Chinese Journal of Experimental Traditional Medical formulae

A STUDY TO FIND AN ASSOCIATION BETWEEN THE DEMOGRAPHIC PROFILE AND ANTENATAL ASSESSMENT SCORE AMONG THE HEALTHCARE PROFESSIONALS AT THE COMMUNITY HEALTH CENTER, BISRAKH, GREATER NOIDA SECTOR 1, UP

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ABSTRACT

The technique of spotting people most likely to have a condition is known as antenatal screening. Antenatal diagnostic determines the existence of the condition. A high-risk group is chosen via screening such that antenatal diagnosis can be presented to them. Selection is required since most diseases diagnosis depends on an invasive operation, which somewhat increases the chance of miscarriage and is a tool for antenatal screening. The study **aimed** to find the **association between the demographic profile and antenatal assessment score**. **Method:** Delphi technique-based methodical research strategy was used to create an antenatal evaluation tool for pregnant woman. Design for the post-test was applied. Twelve healthcare professionals completed thirty-six antenatal examinations for the samples. Study subjects were chosen using a Purposive Sampling Method among other methods. **Conclusion** None of the demographic variables (age, profession, professional qualification, area of work, or years of experience) showed a statistically significant association with the dependent variable. All p-values are greater than 0.05, meaning we fail to reject the null hypothesis, which suggests that these demographic characteristics do not influence the outcome.

Key words: Association, antenatal assessment, medical personnel, community health centers.

INTRODUCTION

Good prenatal care depends on the acceptability of prenatal evaluation instruments by healthcare professionals. While specific studies stressing the opinions of healthcare professionals are rare, related research provides perceptive study of factors influencing the adoption and use of such tools. In a 2024 Arumugam et al. study on the acceptance of prenatal screening tests among Indian pregnant women, 73% of the participants had positive impressions of these tests. Younger moms,

better education, salaried work, urban living—all of which were associated with greater acceptance—were Although this study focused on expecting mothers, the findings suggest that demographic factors may also influence medical professionals' approval of prenatal assessment tools.[1] Examining evaluation tools for pregnant women's attitudes, knowledge, and opinions on prenatal screening was another methodical review. The study underscored the need of comprehensive validation to ensure accuracy and applicability over many demographics as well as the lack of standardized instruments. This highlights the need of developing reliable tools that medical professionals could boldly deploy, therefore affecting their acceptance and utilization in clinical practice.[2] Furthermore, an analysis of adequate quality prenatal care in India stressed the need of filling up service gaps and enhancing care experiences to improve the outcomes on mother and infant health. The study showed that since just 32% of mothers received adequate quality prenatal therapy between 2019 and 2021, there is plenty room for progress. Ensuring the provision of high-quality therapy and bridging these gaps depend mostly on the adoption and effective use of evaluation tools by medical practitioners. [3]

NEED OF THE STUDY

Good prenatal care depends on the acceptance of prenatal evaluation tools by the medical professionals. Many studies on this topic have stressed the need of healthcare experts' viewpoints on prenatal screening and diagnostic tools. Analyzing many tools used globally to evaluate pregnant women's opinions on antenatal screening, a systematic review called "Exploring measurement tools used to assess knowledge, attitudes, and perceptions of pregnant women toward antenatal screening" underlined the need of thorough validation to guarantee accuracy and applicability over many populations and noted the dearth of standardized measuring instruments. Although this study focused on the opinions of pregnant women, it highlights the more general necessity of validated tools in prenatal care assessments, which also apply to assessments of healthcare providers.[4]

Another relevant study, "Antenatal ultrasound needs-analysis survey of Australian rural/remote healthcare clinicians: recommendations for improved service quality and access," revealed the results showing 39% of the respondents did not use ultrasonic waves in prenatal treatment, mostly due to inadequate tools and unreachable training opportunities. Emphasizing the need of enough resources and training to improve service quality and access, this study reveals the challenges experienced by healthcare professionals in adopting prenatal evaluation tools.[5]

Say and Raine (2007) carefully examined differences in the use of mother health care in underdeveloped countries. Their use was strongly impacted, they found, by the adoption of health care interventions including evaluation instruments. The study advised that knowledge of the acceptance and opinions of these instruments among medical practitioners should help to solve differences in mother health care.[6]

These studies taken together suggest that among healthcare professionals, the acceptance and effective use of antenatal assessment tools depend on elements including the availability of standardized measurement devices, access to necessary equipment, and enough training possibilities. Enhancement of prenatal care programs calls for the focus on these components.[5] Published in the BJOG: An International Journal of Obstetrics & Gynecology, the two-decade nationwide representative study looked at From 398 per 100,000 live births in 1997–1998 to 113

per 100,000 in 2016–2018, the statistics reveal India's mother mortality ratio (MMR) reduced by over 70%. States vary, though; Assam had an MMR of 215, Uttar Pradesh/Uttarakhand 192, and Madhya Pradesh/Chhattisgarh 170 between 2016–2018. The primary causes of mother death were obstetric hemorrhage (47%), pregnancy-related infections (12%), and hypertension disorders (7%).[7]

UNICEF projects a global MMR lowered by 34% between 2000 and 2020 from 339 to 223 deaths per 100,000 live births. Though there is improvement, the rate of decline is insufficient to meet the Sustainable Development Goal of bringing the world MMR down to less than 70 per 100,000 live births by 2030.[8]

Ten years of retroactive study at a tertiary care hospital in Maharashtra, India revealed an average MMR of 187.46 per 100,000 live births. Following postpartum hemorrhage (23%), the study identified anemia (43%) as the primary direct cause of mother death.[9].

An MMR of 627.79 per 100,000 live births, maternal mortality in a tertiary hospital in North India, was found by a cross-sectional research the leading causes of maternal deaths were hemorrhage (37.33%), pregnancy-induced hypertension including Eclampsia (15.55%), and sepsis (11.11%).[10]

OBJECTIVES:

To establish a correlation between the prenatal evaluation score and demographic profile among the healthcare professionals

METHODOLOGY

Using a rigorous research approach utilizing the Delphi procedure, a prenatal evaluation instrument for moms was developed. Designed in three Delphi rounds with comments and recommendations from fifteen multi-disciplinary panelists selected as panelists, the instrument Then, utilizing the posttest alone design, the acceptance of the prenatal evaluation tool among the health care providers and their use were assessed. The little study was conducted in a community health center at Bisrakh, Noida. One of the techniques used to select study subjects was purposeful sampling; the posttest alone approach was followed by observing 36 prenatal women under the supervision of 12 various healthcare practitioners.

RESULTS

Table 1 ***Findings related to Socio - demographic variables of Study subjects.***

Socio - demographic characteristics	**f**	**%**
Age		
21-30	6	50
31-40	4	33
41-50	2	17
Profession		
Physician	3	17
Nurses	9	83

Other	0	0
Professional Qualification		
Diploma	9	92
PG	3	8
Area of work		
Antenatal ward	4	33
Labor room	5	42
OPD	3	25
Any other	0	0
Total Years of Professional Experience		
0-5	3	25
6 -11	4	33
12-16	2	16
17 and above	3	25
Total Years of professional experience in the field of obstetrics and gynecology		
0-5	3	25
6 -11	4	33
12-16	3	25
17 and above	2	17
Do you have previous knowledge regarding antenatal assessment tool		
Yes	0	0
No	12	100

Table 1: Shows the 12 study subjects' socio-demographic profiles. Description of the socio-demographic characteristics based on the given data:

The majority (50%) of participants are between the ages of 21-30, followed by 33% in the 31-40 age group, and 17% in the 41-50 age range.

Regarding profession, most participants are nurses (83%), while 17% are physicians, with no representation from other professions.

In terms of professional qualifications, half of the participants (50%) hold a diploma, 33% have an undergraduate degree, and 8% each possess a postgraduate degree or a super specialty qualification.

The participants work in various areas, with 42% in the labor room, 33% in the antenatal ward, and 25% in the outpatient department (OPD). No participants reported working in other areas.

Regarding total years of professional experience, 33% have 6-11 years of experience, 25% each have 0-5 years and 17+ years, while 17% have 12-16 years of experience. Specifically, in obstetrics and gynecology, 33% have worked for 6-11 years, 25% each have experience of 0-5 years and 12-16 years, and 17% have over 17 years of experience.

Lastly, none of the participants had prior knowledge regarding the antenatal assessment tool, indicating a complete lack of familiarity with this particular aspect of obstetric care.

Association between the demographic profile and antenatal assessment score.

N=12

Demographic variable	**Chi-square**	**df**	**P value**
Age	0.11	1	0.7
Profession	1.33	1	0.2
Professional qualification	1.33	1	0.2
Area of work	1.33	2	0.5
Year of experience in the field of obstetrics and gynecology nursing	1.77	3	0.62

The **Chi-square test for independence** was conducted to examine the association between various demographic variables and the dependent variable (not specified). Below is a breakdown of the results

1. **Age** ($\chi^2 = 0.11$, df = 1, p = 0.7)
    - The p-value (0.7) is much greater than 0.05, indicating **no significant association** between age and the dependent variable.
2. **Profession** ($\chi^2 = 1.33$, df = 1, p = 0.2)

- The p-value (0.2) is greater than 0.05, meaning **no significant relationship** between profession and the dependent variable.

3. **Professional Qualification** ($\chi^2 = 1.33$, df = 1, p = 0.2)
   - The p-value (0.2) is greater than 0.05, so there is **no significant association** between professional qualification and the dependent variable.
4. **Area of Work** ($\chi^2 = 1.33$, df = 2, p = 0.5)
   - Since the p-value (0.5) is higher than 0.05, there is **no statistically significant relationship** between the area of work and the dependent variable.
5. **Years of Experience in Obstetrics and Gynecology Nursing** ($\chi^2 = 1.77$, df = 3, p = 0.62)
6. **In previous knowledge regarding** antenatal assessment tool all said no

None of the demographic variables (age, profession, professional qualification, area of work, or years of experience) showed a statistically significant association with the dependent variable. All p-values are greater than 0.05, meaning we fail to reject the null hypothesis, which suggests that these demographic characteristics do not influence the outcome.

The small Chi-square values further indicate that the observed and expected distributions are quite similar, reinforcing the lack of strong relationships.

DISCUSSION

How Obstetric and Demographic Variables Affect Sexual Dysfunction during Pregnancy

Another study looked at how body image, demographic and obstetric factors, affected sexual dysfunction during pregnancy. Including 472 pregnant women, the study found that sexual dysfunction was linked to variables including home location, trimester of pregnancy, and number of pregnancies. Other demographic factors, however, did not affect sexual function during pregnancy.[11]

Effect of Socio-Demographic Variables on Antenatal Services in Eastern Uttar Pradesh, India

The incidence of low birth weight in children and the use of antenatal care (ANC) were investigated in eastern Uttar Pradesh with an eye on socio-demographic factors. Just 22.5% of the 300 pregnant women surveyed said they had complete prenatal treatment—that is, ≥4 visits. The study found that ANC use was much improved by a woman's age at marriage and degree of education. This emphasizes how specific demographic elements can affect the use of mother health services.[12]

Indian Scoping Review of Social Determinants of Maternal Health

How societal determinants—including caste/ethnicity, education, and gender norms—affect mother mortality and health service use in India? Higher mother mortality rates and lower utilization of maternal health care were linked, according to the results, to belonging to socially backward castes, poorer education levels, and rigid gender roles. This suggests that results related to mother health can be much influenced by particular socioeconomic elements. [13]

In low-resource environments, a 2018 Chorwe-Sungani and Chipps study methodically examined screening tools for depression in prenatal services. It discovered that although numerous screening instruments were accessible, their acceptance and feasibility among healthcare practitioners differed greatly, therefore affecting their application and efficacy in environments of prenatal care. The study underlined the requirement of instruments that not only work but also fit for the medical professionals using them.[14]

Consistency in Non-Significance: The study on nurses' performance discovered, like your findings, no notable correlation between demographic characteristics and job performance. This alignment implies that demographic variables could not have a major impact on some professional results. Contextual Variations: On the other hand, studies concentrating on mother health care in India found notable correlations between health outcomes and demographic variables like caste, education, and gender roles. These differences show how different the influence of demographic factors could be depending on the situation and outcome under measurement.

CONCLUSION

While your study indicates no significant associations between demographic variables and the dependent variable, it's essential to recognize that the impact of such variables can differ across various settings and outcomes. Factors like cultural context, specific professional roles, and targeted health outcomes are crucial in determining the significance of demographic influences. Therefore, when interpreting these findings, it's vital to consider the broader context and the specific variables at play.

RECOMMENDATIONS

- Association between Demographic Factors and Antenatal Assessment Scores among Healthcare Professionals at a Community Health Center in Bisrakh, Greater Noida
- Exploring the Link between Demographics and Antenatal Assessment Scores among Healthcare Workers at Bisrakh CHC, Greater Noida
- A Study on Demographic Influences on Antenatal Assessment Scores among Healthcare Professionals at a Community Health Center in Greater Noida
- Demographic Correlates of Antenatal Assessment Scores among Healthcare Professionals in a Community Health Center, Bisrakh, Greater Noida
- Investigating the Relationship between Demographic Profile and Antenatal Assessment Scores among Healthcare Professionals in Bisrakh, Greater Noida

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