

Effect of Male Education on Women's Health Knowledge and Routine Clinic Utilization in Margibi County, Liberia

Study Purpose and Rationale

Women's health in Africa has become central in international efforts for health improvement and has been included in the United Nations' Millennium Development Goals (14). Sexually transmitted diseases including HIV, prenatal and peri-natal care to reduce maternal mortality, sexual violence, and fertility are at the forefront of most interventions. More recently, cancer (specifically cervical and breast cancer) is also gaining more attention as a preventable and treatable disease with high associated mortality in developing countries (4-7).

Women's health deficits in Liberia parallel those of most African countries, with the exception of a relatively low HIV prevalence. Extensive data on prevalence of disease in Liberia is wanting secondary to the destruction of the health system and infrastructure from the long civil war which ended in 2003. Indeed, it is estimated that less than 10% of the population has access to health care in the country (10). Studies and reports available emphasize the high prevalence of STDs including gonorrhea, syphilis, chancroid, and (less so) HIV (1). In addition, reproductive planning and prenatal care (2) need emphasis given that fertility rate was 6.8 children per woman in 2004 (11) and maternal mortality was extremely high, estimated at 760 per 100K in 2000 (9). Cervical cancer is the most common malignancy among women with incidence up to 320 per 100K and mortality of 256 per 100K reported in 2002. Breast cancer follows with incidence and mortality of 166 and 119 per 100K respectively reported in 2002 (6).

For many years now, the social context in reproductive, sexual, and personal health of women has been recognized as a fundamental factor that must be included in any policies aiming to improve women's health (15-18). Male entitlement, culturally male-dominated societies, and traditional family interactions significantly mitigate efforts to improve women's health when these focus on women outside of the social context in which they function. As a result, several comprehensive programs have been implemented with mixed results (17, 18). Most of the interventions postulate that the positive effects of involving men in women's health stem mainly from women's increased access to care because men are more likely to allow them to visit clinics or get checked for STDs.

The question of enhancement of women's understanding and learning about health issues through health-educated men has not been addressed. We hypothesize that education of men about women's health will not only enhance utilization of health services but will further enhance women's knowledge and understanding of women's health issues. Since women are traditionally in charge of raising the children, improved health knowledge can fortify the transmission of such information to children and most importantly young girls. In addition to increasing their capacity to seek care for themselves, women will therefore also seek care for their children and teach them to do the same in the future. Health knowledge incorporation into vertical, traditional teaching can have significant long-term impacts on health outcomes for the entire family. In addition, simple knowledge-based training can more easily be incorporated into school programs than the extensive gender analysis approaches typically used today.

One Bright World (OBW) is a non-profit organization with a central goal to promote the education of the most disadvantaged children around the world (13). It is planning to open a school in Margibi County, Liberia in a community about 10 kilometers away from the city of Kakata. On the school premises, OBW will provide a clinic that will serve all villages within a 7 km radius. It is estimated that it will provide care for about 500 adults in addition to the children in the area.

Among a series of longitudinal studies and programs, the OBW clinic will offer women’s and men’s health workshops to the villages it will serve. This will be an ideal setting to specifically study the effect of male education on women’s knowledge of health issues in addition to seeing its effect on women’s utilization of the OBW clinic for routine care.

Study Design and Statistical Procedures

Design: This is a randomized, controlled interventional study.

Intervention: The intervention consists of an additional section on women’s health in the workshop for men.

Randomization: Villages will be randomized to intervention vs. no intervention. Since religious affiliation (8) and distance to the clinic can impact fertility practices and clinic utilization, the randomization will be stratified according to these factors.

Outcomes: Normalized scores of the knowledge tests at 3 months, number of clinic visits for routine care including (STD transmission, fertility/family planning, routine women’s health (breast exam, pelvic exam), prenatal care) in the 2 years following the workshop.

Statistics: Of the 500 adults, it is expected that about 250 will be women. Given that women generally marry at an early age, it is expected that all of these women will be married. We nonetheless assume that only about 200 women will be available for the study given that some may be widowed, and some may not want to participate. With the randomization, therefore, we expect about 100 women in each branch of the study.

The two tests A and B will be normalized based on the initial scoring. A t test will be used to compare the women’s score means between the intervention and non-intervention groups. With 100 women in each branch, there is more than enough power to distinguish a difference of even half a standard deviation. Pre and post-intervention mean scores will also be compared for both men and women.
($n=1+16(SD/difference)^2$)

The number of clinic visits for routine care will be compared by chi square test of proportions of women having at least 2 routine visits over the next two years. With 100 women in each branch, the following table presents the difference in proportion of clinic attendance that could be detected based on the proportion of women in the control group that attend the clinic for 2 or more routine visits.

Proportion of control branch with 2 or more visits	Proportion of study branch with 2 or more visits for a difference to be detected
0	9.3%
10%	26%
20%	39%
30%	50%

Study Procedures

Please refer to appendix A for schematic

-On the day of the workshops, study participants will need to arrive early in order to take an initial knowledge assessment test. They will be randomized to take one of two similar tests A or B on basic women's health. Those who cannot read will have study personnel read the questions to them and mark participants' answers (without any further assistance).

-All villages will receive sex-segregated health training. Women in all villages will receive the same training on women's health. Men will receive training on men's health. In addition, based on randomization, men may receive an additional session on women's health.

-Three months after the workshops are held, study participants will again be asked to take a health knowledge test, different from the initial test they took (if A then B, if B then A).

-In the clinic, all visits will be coded by visit type (fertility, contraception/family planning, routine screens, prenatal, STD transmission/prevention, acute diseases...). For study participants, this information will be collected retrospectively from the records starting from the day following the workshop and for two years following. The total number of routine visits will be thus available for analysis.

Study Drugs of Devices

None

Study Questionnaires

Please see appendix for women's health knowledge tests A and B

Study subjects

Inclusion criteria:

- 1) Must be married adults
- 2) Both partners must be willing and able to participate in the study
- 3) Must live within the One Bright World's clinic service area

There are no exclusion criteria.

Recruitment

Subjects will be recruited from all villages within the radius of service of the OBW clinic. The study will be publicized through village leaders and village meetings prior to the set dates for the workshops (planned to maximize attendance). Couples will be compensated for the additional time taken to complete the two tests. Compensation will be provided after the second test is completed.

Confidentiality of Study Data

Only clinic personnel and study staff will have access to the study data. Testing scores will be kept confidential except that families with the highest scores will be awarded the prize. Clinic visit content will be kept in the clinic records, aside from study data. Routine visit types (family planning, prenatal, routine...) will be coded and only the number of visits of each type will be available in the study data.

Potential Risks

No significant risks are associated with participation in this study.

Potential Benefits

Patients participating may improve their knowledge regarding women's health and enhance their knowledge about when to seek routine medical care in the newly available clinic.

Alternatives

Patients can choose not to participate in the study. They may still attend the health knowledge workshops planned in their village.

References

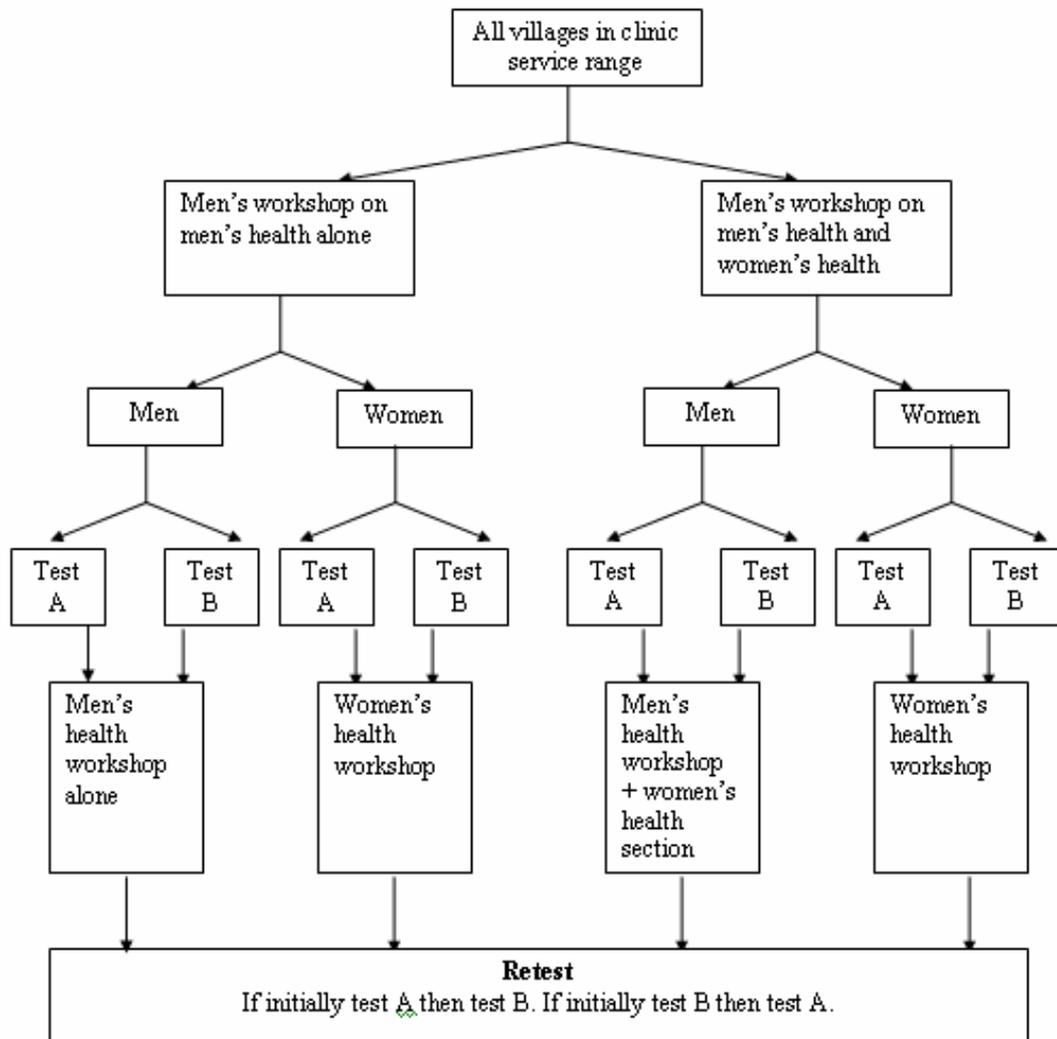
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Appendix A Study Design Flow Chart



Appendix B

Knowledge Tests (True/False)

Test A

- 1) I can tell if someone has a disease just by looking at him or her because they look sick
- 2) If I have a sexually transmitted disease but don't feel sick I will not have any health problems from it
- 3) Some sexually transmitted diseases can make it difficult for women to become pregnant
- 4) Sexually transmitted diseases cannot be avoided
- 5) By knowing her body a woman can affect when she becomes pregnant
- 6) There are pills that can help me and my husband choose when to have a baby
- 7) Yellow discharge and pain from my private area is a sign of possible infection
- 8) We can increase the chance of having a healthy mother and health baby by improving the mother's food intake during pregnancy
- 9) We can increase the chance of having a health mother and healthy baby by having health personnel look for possible problems during pregnancy
- 10) Vitamins taken during pregnancy can worsen the chance for a healthy baby and healthy mother
- 11) Cancer is a disease that can be caused by an infection
- 12) There is a way to find out if I have some types of cancer before I feel sick
- 13) Cancer can sometimes be cured
- 14) Smoking causes health problems
- 15) A lump in the breast that does not hurt is not a reason to worry

Test B

- 1) Some people have a disease but do not look or feel sick
- 2) I can have a disease that will cause me harm even if I do not feel sick right now
- 3) Fertility is not affected by sexually transmitted diseases
- 4) I can take precautions to avoid catching sexually transmitted diseases
- 5) A woman cannot know when she will likely become pregnant
- 6) Pills that help a woman choose when to be pregnant will make her infertile
- 7) Pain during intercourse may be caused by a sexually transmitted disease
- 8) The mother's nutrition during pregnancy can affect how healthy she and the baby will be
- 9) Some problems that come up during labor can be predicted and sometimes prevented by examining the pregnant woman
- 10) Women should take vitamins during pregnancy to improve their health and their babies' health
- 11) Cancer is a disease that has been made up to scare people
- 12) If I have cancer I will feel it right away in my body
- 13) Cancer is not a preventable disease
- 14) Smoking is a healthy habit that allows people to relax and concentrate better
- 15) Discharge from the nipple in a woman who is not breastfeeding is normal