International Journal of Science and Research (IJSR)
ISSN (Online): 2319-7064
Index Copernicus Value (2015): 78.96 | Impact Factor (2015): 6.391

Individual Case Study on Family Health–Presenting Samples of Primary Case Studies from Different Countries and Summary of Proposed Case Study

Odikpo Linda, C

Department of Nursing Sciences, Faculty of Health Sciences, Abia State University, Uturu, Nigeria

Abstract: ***Case study is a way to reach the target population of a country from the grass root which is the family. The contribution of primary care at the family level to the health of populations and organization of health systems has been well documented in the international scientific literature. Case studies are designed to reach the poor due to the inequalities that exist in the utilization of the health care service. Certain case studies have been carried out by health workers and have proved to make great impact in some countries where it has been employed like; Afghanistan, Bangladesh, Brazil, Ethiopia, India, Indonesia, Iran, Nepal, Pakistan, Rwanda, Zambia, and Zimbabwe, USA etc. Their impact seems to be more on reducing under five death and maternal mortality. The focus of case study is to meet the needs of the population hence the researcher presented two summarized samples of case studies from two countries and also summarized proposal of an intended case study using the WHO guidelines for primary care studies.***

Keywords: Individual, Family health, Primary, Case study

1. Introduction

The field of population health includes studies of "health outcomes, patterns of health determinants, and policies and interventions that link these two[1]. Population health research focuses on the multiple determinants of health (including medical care and public health, the social and physical environment, genetics, and individual behavior-family). A crucial, and often overlooked, link between health outcomes and health determinants is the family. In particular, the family plays a particularly important role in mediating and moderating the effects of determinants on health outcomes. An individual's health can affect family members' health and the family environment can also impact individual health outcomes. Both the individual and family contribute to the population health hence there is need for care studies to address family health and population programmes. Previous studies according to. Fletcher J, [2]. Have incorporated the family into a health determinants framework, future work should expand the examination of health as a family phenomenon.

The contribution of primary care at the family level to the health of populations and organization of health systems has been well documented in the international scientific literature[3].. A health system organized with primary care as the basis theoretically improves the possibilities for performance by the health services network: first, because unlike specialized care, primary care plays an integrative role; second, because it is more accessible; third, because patient management becomes more appropriate for the types of complaints users present in their first contact with health services; and fourth, because it organizes and rationalizes the use of resources (both basic and specialized) by targeting the promotion, maintenance, and improvement of health.

Some case studies have further highlighted that the organizational characteristics, type of professional (family physician, general practitioner, or pediatrician), and type of service in which the care is provided have an impact on the outcomes [4].

These case studies are carried out by health workers and have proved to make great impact in some countries where it has been employed like ; Afghanistan, Bangladesh, Brazil, Ethiopia, India, Indonesia, Iran, Nepal, Pakistan, Rwanda, Zambia, and Zimbabwe. Their impact seems to be more on reducing under five death and maternal mortality. Most care studies are designed to reach the poor due to the inequalities that exist in the utilization of the health care service [5]

Nurses and midwives took the Declaration of Alma-Ata to heart from the start and continue to put its principles into practice. Their contribution forms the backbone of primary health-care services and family care studies worldwide. Primary care has a number of distinctive features that differentiate it from conventional care. These features are person - centeredness, comprehensiveness and integration, effectiveness and safety, and continuity of care. There is need therefore for nurses and midwives in this 21st century to make adequate contribution to the health of the family by closely studying the family, community and entire population to understand their health challenges and follow up with guidance and make necessary recommendations and referrals when needed.

The focal activities of the case studies

- Prevention and control of locally endemic diseases
- Health promotion
- Promotion of food supply and proper nutrition, adequate supply of safe water and sanitation
- Maternal and child health, immunization and school health
- Appropriate treatment of common diseases and illnesses
- Provision of essential medication
- Provision of mental health services
- Telehealth

- Health promotion for the elderly and the prevention of non communicable disease

Top five needs of the populations served in the case studies

1) **Needs of the chronically ill and the elderly**
   - Health education and disease management support for people living with non communicable diseases (NCD) such as diabetes, hypertension and cancer .
   - Home care for the elderly
   - Continuity of care for the elderly and those with NCD.
   - Rehabilitation
2) **Basic social and infrastructure needs**
   - Disease prevention (unspecified) .
   - Adequate food
   - Prevention of communicable diseases
   - Financial support to access health care
   - Adequate water
   - Essential medication
   - Prevention of HIV/AIDS
   - Advocacy for resources
   - Adequate hygiene habits
   - Adequate shelter
3) **Psychological and mental health needs**
   - Belief in and ability to effect self-care
   - Counselling and psychological support.
   - Reduction of social and familial isolation .
   - Reduction of substance use and abuse
   - Leisure and sports activities
   - Support to obtain and keep employment
   - Domestic and gender violence
   - Increase of self-esteem
4) **Maternal and child health needs**
   - Family planning, screening, sexual and reproductive health.
   - Reduction in maternal and infant mortality
   - Immunization.
   - Antenatal and postnatal care.
   - Child health, parenting skills, breastfeeding.
5) **Acute care needs**
   - Accidents, trauma, war injuries
   - Asthma management in children
   - Acute front-line care.

Key themes arising from the case studies

WHO's general programme of work for 2006–2015 revealed 5 key themes from case studies

WHO priority area Key themes from case studies include;

1) **Investing in health to reduce poverty**
   - Variability in investment.
   - Funding strategies and sustainability.
   - Role of the charitable and voluntary sectors.
2) **Building individual and global health security**
   - The educational role of nurses and midwives.
   - Ways of working with communities –co-production of health.
3) **Promoting universal coverage, gender equality, and health related human rights**
   - Use of technology to promote coverage.
   - Working with women.
   - Ensuring access in rural areas,
   - Free at point-of-service delivery.
4) **Tackling the determinants of health Education in schools and communities.**
5) **Strengthening health systems and equitable access**
   - The role of universities.
   - Cross-country support.
6) **Harnessing knowledge, science and technology**
7) **Strengthening governance, leadership and accountability**
   - Preparing future leaders through education.

2. Samples of Case Studies

The Community-Based Health Care System of Afghanistan

Background

The Afghanistan Community Health Worker (CHW) program is part of the Community-Based Health Care (CBHC) component of the Basic Package of Health Services (BPHS), which was disseminated in 2003 after a year-long consensus building process. The CHW program functions in a context where there are few health professionals and where social and economic structures remain weak.

Much of Afghanistan's population is dispersed widely in difficult-to-reach areas, including deserts and remote mountain valleys. Additionally, the health facilities that did exist in 2003 were not well equipped with either necessary supplies or adequate female staff to provide examinations and services to female patients. Both the maternal mortality ratio (MMR) and the under-5 mortality rate were relatively high, nearly half of children were stunted, and the total fertility rate was 6.7. Less than one quarter of the population had access to safe water, and sanitation was even lower. Communicable diseases, reproductive health needs, immunization rates, and disabilities resulting from conflict were major areas of need and challenge.

Implementation

Community Health Workers are based at health posts in pairs as a male and female team, usually as spouses or as family members. CHWs are selected through a process that includes the nongovernmental organization (NGO) staff and community elders from the population they will serve. The health posts are connected to the district-level facilities operated by the government. At present, there are approximately 29,000 CHWs. The CHWs are trained and supervised by NGOs who have contracts from the government to implement the BPHS, including CHW training and supervision, in specific districts. These NGO-sponsored activities are funded by multiple international donors, including the World Bank, USAID, and the European Union, with other partners contributing substantially toward the initial development of the program.

Training

Community Health Workers receive three separate three-week modules with a month of field experience in the

village in between. Trainers attempt to visit all the trainees in their villages during the month of field experience.

The three modules build from basic and simple knowledge and skills to more complex ones. First, CHWs learn hygiene and care of common conditions such as diarrhea. The second module focuses on maternal and child health (MCH), including pregnancy, birth, postpartum care, and care of newborns, including breastfeeding and immunizations. Finally, the third module focuses on managing childhood illnesses, reproductive health, tuberculosis (TB), and additional skills in communicating with their communities.

Roles/Responsibilities

Community Health Workers conduct a comprehensive set of activities, ranging from health promotion to provision of health services and to referral to the next level of care at a basic or comprehensive health center. Their services include educational services such as prevention of illnesses such as malaria, information on safe delivery, promotion of breastfeeding and nutrition, hygiene, and reproductive health information. CHWs also report vital events (births and maternal and under-5 deaths) to the national health management information system (HMIS), maintain a community map, and manage the equipment and supplies at the health post. Of note is CHWs' capacity to carry out community case management of acute childhood illness (pneumonia, diarrhea, and malaria where it is endemic), treatment of patients diagnosed with TB, and provision of family planning (FP) commodities.

Incentives

Community Health Workers are volunteers, which they have been since the program began. Communities have been encouraged to provide support to CHWs, but this has not been very effective. CHWs do receive allowances for travel and food during their monthly visits to the district health facility and any additional training. Other special events and occasions, such as national immunization days, may provide honoraria for CHWs who participate as well; in some regions, CHWs receive in-kind or financial support for caring for specific categories of patients. Since 2010, National CHW Day has been observed on December 5 to honor the contributions of CHWs in Afghanistan.

Supervision

District health facilities, which support health posts, have Community Health Supervisors (CHS)—who are typically males. The CHS usually has a high school education, good communication skills, and lives in the district where he works. CHSs make monthly visits to each health post to provide on-the-job training, check records, the quality of the community maps, as well as drug stocks and supports planning and management of CHW activities. CHWs also come monthly to the "parent" health facility where the CHS is based for a joint meeting with the other CHWs.

Impact

Community Health Workers now provide a major portion of primary health care services in Afghanistan and are widely recognized as one of the important contributors to Afghanistan's marked improvement in health status during the past decade.

Over the past decade, Afghanistan has seen marked changes for the better on numerous key health indicators. Total fertility, under-5 mortality, and the MMR have dropped, and rates of utilization of antenatal care (ANC) services and births attended by a skill birth attendant have increased. Care of common childhood illnesses, such diarrhea and symptoms of pneumonia, has improved as well. Although these positive changes cannot be attributed directly to the CHWs with any precision, the CBHC system has undoubtedly played a major role in this dramatic progress.

United States case study; Group antenatal care promotes breastfeeding

The Centering Pregnancy Program conducted at the University of Illinois in Chicago provides health promotion, group-peer support, a collaborative patient-provider relationship, and self-management training and activities. The programme aims to increase women's psychosocial well-being and healthy behaviour in order to reduce adverse maternal and infant outcomes and disparities. This is a local pilot project that replaces the individual-visit model of antenatal care for poor, obstetrically low-risk women with a group-visit model. The target population comprises 110 low-income African-American women who receive antenatal care in an urban public health clinic. Funding has been provided by the March of Dimes, Illinois Chapter, and ongoing support is provided by insurance reimbursement of antenatal services. The group antenatal-care model consists of 10 two-hour visits beginning at 16–18 weeks and continuing until delivery, following the recommended schedule for antenatal care. Each group of pregnant women is led by a nurse midwife and a co-facilitator, either a clinical nursing-support staff member or a graduate nursing student. At each group visit, the women practice self care skills such as measuring their weight and blood pressure, each woman undergoes a short assessment with the nurse-midwife provider in the group space, and the remaining time is used to discuss concerns as a group, ask questions and explore the new roles of pregnancy, parenting and motherhood..The women also receive health information on keeping themselves safe and healthy during pregnancy and beyond. Focus groups of pregnant women, providers and health-centre Staff report that the programme has benefited the women who participated, despite Implementation challenges such as scheduling changes. The women report that they enjoy sharing their pregnancy experience with other women. Compared to women in individual care, the women in Centering Pregnancy attended considerably more antenatal visits (9.7 versus 8.3) and gained appreciably more weight during pregnancy (32.2 pounds versus 28.5 pounds). They were also significantly more likely to have initiated breastfeeding during hospitalization (59% versus 44%); at hospital discharge 44% were breastfeeding exclusively, compared to 31% of the women in individual care.

3. Case Study; Scaling Up Exercise Uptake Among Breast Cancer Survivors to Promote Health and Reduce Mortality

Breast cancer is one of the main causes of cancer deaths in women, [6]. It is responsible for 23% of total cancer cases

and 14% of cancer deaths[7]. With the improvements in early detection and treatment, the number of cancer survivors continued to increase, in which women with breast cancer accounted for 22% of total cancer survivors in 2012 [8]..However, the problems related to breast cancer and cancer treatment, such as cardiac toxicity of adjuvant systemic therapy, arm or shoulder problems, body image,change in social life, fear,and poorer quality of life were negatively associated with the overall well-being of breast cancer survivors.

Strong evidence for the role of exercise for cancer survivors is provided by four landmark studies that examined the association between physical activity and cancer recurrence and overall survival in persons diagnosed with breast [9]. Results of these studies suggest that survivors who engaged in routine physical activity had a significant disease-free and mortality risk reduction compared with those who were physically inactive. Of note, these findings also include data obtained from women participating in the control arm of the WHEL study, and show that increased physical activity (equivalent of brisk walking for 30 minutes 6 days/week) was associated with a significant reduction in the risk of death among 1,490 women with breast cancer, an effect independent of either weight status [9].

In two recent Institute of Medicine reports entitled "From Cancer Patient to Cancer Survivor: Lost in Transition" and "Implementing Cancer Survivorship Care Planning," the numerous health issues of cancer survivors were summarized, and the potential benefits of lifestyle modifications were reviewed[10].Also during this period of time, the American Cancer Society (ACS) reissued its guide for Informed Choices on Nutrition and Physical Activity During and After Cancer Treatment [11].). Taken together, these reports serve as resources for health care providers, patient advocates, and other stakeholders to improve the health and well-being of this rapidly expanding and high risk population. This exercises include either endurance (aerobic) or combined (endurance plus resistance training) exercise training prescribed according to standard exercise prescription guidelines for healthy adults. (i.e., exercise sessions 3–5 days/week for 20–45 minutes, at a moderate-intensity for 2 to 6 months which evidence indicated that exercise intervention results in beneficial outcomes in cancer patients.It increased cardiorespiratory fitness, physical performance,reduced overall mortality, with improvements in the symptom of depression, body image, self-esteem, and quality of life,though some conclusions were not inconsistent in terms of fatigue[12].

Aim of the case study

The aim of this case study is to scale up exercise uptake among breast cancer survivors in Asaba, to improve wellbeing and reduce mortality.

Type of services

The programme will provide educative and training services on exercise uptake initiatives among cancer survivors which will include; health education, counseling, exercise training and follow up to determine effect of exercise uptake on cancer survivors.

Staff

The staff will comprise nurse/midwives and a doctor.

Funding and community engagement

The case study will be individually funded. The care study is in its early stages. Community engagement has not yet been implemented but the service has been seen to be acceptable to individuals and families, although certain factors especially social and psychological factors which will be addressed during programme implementation inhibit uptake as observed from personal contact with two women in Asaba, Delta state who are cancer survivors for upto 2 years.

Importance of the Case Study and formulated model acronym to be used by the researcher

The case study is considered to be important because it addresses the needs of the population hence the programme will make use of 3Cs from the researcher which stands for-contact, counsel and commenced. When the appropriate contact has been established, the client will be counseled, trained and follow up to make sure the standard America guideline for Exercise and fitness is commenced and continued for upto six months.

Exercise Prescription Guidelines for Cancer Survivors after Completion of Primary Treatment

Low Intensity (light effort) Endurance Exercise

- 20% – 39% of $HR_{reserve}$; 40% – 50% VO_{2peak}; RPE of 10 to 11; 2 to 4 METs
- 45 – 60 sminutes per day (total exercise minutes can be accumulated by performing short bouts of light intensity endurance exercise throughout the day)
- 5–7 days of week
- Gardening, carrying groceries, raking lawn

Moderate Intensity (moderate effort) Endurance Exercise

- 40% – 59% of $HR_{reserve}$; 60% – 75% VO_{2peak}; RPE of 12 to 13; 4 to 6 METs
- 20 – 60 minutes per day (total exercise minutes can be accumulated by performing short bouts of moderate intensity endurance exercise throughout the day)
- 3–5 days of week
- Brisk walking, (≥ 2.5mph – 4.0 mph), swimming, cycling

Vigorous Intensity (strenuous effort) Endurance Exercise

- 60% – 84% of $HR_{reserve}$; ≥ 75% VO_{2peak}; RPE of 14 to 16; 6 to 8 METs
- 20 – 45 minutes per day (total exercise minutes can be accumulated by performing short bouts of vigorous intensity endurance exercise throughout the day)
- 3–5 days of week
- Jogging (≥ 5.0mph), vigorous swimming, vigorous cycling

Progressive Resistance Exercise (Weight-Bearing)

- 1–2 sets (8–12 repetitions each) of 8–10 large-muscle group resistance exercises at moderate intensity
- 2–3 nonconsecutive days of week

Flexibility/Stretching Exercise (Weight-Bearing)

- Gentle reaching, bending and stretching of the large muscle groups
- Hold each stretch for 20–30 seconds; perform each stretch at least twice

Calculations: $HR_{reserve}$= maximal heart rate (HR_{max}) minus resting heart rate (HR_{rest}). Multiply $HR_{reserve}$ by .20 to .84 to obtain target heart rate for desired intensity of exercise.

Abbreviations: VO_{2peak}, Peak Oxygen Consumption ($mL.kg.min^{-1}$); RPE, rate of perceived exertion; METs, metabolic equivalent *Adapted with Permission from the American Cancer Society*.

References

[1] Kindig D, Stoddart G. What is population health? Am J Public Health. 2003;93(3):380– 388.
[2] Fletcher J. All in the Family: Mental Health Spillover Effects between Working Spouses. The B.E. Journal of Economic Analysis & Policy.2009;9(1) [PMC free article[PubMed].
[3] Adam Wagstaff. Poverty and Health Sector Inequalities,"*Bulletin of the World Health Organization 2002;*80(2): 97.
[4] Davidson Gwatkin et al.*Socioeconomic Differences in Health,Nutrition, and Population, Round II Country Reports* .Washington, DC: World Bank.2004.
[5] Carr, Dara. Improving the Health of the World's Poorest People" *PRB Health Bulletin*1, Washington, DC:Population Reference Bureau.2004.
[6] Siegel R, Ma J, Zou Z, emal A. Cancer statistics. *CA Cancer J Clin*. 2014;64(1):9–29.
[7] Jemal A, Bray F, Center MM, Ferlay J, Ward E, Forman D. Global cancer statistics. *CA Cancer J Clin*. 2011;61(2):69–90.
[8] de Moor JS, Mariotto AB, Parry C, et al. Cancer survivors in the United States: prevalence across the survivorship trajectory and implications for care. *Cancer Epidemiol Biomarkers Prev*. 2013;22(4):561–570.
[9] Pierce JP, Stefanick ML, Flatt SW, et al. Greater survival after breast cancer in physically active women with high vegetable-fruit intake regardless of obesity. J CLINOncol. 2007;25:2345–2351. [PMC free article] [PubMed.
[10] Hewitt M, Greenfield S, Stovall EL. Institute of Medicine and National Research Council:From Cancer Patient to Cancer Survivors: Lost in Transition. Washington,DC: National Academies Press; 2005.
[11] Jones L, Demark-Wahnefried W. Recommendations for health behavior and wellness following primary treatment for cancer. Washington, DC: National Academies Press.2005.
[12] Dimeo FC, Thomas F, Raabe-Menssen C, Propper F, Mathias M.Effect of aerobic exercise And relaxation training on fatigue and physical performance of cancer patients after surgery: a randomised controlled trial. *Support Care Cancer*.2004;12(11):774–779.