EFFECT OF EDUCATION AND TRAINING ON PATIENT REFERRAL BY PUBLIC PRIMARY HEALTH CARE WORKERS IN MUSHIN LOCAL GOVERNMENT AREA TO STATE GENERAL HOSPITALS

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ABSTRACT

BACKGROUND:
Poor referral linkages had been noted and documented by various researchers on the health care delivery system in Nigeria. This study is designed to find out the situation of referral practices and make recommendations on how to improve the situation.

MATERIALS & METHODS
A quasi-experimental study was carried out to determine the effect of health education and training on the Knowledge, attitude and practices of patient referral by primary health care workers in Mushin and Surulere Local Government Areas of Lagos State of Nigeria.
A total sample of 170 primary health care workers was involved in the study: 85 in each of the Local Government Areas. The study involved three stages, the pre-intervention, the intervention phase, and a post intervention phase of the study.

RESULTS
Analysis of the responses of the two groups showed that there was no statistically significant difference in the responses in the areas concerning their attitude towards, and knowledge of patient referral at the pre-intervention phase.
In the post-intervention phase the differences in the responses between the two groups in the area of practice of patient referral were statistically significant. In the control group 18.8% of the workers used the two-way referral form in the pre-intervention phase. This rose to 27.1% in the post intervention phase. In the experimental group, 17.5% used the two-way referral form in the pre-intervention phase, and this rose to 69.4% in the post intervention phase.

CONCLUSION:
The conclusion was that education and training on patient referral could improve the patient referral activities of primary health care workers.

Key words: Health education, Training, Patients, Referrals

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INTRODUCTION

Primary health care is essential health based on scientifically sound and socially acceptable methods, and technology that is an integral part of the health system of the country and is the first level of contact of individuals, the family, and the community within national health systems. It also constitutes the first element of a continuing health care process[1]. Intrinsic in this statement is the fact that an effective referral framework should exist between the different levels of the health care systems. Indeed, the five possible stages of referral have been identified in the health system: from village health worker to the health post, to the primary health centre, and then to the comprehensive health centre. The general hospital and the teaching / specialist hospital form the apex[2].

A World Bank study in 1994 revealed that there was no formally established patient referral system between various levels of health care system in Nigeria. The study also showed that there was a lack of comprehensive approach to strengthening the referral system in Nigeria and this was a major deficiency of the health system[3]. There is therefore a high ratio of patients seen in tertiary hospitals who are not referred. This leads to overuse of the already strained resources,

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waste of specialized manpower and overcrowding in such centres. A lot of such cases can be handled effectively in the secondary health centres but still left at the primary care centres[4]. Less than 10% of first presentations at a particular tertiary hospital in Nigeria are referred cases.[5]

Theoretically, a system of referral is in place but in practice patients go to any facility at their convenience irrespective of the level for any minor or major health problem[6]. In a study it was found that there was no referral system between state and local government authorities[7]. A reason for this, the study suggested was the fact that health was on the concurrent list of the Nigerian Constitution[8]. This means that at each level, government budgets for and administers the apportioned health system independent of other levels of government. Primary health care is to be administered at the Local Government Authority level and secondary health care at the State Government level[9].

The lack of institutionalization of a formal referral system in the health sector has been identified as a serious constraint in offering primary health care services[10]. This deficiency means that there is no opportunity for health centre staff to update their knowledge[10]. Ideally there should be a two-way referral system existing between the primary health care centres and the higher levels[10]. Indeed, the process recommended in the Nigerian health system to achieve the two-way referral is for the health worker at the primary health care facility to give a completed two-way referral form to the patient to take with him/ her to the secondary level hospital. The patient is to be instructed to give the form to the health worker who sees him at the hospital. The patient is to collect the detachable end of the form and take it back to the health worker at the primary health care facility. The two-way referral form is printed in the "standing orders" which is the standard text for the training of community health officers and community health extension workers[11]. The Nurse/Community Health Officers working at the primary health care level have access to this information[12]. Presumably therefore their primary tutoring should have covered the application of the referral tools.

There are many advantages that will accrue to the healthcare system by the establishment of a formal referral process. An immediate advantage is that the primary health care programme in Nigeria will get the necessary support structures[3]. It is essential to determine if provision of education and training on patient referral will improve the referral practices of primary health care workers.

The study was carried out on the premise that continuous education of health staff is not important for promoting institutionalizing of referrals from primary health care to secondary facilities.

MATERIALS AND METHODS

Study Design: This was a quasi-experimental study with education and training being the intervention in the study group.

Sample size calculation and sampling methodology: The formula for the comparison of two independent proportions was used for estimation of the sample size.

Stages of the study:

Stage one: Pre-interventional comparative study was carried out. This generated the base line data on the knowledge, attitude and practice of the health workers on patient referral. The questionnaire, which had been previously pre-tested at Alimosho Local Government Area, was administered to both the experimental and control groups. The primary health care facilities in Alimosho Local Government Area were chosen because the workers have similar background as those in the study facilities. Responses were obtained from the subjects on contents of the questionnaire, which was in four parts namely background information, knowledge on patient referral, attitude on referral, and practice of patient referral.

Stage two: This involved a comprehensive educational and training programme for Mushin Local Government health workers (the experimental group) on the advantages of effective patient referral, which ensured that the patient actually went for the recommended treatment, and that feedback on the type of treatment obtained at the hospital in medical language was obtained by the referrer. This programme involved the production of the educational and training material that presented the method of patient referral, advantages of patient referral and the use of two-way referral form. The education and training material also included information on the services offered by the hospitals that the Mushin Local Government health workers refer patients to and these were Isolo, Gbagada and Surulere General Hospitals. The education and training material was produced with the collaboration of the Medical Officer of Health of Mushin Local Government. This encouraged the staff of Mushin Local Government to accept the document. Each worker was provided with the training manual on patient referral. To obtain standard information on each of the hospitals a standard questionnaire was filled for each of the hospitals. Responses from the three hospitals that indicated the services offered by such hospitals were analyzed, the

results from the three hospitals were presented on a single page of paper. This page was produced in a poster form and pasted in each facility in Mushin Local Government Health facilities.

The two-way referral form was produced in large numbers and distributed to all the primary health care facilities in Mushin Local Government Area primary health care facilities. The utilization of the forms was monitored and effort was made to ensure that the forms did not run out of stock in any of the facilities during the study.

Training of these health staff was done initially in their different health centers on days when clinics were not held. This activity was followed by the actual observance of in-clinic practice of effective patient referral by the health workers. These activities took place over a six-month period. A major education activity for the workers was the arrangement of a forum where the medical directors of the different hospitals that patients are referred to presented the services offered by their hospitals in a plenary session. Cooperation and approval of the Permanent Secretary Lagos State Health Management Board was obtained. The chief medical directors of the three hospitals were contacted and they attended and the session was a lively and informative one. The workers were allowed to ask questions after each presentation. The medical directors were also invited to ask questions directed to primary health care workers.

3) Stage three: A post-interventional study was carried. This study took place three months after the end of the intervention. This study was a repeat of the survey carried out in step one. The same questionnaire used in the pre-interventional stage was used to allow for comparability.

RESULTS

85 workers were involved in the study in each of the two groups. The control and experimental groups were similar with respect to age, sex, professional qualification, length of professional service and length of time spent in each facility. Analysis of the pre-intervention responses on attitude and knowledge of the two groups showed that there was no statistically significant difference in the responses between the two groups. This can deducted from the following:

There was no significant statistical difference between the control and experimental groups as regards highest professional qualifications (p = 0.97), seniority was not statistically significant (p = 0.998), distribution between the two populations as regards duration as health care providers. (p = 0.07), time spent in the present was not statistically significant (p = 0.6805) and distance of nearest facility patients were referred to was not statistically significant (p = 0.8303). All these analysis shows that the two populations are comparable in these background characteristics.

Following the intervention, as shown in Table 1, the difference in the distribution between the control and experimental groups as concerns familiarity with hospital workers at the destination hospital was statistically significant (p = 0.0008). The p value was 0.2176 in the pre-intervention phase.

Table 2 shows that in the post intervention phase, the difference in the distribution between the control and experimental groups as concerns familiarity with services offered at the destination hospital was statistically significant (p = 0.0001). The p value was 0.9651 in the pre-intervention phase. This means that for effective referral it is essential to be familiar with services offered at destination hospital. The workers in the experimental group were given this information during their training on referring clients effectively.

Table 3 shows that in the post intervention phase, the difference in the distribution between the control and experimental groups as concerns the instrument used in referral to the destination hospital was statistically significant (p = 0.0025). The p value was 0.65 in the pre-intervention phase. The proper form is the two-way referral form, which can be detached and filled with information on the diagnosis and treatment offered to the client at the destination hospital. This means that more health workers used the 2-way form in referring patients to destination hospitals.

Table 4 shows that in the post intervention phase, the difference in the distribution between the control and experimental groups as concerns whether a health worker referred a patient or not was statistically significant (p = 0.001). The p value was 0.8475 in the pre-intervention phase. T his means that when health workers are given education and training on effective patient referral, they are indeed more likely to refer patients.

Table 5 shows that in the post intervention phase, the difference in the distribution between the control and experimental groups as concerns the frequency with which patients are referred to destination hospital was statistically significant (p = 0.0001). The p value was 0.62 in the pre-intervention phase. This shows that health workers that are trained in referral, refer patients, and do so more frequently than health workers who are not trained in the practice of referral.

Table 6 shows that in the post intervention phase, the difference in the distribution between the control and

experimental groups as concerns getting feedback on referred patients from destination hospital was statistically significant (p = 0.0001). The p value was 0.6985 in the pre-intervention phase. This shows that when health workers that are trained in the practice of effective referral refer patients, more feedback is obtained on such referrals from destination hospitals.

Table 7 shows that in the post intervention phase, the difference in the distribution between the control and experimental groups as concerns the most common method of obtaining feedback from hospitals was statistically significant (p = 0.001). The p value was 0.493 in the pre-intervention phase. The most common method in this case is the detachable end from the 2-way referral form. This means that when health workers are trained in the practice of effective patient referral, they are likely to obtain feedback from destination hospitals by mans of the detachable piece fro, the 2-way referral form.

DISCUSSION

This study set out to assess the knowledge, attitude and practices of public primary health care providers on patient referral in Mushin and Surulere Local Government Areas and determine the effect of education and training on these workers in Mushin Local Government Area on patient referral to state general hospitals.

The results obtained by analyzing the responses of the two groups to questions in the background information section, revealed no statistically significant difference in the two groups as concerned characteristics like age and sex, position in the facility, seniority as measured by the government grade levels, highest professional qualification obtained, experience as health care worker and length of stay in the present health facility.

Results show that there were significant increases in the parameters of patient referral in the experimental group in the post intervention phase. There was an increase in the use of the two-way referral form as an instrument of referral. There was also an increase in the number of workers who referred patients in the preceding three months and indeed there was also an increase in the number of patients referred by the workers in the preceding three months. There was also an increases in the feedback obtained from the hospital on referred patients and finally there was an increase the number of feedback obtained by way of the two-way referral form.

The study highlighted the importance of institutionalized training and retraining primary health workers in need for prompt and adequate referral to higher level of care. This is a necessary action that would aid reduction of the entrenched poor referral of patient that is found in Nigeria health system and generally improve the health system as a whole[5 13]. The improvement of the Nigerian referral system would aid effective health system utility.

Currently there are few interventional studies to examine the referral system among health workers in Nigeria. We believe this study would aid understanding of this subject matter which would enhance the functionality of the part of the health system.

It is recommended that more studies should be done to improve on the training and retraining of the primary health workers to imbibe the culture of referral of patients since it is part of their curriculum ab-initio. This would help enhance the capability of primary health care to aid the development of the Nigeria health system and reverse the current poor status[14]. Further study would be needed to improve on the information, educational and communication (IEC) materials on referral available to the health workers to make them more effective using established principles[15].

We believe the study should be localized to the Lagos state health system, and Nigeria health system in general because of the likely similarity in age, uniform curriculum of community health worker nationwide, and uniformity in qualification to work in primary health care system in Nigeria.

CONCLUSION

Following the intervention, as shown in Table 1, the difference in the distribution between the control and experimental groups as concerns familiarity with hospital workers at the destination hospital was statistically significant (p = 0.0008). The p value was 0.2176 in the pre-intervention phase. In effect, setting up a formal referral system facilitated interactions between health workers of Local government health facilities and State hospitals.

From the foregoing it can be concluded that proper education and training of primary health care workers on patient referral would have the beneficial effect of improving patient referral practices of health workers at the primary health care level.

Appendix

TABLES

Table 1

DISTRIBUTION OF RESPONSE WITH REGARD TO FAMILIARITY WITH HOSPITAL WORKERS THAT PATIENTS WERE REFERRED TO

PRE-INTERVENTION

RESPONSE	CONTROL Freq. (%)	EXPERIMENTAL Freq. (%)	TOTAL Freq. (%)
YES	18 (21.2)	20 (23.5)	38 (22.4)
NO	67 (78.8)	65 (76.5)	132 (77.6)
TOTAL	85 (100)	85 (100)	170 (100)

$\chi^2 = 1.52$, df = 1, p = 0.2176

POST INTERVENTION

RESPONSE	CONTROL Freq. (%)	EXPERIMENTAL Freq. (%)	TOTAL Freq. (%)
YES	22 (25.9)	35 (41.2)	57 (33.5)
NO	63 (74.1)	50 (58.8)	113 (66.5)
TOTAL	85 (100)	85 (100)	170 (100)

$\chi^2 = 11.35$, df = 1, p = 0.0008

Table 2

RESPONDENTS FAMILIARITY WITH DETAILS OF HOSPITAL SERVICES WHERE PATIENTS ARE REFERRED TO

PRE-INTERVENTION

RESPONSE	CONTROL Freq. (%)	EXPERIMENTAL Freq. (%)	TOTAL Freq. (%)
YES	11 (12.9)	14 (16.5)	25 (14.7)
NO	74 (87.1)	71 (83.5)	145 (85.3)
TOTAL	85 (100)	85 (100)	170(100)

χ^2 =0.47, df =1, p = 0.4930

POST INTERVENTION

RESPONSE	CONTROL Freq. (%)	EXPERIMENTAL Freq. (%)	TOTAL Freq. (%)
YES	22(25.9)	51 (60)	73 (42.9)
NO	63 (74.1)	34 (40)	97 (57.1)
TOTAL	85 (100)	85 (100)	170 (100)

χ^2 =29.76,df = 1, p = 0.0001

Table 3

INSTRUMENTS USED FOR REFERRAL BY RESPONDENTS

PRE-INTERVENTION

RESPONSE	CONTROL Freq. (%)	EXPERIMENTAL Freq. (%)	TOTAL Freq. (%)
ORAL INSTRUCTION	1 (1.18)	0	1(0.59)
LETTER	1 (1.18)	2 (2.35)	3 (1.76)
SIMPLE FORM	67 (78.8)	68 (80)	135(79.4)
REFERRAL FORM	16 (18.8))	15 (17.65)	31(18.2)
TOTAL	85 (100)	85 (100)	170 (100)

P = 0.65

POST INTERVENTION

RESPONSE	CONTROL Freq. (%)	EXPERIMENTAL Freq. (%)	TOTAL Freq. (%)
LETTER	1 (1.18)	1 (1.18)	2 (1.2)
SIMPLE FORM	61 (71.8)	2 5 (29.4)	86 (50.6)
REFERRAL FORM	23 (27.1)	59 (69.4)	82 (48.2)
TOTAL	85 (100)	85 (100)	170 (100)

P = 0.0025

Table 4

REFERRALS MADE IN THE LAST 3 MONTHS

PRE-INTERVENTION

RESPONSE	CONTROL Freq. (%)	EXPERIMENTAL Freq. (%)	TOTAL Freq. (%)
YES	35 (41.2)	34 (40)	69(40.6)
NO	50 (58.8))	51 (60)	101(59.4)
TOTAL	85 (100)	85 (100)	170 (100)

χ^2 = 0.037, df = 1 , p = 0.8475

POST INTERVENTION

RESPONSE	CONTROL Freq. (%)	EXPERIMENTAL Freq. (%)	TOTAL Freq. (%)
YES	34 (40)	61 (71.8)	95 (55.9)
NO	51 (60)	24 (28.2)	75 (44.1)
TOTAL	85 (100)	85 (100)	170 (100)

χ^2 =19.06, df = 1 , p = 0.001

Table 5

NUMBER OF REFERRALS MADE IN THE LAST 3 MONTHS

PRE-INTERVENTION

RESPONSE	CONTROL Freq. (%)	EXPERIMENTAL Freq. (%)	TOTAL Freq. (%)
1-5	31 (36.5)	31 (36.5)	62(36.5)
NONE	54 (63.5)	54 (63.5)	108(63.5)
TOTAL	85 (100)	85 (100)	170(100)

Fisher' Exact Test, p = 0.62

POST INTERVENTION

RESPONSE	CONTROL Freq. (%)	EXPERIMENTAL Freq. (%)	TOTAL Freq. (%)
1-5	32 (37.6)	50 (58.8)	82 (48.2)
≥ 6	2 (2.4)	11 (12.8)	13 (7.7)
NONE	51 (60)	24 (28.2)	75 (44.1)
TOTAL	85(100)	85 (100)	170 (100)

χ^2 = 10.2, df = 2 , p = 0.0001

Table 6

FEEDBACK OBTAINED ON REFERRED PATIENTS IN THE LAST 3 MONTHS

RESPONSE	CONTROL Freq. (%)	EXPERIMENTAL Freq. (%)	TOTAL Freq. (%)
PRE-INTERVENTION			
YES	18 (51.4)	16 (47.1)	34(49.3)
NO	17 (48.6))	18 (52.9)	35(50.7)
TOTAL	35 (100)	34 (100)	69 (100)

χ^2 = .15 df 1 p = 0.6985

RESPONSE	CONTROL Freq. (%)	EXPERIMENTAL Freq. (%)	TOTAL Freq. (%)
POST INTERVENTION			
YES	18 (52.9)	47 (77.1)	65 (68.4)
NO	16 (47.1)	14 (22.9)	30 (31.6)
TOTAL	34 (100)	61 (100)	95 (100)

χ^2 = 26.97 df 1 p = 0.0001

Table 7

MOST COMMON METHOD OF FEEDBACK

RESPONSE	CONTROL Freq. (%)	EXPERIMENTAL Freq. (%)	TOTAL Freq. (%)
PRE-INTERVENTION			
RELATIVE CAME	14 (77.8)	11 (68.8)	25(73.5)
FEEDBACK FORM RECEIVED AT FACIL.	4 (22.2)	5 (31.3)	9 (26.5)
TOTAL	18 (100)	16 (100)	69(100)

χ^2 = 0.47 df = 1 p = 0.493

RESPONSE	CONTROL Freq. (%)	EXPERIMENTAL Freq. (%)	TOTAL Freq. (%)
POST INTERVENTION			
RELATIVE CAME	14 (77.8)	14 (29.8)	28 (43)
STAFF VISITED HOME	0	1 (2.1)	0
FEEDBACK FORM RECEIVED AT FACIL.	4 (22.2)	32 (68.1)	36 (55)
TOTAL	18 (100)	47 (100)	65 (100)

Fisher's Exact Test, p = 0.001

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