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**EFFECTIVENESS OF NURSING ACTIVITIES IN PROVIDING MEDICAL CARE TO
WOMEN OF REPRODUCTIVE AGE IN OUTPATIENT SETTINGS**

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Abstract

Background: Reproductive health is a cornerstone of public health, directly influencing maternal and child mortality rates. In Uzbekistan, the primary healthcare system relies heavily on patronage nurses to deliver care to women of reproductive age (WRA). However, the effectiveness of nursing interventions in outpatient settings remains under-evaluated. This study aims to assess the impact of an "Enhanced Nursing Care Model" on reproductive health indicators, patient satisfaction, and preventive behavior among WRA in the Andijan region. **Methods:** A prospective comparative study was conducted in 4 Family Polyclinics. 400 women of reproductive age were enrolled. The Intervention Group (n=200) received care from nurses trained in a new protocol (active counseling, home monitoring, digital tracking), while the Control Group (n=200) received standard care. Key performance indicators included contraceptive prevalence rate, screening coverage for cervical cancer/anemia, and patient satisfaction scores over a 12-month period. **Results:** The Intervention Group showed a significantly higher uptake of modern contraceptives (62% vs. 45%, $p < 0.01$) and improved screening rates for anemia (95% vs. 70%). Patient satisfaction with nursing care was 92% in the Intervention Group compared to 68% in the Control Group. Nurses in the enhanced model identified high-risk pregnancies earlier (8 weeks gestation vs. 14 weeks). **Conclusion:** Expanding the role and competency of nurses in outpatient settings significantly improves reproductive health outcomes. A proactive, nurse-led model is cost-effective and essential for strengthening the primary care system.

Keywords

Nursing, reproductive health, outpatient care, patronage, contraception, patient satisfaction, primary healthcare.

**AMBULATOR SHAROITDA REPRODUKTIV YOSHDAGI AYOLLARGA
TIBBIY YORDAM KO'RSATISHDA HAMSHIRALAR FAOLIYATINING
SAMARADORLIGI**

Annotatsiya

Kirish: Reproductive health is a cornerstone of public health, directly influencing maternal and child mortality rates. In Uzbekistan, the primary healthcare system relies heavily on patronage nurses to deliver care to women of reproductive age (WRA). However, the effectiveness of nursing interventions in outpatient settings remains under-evaluated. This study aims to assess the impact of an "Enhanced Nursing Care Model" on reproductive health indicators, patient satisfaction, and preventive behavior among WRA in the Andijan region. **Methods:** A prospective comparative study was conducted in 4 Family Polyclinics. 400 women of reproductive age were enrolled. The Intervention Group (n=200) received care from nurses trained in a new protocol (active counseling, home monitoring, digital tracking), while the Control Group (n=200) received standard care. Key performance indicators included contraceptive prevalence rate, screening coverage for cervical cancer/anemia, and patient satisfaction scores over a 12-month period. **Results:** The Intervention Group showed a significantly higher uptake of modern contraceptives (62% vs. 45%, $p < 0.01$) and improved screening rates for anemia (95% vs. 70%). Patient satisfaction with nursing care was 92% in the Intervention Group compared to 68% in the Control Group. Nurses in the enhanced model identified high-risk pregnancies earlier (8 weeks gestation vs. 14 weeks). **Conclusion:** Expanding the role and competency of nurses in outpatient settings significantly improves reproductive health outcomes. A proactive, nurse-led model is cost-effective and essential for strengthening the primary care system.



monitoring, raqamli kuzatuv) xizmatidan foydalandi, Nazorat guruhi (n=200) esa standart yordam oldi. Asosiy samaradorlik ko'rsatkichlari sifatida kontraseptivlardan foydalanish darajasi, bachadon bo'yni saratoni/anemiya bo'yicha skrining qamrovi va bemorlarning qoniqish darajasi 12 oy davomida baholandi. Natijalar: Intervensiya guruhida zamonaviy kontraseptivlardan foydalanish (62% ga 45%, $p<0.01$) va anemiya skriningi qamrovi (95% ga 70%) sezilarli darajada yuqori bo'ldi. Hamshiralik parvarishidan qoniqish darajasi Intervensiya guruhida 92%, Nazorat guruhida esa 68% ni tashkil etdi. Kuchaytirilgan modeldagi hamshiralalar yuqori xavfli homiladorlikni erta aniqlashda (8 haftalikda, nazoratda 14 haftalik) ustunlik qildi. Xulosa: Ambulator sharoitda hamshiralarning roli va kompetensiyasini kengaytirish reproduktiv salomatlik natijalarini sezilarli darajada yaxshilaydi. Hamshira boshqaruvidagi faol model iqtisodiy jihatdan samarali va birlamchi tibbiy yordam tizimini mustahkamlash uchun zarurdir.

Kalit so'zlar

Hamshiralik ishi, reproduktiv salomatlik, ambulator yordam, patronaj, kontrasepsiya, bemor qoniqishi, birlamchi tibbiy yordam.

ЭФФЕКТИВНОСТЬ ДЕЯТЕЛЬНОСТИ МЕДСЕСТЕР ПРИ ОКАЗАНИИ МЕДИЦИНСКОЙ ПОМОЩИ ЖЕНЩИНАМ РЕПРОДУКТИВНОГО ВОЗРАСТА В АМБУЛАТОРНЫХ УСЛОВИЯХ

Аннотация

Введение: Репродуктивное здоровье является краеугольным камнем общественного здравоохранения, напрямую влияющим на показатели материнской и детской смертности. В Узбекистане система первичной медико-санитарной помощи в значительной степени полагается на патронажных медсестер при обслуживании женщин репродуктивного возраста (ЖРВ). Однако эффективность сестринских вмешательств в амбулаторных условиях остается недостаточно изученной. Целью данного исследования является оценка влияния «Модели усиленного сестринского ухода» на показатели репродуктивного здоровья, удовлетворенность пациентов и профилактическое поведение среди ЖРВ в Андижанской области. Методы: Было проведено проспективное сравнительное исследование в 4 семейных поликлиниках. В исследование были включены 400 женщин репродуктивного возраста. Группа вмешательства (n=200) получала помощь от медсестер, обученных по новому протоколу (активное консультирование, домашний мониторинг, цифровое отслеживание), тогда как контрольная группа (n=200) получала стандартную помощь. Ключевые показатели эффективности включали уровень использования контрацептивов, охват скринингом на рак шейки матки/анемию и оценки удовлетворенности пациентов в течение 12 месяцев. Результаты: В группе вмешательства наблюдалось значительно более широкое использование современных контрацептивов (62% против 45%, $p<0.01$) и улучшение показателей скрининга анемии (95% против 70%). Удовлетворенность пациентов сестринским уходом составила 92% в группе вмешательства по сравнению с 68% в контрольной группе. Медсестры в усиленной модели выявляли беременность высокого риска раньше (на 8-й неделе гестации против 14-й). Заключение: Расширение роли и компетенции медсестер в амбулаторных условиях значительно улучшает исходы в области репродуктивного здоровья. Проактивная модель под руководством медсестры является экономически эффективной и необходимой для укрепления системы первичной медико-санитарной помощи.

Ключевые слова



Сестринское дело, репродуктивное здоровье, амбулаторная помощь, патронаж, контрацепция, удовлетворенность пациентов, первичная медико-санитарная помощь.

INTRODUCTION

Women of Reproductive Age (WRA), conventionally defined as those aged 15–49 years, constitute a significant demographic segment that forms the biological foundation of future generations. Their health status is not only an individual concern but a critical determinant of public health, directly influencing maternal and child mortality rates, family well-being, and national economic productivity. In Uzbekistan, the protection of motherhood and childhood is a state priority, yet the burden of preventable reproductive health issues—such as anemia, unintended pregnancies, and late detection of gynecological pathologies—remains a challenge.

The primary responsibility for delivering continuous, comprehensive, and accessible medical care to this population falls upon the primary healthcare (PHC) system, specifically Family Polyclinics and Rural Doctor Points (QOP). Within this infrastructure, the patronage nurse serves as the pivotal link between the medical community and the household. The nurse is often the first, and sometimes the only, point of contact for women in rural areas, uniquely positioned to influence health behaviors through trust and proximity.

However, the traditional model of nursing in the Andijan region has often been constrained by a hierarchical, task-oriented approach. Nursing activities in outpatient settings are frequently limited to passive execution of physician orders, administrative record-keeping, and reactive care (e.g., injections, blood pressure measurement). This underutilization of nursing potential leads to critical gaps in care. For instance, while antenatal care coverage is high, the *quality* of preconception counseling is variable, resulting in high rates of anemia at the onset of pregnancy. Similarly, low uptake of modern contraceptives is often linked to myths and lack of proper education, a gap that nurses are ideally suited to fill.

Improving the quality and efficiency of reproductive health services requires a paradigm shift towards an "Enhanced Nursing Care Model." This model envisions the nurse not as a passive assistant, but as an autonomous provider of health education, case management, and preventive screening. It emphasizes active patronage, where the nurse proactively visits homes to identify risks (e.g., domestic violence, nutritional deficits) rather than waiting for patients to present with complications. This study aims to rigorously evaluate the effectiveness of such a model, hypothesizing that empowering nurses with updated protocols and digital tools will lead to measurable improvements in reproductive health indicators and patient satisfaction in the Andijan region.

LITERATURE REVIEW

The Global Evolution of Primary Care Nursing The role of the nurse in primary care has undergone a significant transformation globally. International literature, particularly from the UK and Scandinavia, supports the efficacy of "Nurse-Led Clinics." Studies by *Kemp et al. (2018)* demonstrated that nurses trained in family planning provided contraceptive counseling outcomes equivalent to or better than general practitioners. Nurses often spend more time with patients, addressing holistic needs and psychosocial barriers that physicians may overlook due to time constraints. The World Health Organization (WHO) actively promotes "Task Shifting"—the rational redistribution of tasks from highly specialized workforce (doctors) to less specialized but competent health workers (nurses)—as a key strategy to achieve Universal Health Coverage.

The Unique Context of the "Patronage" System In Central Asia and post-Soviet states, the "Patronage" system offers a unique infrastructure for home-based care. Unlike the clinic-



based models of the West, patronage nurses have a mandate to visit homes. However, *Ahmedov (2020)* notes that the potential of this system is often hampered by excessive bureaucracy and a lack of specific training in modern counseling techniques. Nurses are often viewed as "controllers" rather than "partners" in health. Modernizing this system requires shifting the focus from "checking boxes" to "building relationships."

Evidence for Nursing Interventions in Reproductive Health Specific areas where nursing interventions have shown high impact include:

Contraception and Family Planning: Nurses are pivotal in dispelling myths regarding hormonal contraception and IUDs. Systematic reviews indicate that nurse-led education significantly increases the Contraceptive Prevalence Rate (CPR) and reduces discontinuation rates.

Preconception Care: Identifying modifiable risk factors like anemia, obesity, and hypertension *before* conception is crucial. Nurses can effectively manage iron supplementation programs and lifestyle coaching.

Screening Programs: Organizing population-based screening for cervical (Pap smear) and breast cancer. *Jassim et al. (2017)* found that nurse-led reminder systems (calls, texts) increased cervical screening attendance by over 20%.

Dimensions of Effectiveness Measuring the "effectiveness" of nursing care requires a multidimensional approach. It is not sufficient to measure only clinical outcomes (e.g., birth rates). Effectiveness must also encompass "Process Indicators" (e.g., percentage of women screened, timeliness of referrals) and "Humanistic Outcomes" (e.g., patient trust, satisfaction, empowerment, and quality of life). There is a paucity of local data quantifying these specific metrics in the context of the Uzbek healthcare reforms, making this study timely and relevant.

MATERIALS AND METHODS

Study Design A prospective, cluster-randomized comparative study was conducted over 12 months (2023-2024). Setting Four Family Polyclinics in Andijan city were selected. Two were randomized to the "Intervention" arm and two to the "Control" arm. Nurses - 20 nurses in the Intervention group underwent a 2-week intensive training course on "Modern Reproductive Health Counseling and Digital Monitoring." 20 nurses in the Control group continued standard practice. Patients - 400 women (200 per group) aged 18-35, registered in the catchment areas.

The Intervention (Enhanced Model) The Intervention nurses utilized: Structured Home Visits - Using a checklist to assess reproductive plans, anemia signs, and domestic environment. Active Counseling - Motivational interviewing techniques to discuss family planning. Digital Tools - Tablets to register health data and set automated reminders for screening appointments. Clinical - Contraceptive Prevalence Rate (CPR), Anemia detection rate, Early antenatal registration (<12 weeks). Social - Patient Satisfaction Index (PSI) measured via a validated questionnaire (5-point Likert scale).

RESULTS

Clinical Indicators The proactive approach yielded superior clinical coverage.

Table 1: Reproductive Health Indicators at 12 Months

Indicator	Control Group (Standard)	Intervention Group (Enhanced)	P-value
Contraceptive Prevalence	45.0%	62.0%	<0.01
Anemia Screening Coverage	70.0%	95.0%	<0.001



Early Registration	Pregnancy	65.0%	88.0%	<0.01
Detected Pathologies	Gyn.	12.0%	28.0%	<0.01

The higher detection rate in the Intervention group suggests that standard care misses a significant burden of asymptomatic disease (e.g., erosion, vaginitis).

Patient Satisfaction Women in the Intervention group reported feeling more "listened to" and "cared for."

Trust in Nurse - 92% in Intervention vs. 55% in Control.

Accessibility - 85% of Intervention patients reported they could easily contact their nurse for advice, compared to 30% in Control.

Nursing Efficiency Time-motion analysis showed that while Intervention nurses spent more time on direct patient care (25 mins/visit vs. 10 mins/visit), they spent less time on redundant paperwork due to digitization.

DISCUSSION

The study demonstrates that the effectiveness of medical care for WRA is heavily dependent on the quality of nursing activity. The "Enhanced Model" transformed the nurse from a passive recorder of data into an active manager of health.

Trust as a Currency - The significant rise in contraceptive use in the Intervention group is likely due to the trust built during structured counseling. Women are more likely to accept family planning advice from a nurse who demonstrates competence and empathy.

Early Detection - The disparity in early pregnancy registration (88% vs 65%) highlights the value of active patronage. Nurses who actively monitor their catchment population identify missed periods and encourage testing earlier than women left to their own devices.

Barriers - The study also revealed that workload management is crucial. To sustain the enhanced model, nurses must be relieved of non-clinical duties (e.g., delivering mail/summons).

CONCLUSION

The investigation into nursing activities in outpatient settings leads to a definitive conclusion: the nursing workforce is the most valuable yet underutilized resource in the reproductive health system of Uzbekistan. The transition from a passive, administrative role to an active, patient-centered clinical role yields profound benefits for public health.

Targeted, nurse-led interventions significantly improve critical reproductive health indicators. The increased uptake of modern contraceptives and the near-universal screening for anemia in the intervention group demonstrate that nurses are effective agents of behavior change and preventive care.

The enhanced model fosters a stronger therapeutic alliance. High patient satisfaction scores indicate that women value accessible, empathetic, and competent nursing care, which in turn drives compliance with medical advice.

Early detection of high-risk pregnancies and gynecological pathologies by nurses reduces the burden on specialists (obstetricians/gynecologists) and prevents costly emergency complications. The digitalization of nursing records further enhances efficiency by freeing up time for direct patient interaction.

The model is feasible to implement within the existing infrastructure of Family Polyclinics, requiring investment primarily in training and digital tools rather than expensive medical equipment.



RECOMMENDATIONS

To scale up the benefits observed in this study, the following strategic actions are recommended for the Ministry of Health and regional health administrations:

Integrate modules on "Communication Skills," "Motivational Interviewing," and "Digital Health Literacy" into the continuous professional development (CPD) curriculum for all patronage nurses. Training should move beyond clinical skills to include counseling and case management.

Revise the official normative documents defining the duties of patronage nurses. Explicitly prioritize patient counseling, home monitoring, and health promotion over administrative reporting and non-clinical tasks (such as courier duties).

Scale up the use of tablets and electronic health records (EHR) for all outpatient nurses. This will streamline data collection, allow for real-time monitoring of high-risk groups, and reduce the time spent on manual paperwork.

Grant nurses greater autonomy in managing low-risk family planning cases and routine screenings, following approved clinical protocols. Establish a career ladder that rewards clinical excellence and specialization in reproductive health nursing.

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