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A Study to Assess the Effectiveness of Information Booklet on Outcome of Teenage Pregnancy in Terms of Knowledge of Adolescent Girls in Selected Swami Atmanand English Medium School of Aawapalli District Bijapur (C.G.)

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Abstract: ***Teenage pregnancy remains a significant public health concern globally, accounting for approximately 16 million pregnancies annually in the 15-19 year age group. This quasi-experimental study evaluated the effectiveness of an information booklet on adolescent girls' knowledge regarding teenage pregnancy outcomes. Conducted at Swami Atmanand English Medium School in Bijapur District, the study involved 60 adolescent girls aged 10-19 years using a pre-test post-test design. Key Findings: Prior to the intervention, 63.33% of participants demonstrated poor knowledge, while 31.66% had average knowledge. Following administration of the information booklet, 81.66% achieved good knowledge levels. A paired t-test revealed a statistically significant difference between pre-test (mean=12.08, SD=3.35) and post-test (mean=23.5, SD=3.79) scores ($t=7.514$, $p<0.05$), confirming the intervention's effectiveness. Additionally, maternal education demonstrated a significant association with baseline knowledge levels ($p=0.002$). Conclusion: The information booklet proved highly effective in enhancing adolescent girls' knowledge of teenage pregnancy outcomes, with the majority transitioning from poor to good knowledge levels. These findings support the implementation of structured educational interventions in school settings to address knowledge gaps concerning teenage pregnancy.***

Keywords: Teenage pregnancy, Adolescent health education, Knowledge assessment, Health promotion, Information booklet

1. Introduction

Teenage pregnancy constitutes a critical global health issue with substantial implications for maternal and child health outcomes. According to the World Health Organization, approximately 16 million pregnancies occur annually among girls aged 15-19 years worldwide, with 95% of these occurring in developing nations (WHO, 2019, 2020). The prevalence is particularly elevated in regions such as Sub-Saharan Africa (143 per 1,000 girls) and South Asia (71-119 per 1,000 women aged 15-19 years).

In India specifically, the magnitude of this problem is considerable, with 42.9% of girls in the 15-17 year age group and 3 out of 10 girls becoming pregnant before age 20. Notably, 47% of Indian women aged 20-24 married before the legal age of 18, with higher prevalence in rural areas (56%). The total fertility rate among adolescents ranges from 6.2 to 6.7 (WHO, 2020).

Early pregnancy during adolescence poses numerous medical, psychological, and socioeconomic risks. These include increased vulnerability to obstetric complications such as gestational hypertension, anemia, preterm labor, and low birth weight deliveries. Additionally, teenage mothers face challenges including academic discontinuation, limited economic opportunities, and psychosocial difficulties.

The global estimate suggests that 13 million children are born annually to mothers under age 20, with over 90% of these births occurring in developing countries. Young maternal age significantly increases the risk of perinatal mortality and morbidity, with teenage mothers experiencing 2.5 to 18 times greater neonatal mortality compared to adult mothers.

Knowledge deficits regarding teenage pregnancy and its prevention remain significant barriers to health promotion among adolescent girls. Many adolescents demonstrate inadequate understanding of reproductive health, contraceptive methods, and pregnancy-related complications. Educational interventions targeting this population have demonstrated potential in improving health knowledge and promoting protective behaviours.

Study Rationale and Objectives

This study addresses the critical gap in adolescent health literacy regarding teenage pregnancy outcomes. The specific objectives were:

- To assess baseline knowledge levels regarding teenage pregnancy outcomes among adolescent girls
- To develop a comprehensive information booklet on teenage pregnancy outcomes
- To evaluate the effectiveness of the information booklet intervention
- To determine associations between demographic variables and baseline knowledge

2. Methodology

Research Design and Setting

A quasi-experimental, one-group pre-test post-test design was employed. The study was conducted at Swami Atmanand English Medium School in Aawapalli District, Bijapur, Chhattisgarh, India.

Sample and Sampling
Using purposive sampling, 60 adolescent girls aged 10-19 years who had attained menarche were enrolled. Inclusion criteria required participants to be willing to participate and capable of communicating in Hindi or English.

Instrumentation
A self-administered questionnaire comprising two sections was developed:
- Section A: Demographic data (10 items)
- Section B: Knowledge assessment (30 items regarding teenage pregnancy outcomes) Scoring: One point for each correct response; knowledge classified as inadequate (≤50%), moderately adequate (51-75%), or adequate (>75%).

Validity and Reliability
Content validity was established through expert review. Reliability testing using the split-half method yielded r=0.83, indicating acceptable internal consistency.

Data Collection
Pre-test assessment occurred on January 25, 2024. An information booklet with visual aids was administered, followed by post-test assessment on February 1, 2024.

Analysis
Descriptive statistics (frequency, percentage, mean, standard deviation) were computed for demographic characteristics. Paired t-tests compared pre- and post-test knowledge scores. Chi-square analysis examined associations between demographic variables and baseline knowledge.

3. Results

Demographic Characteristics
The sample demonstrated diverse demographic representation: 35% were aged 16-19 years, 38% had completed primary education, 75% resided in nuclear families, and 60% were Hindu. Maternal education varied, with 35% of mothers having secondary education. The majority (43.33%) had fathers in private business, and 50% reported monthly family income ≤₹5,000.

Knowledge Outcomes
Pre-Intervention: Baseline knowledge assessment revealed concerning deficits:
- 58.33% demonstrated poor knowledge
- 31.66% exhibited average knowledge
- 10% achieved good knowledge
- Mean pre-test score: 12.08 ± 3.35

Post-Intervention: Following the information booklet administration:
- 81.66% achieved good knowledge
- 15% demonstrated average knowledge
- 3.33% retained poor knowledge
- Mean post-test score: 23.5 ± 3.79

Effectiveness Analysis
Paired t-test comparison revealed:
- Mean difference: 11.42
- t-value: 7.514
- p-value: <0.05
- Correlation coefficient: r=0.714 (positive correlation)

The table value (2.00) at 0.05 significance level with 59 degrees of freedom was substantially less than the calculated t-value, indicating statistically significant improvement in knowledge.

Demographic Associations
Chi-square analysis identified maternal education as the sole demographic variable significantly associated with baseline knowledge (χ^2=8.83, p=0.002). Age, educational status, family type, religion, paternal education, parental occupation, family income, and media usage showed no significant associations with pre-test knowledge.

4. Discussion

The findings demonstrate remarkable effectiveness of the information booklet intervention. The 71.66 percentage-point increase in participants achieving good knowledge (from 10% to 81.66%) substantially exceeds typical educational intervention outcomes. This improvement aligns with comparable studies highlighting the efficacy of structured health education in adolescent populations.

The positive correlation (r=0.714) between pre- and post-test scores suggests that the intervention benefited learners across the initial knowledge spectrum, with more substantial gains among those with baseline deficits. This is encouraging, as it indicates equitable impact despite heterogeneous starting points.

The significant association with maternal education is noteworthy, suggesting intergenerational transmission of health literacy. Girls with more educated mothers may have had enhanced baseline exposure to health information through family discussions or parental health-seeking behaviours.

5. Conclusion

This study provides compelling evidence for the effectiveness of targeted information booklet interventions in improving adolescent knowledge regarding teenage pregnancy outcomes. The dramatic shift from predominantly poor to predominantly good knowledge levels suggests that carefully designed educational resources can successfully address critical gaps in reproductive health literacy.

The intervention's success in this school setting suggests potential for broader implementation within educational curricula. Community health nurses and educators should prioritize development and dissemination of similar evidence-based materials.

6. Implications for Practice

- Community Health Nursing: Nurses should advocate for school-based screening programs and collaborative health education initiatives targeting adolescents.

- Nursing Education: Curricula should emphasize adolescent reproductive health content and competencies in educational delivery to this population.
- Nursing Administration: Leaders should support and resource reproductive health promotion programs within institutional settings.
- Research: Future studies should explore sustained behavioural change, effectiveness across diverse populations, and optimal delivery mechanisms for educational interventions.

7. Recommendations

1) Implement similar evidence-based interventions in additional school settings
2) Conduct longitudinal studies examining knowledge retention and behavioral application
3) Develop comparative interventions to identify optimal educational delivery methods
4) Expand interventions to include male adolescents and diverse age groups
5) Integrate teenage pregnancy education into formal school curricula.

This study was conducted with ethical approval and informed consent from all participants. The authors declare no conflicts of interest.

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