The profile shows that the hospital mainly serves first-time adolescent mothers who require structured teaching, counseling, birth preparedness, and postpartum support.

Domain / Indicator	Result	Interpretation
Maternal care utilization - overall	3.20	Agree
Timing of prenatal registration	3.17	Agree
Frequency of prenatal visits	2.86	Agree
Services availed	3.58	Strongly Agree
Early registration / consistent follow-up	2.22 / 1.79	Disagree
Health system interventions - overall	3.44	Strongly Agree
Timeliness / Continuity / Documentation	3.27 / 3.48 / 3.58	Strongly Agree
Immediate start after confirmation	2.42	Disagree

Maternal care utilization was favorable overall, and services availed ranked highest, showing that adolescents who reached the hospital generally received check-ups, tests, supplements, referrals, and health education. However, early registration and consistent follow-up were weak. Health system interventions were strongly favorable, particularly documentation and continuity. The low rating for starting care immediately after pregnancy confirmation suggests that pre-facility barriers may delay entry even when hospital services are responsive after arrival.

SOP 4. Relationship Between Maternal Care Utilization and Health System Interventions

Variables Correlated	r	p	Decision
Overall utilization x overall interventions	.742	< .001	Reject H0
Visit frequency x continuity of care	.781	< .001	Reject H0

The overall relationship was strong, positive, and statistically significant ($r = .742$, $p < .001$), leading to rejection of the null hypothesis. The strongest domain relationship was between visit frequency and continuity of care ($r = .781$, $p < .001$). Thus, scheduling, monitoring, return guidance, and consistent service availability are central management levers for improving utilization. The findings support the conceptual framework but do not establish causation.

RESULTS AND DISCUSSION

SOP 5. Proposed Management Intervention Program

The proposed TEEN CARES program - Teenage Pregnancy Care, Access, Registration, Education, and Support - addresses delayed registration and inconsistent follow-up while preserving strengths in continuity, service availability, and documentation.

Component	Priority Activities	Indicator
Timely registration	First-trimester messages, barangay/school referral, confidential fast-track process	% registered early
Engagement and navigation	Adolescent registry, reminders, missed-visit calls, nurse/midwife navigator	On-time visit rate
Confidential care and education	Private counseling, respectful communication, danger signs and birth-preparedness teaching	% counseled privately
Documentation, referral, postpartum support	Standard records, referral feedback, chart audit, postpartum and contraception counseling	Completeness and follow-up rate

Hospital administration should supervise implementation through nursing, obstetrics, midwifery, medical records, social service, information technology, and community partners. Monthly monitoring and quarterly review should compare early registration, missed visits, referral completion, documentation quality, and postpartum follow-up against baseline.

SUMMARY

Among 100 pregnant adolescents, most were 16-17 years old, first-time mothers, and in the third trimester. Utilization was rated Agree overall, with strong service access but weak early registration and follow-up. Interventions were rated Strongly Agree, especially documentation and continuity. Overall utilization was strongly related to interventions ($r = .742$, $p < .001$).

CONCLUSIONS

The hospital mainly serves first-time adolescent mothers who need structured education and support.

Continuity, service availability, and documentation are strengths; early registration and consistent attendance remain gaps.

Stronger health system interventions are associated with better maternal care utilization, but causation cannot be inferred.

RECOMMENDATIONS

Pilot TEEN CARES, assign accountable unit leads, and allocate resources for private counseling, tracking, and referral coordination.

Assign a nurse or midwife navigator, maintain an adolescent registry, send reminders, and follow up missed visits promptly.

Conduct quarterly documentation and referral audits and expand future research through multicenter sampling, record verification, qualitative interviews, and outcome follow-up.

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AI DECLARATION STATEMENT

AI-supported tools were used only for language refinement, condensation, and document formatting. No AI tool collected the data, generated respondent records, performed the statistical analysis, or replaced the researcher's responsibility for verifying the manuscript. The author and adviser remain accountable for the study content, data integrity, interpretation, and academic submission.

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