

SUPPORTIVE SUPERVISION AND PERFORMANCE OF HEALTH WORKERS IN ENUGU STATE OF NIGERIA

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Abstract

Recent survey report indicated that both health facility and community based maternal and newborn cares lack effective supportive supervision aimed at helping staff improve their practice. The study sought to determine the effect of feedback by supervisors on the improvement of health workers' performance in Enugu State. This is cross sectional study of heads of departments and units in randomly selected primary health care centres in District Health Boards and Local Health Authorities in Enugu State in April 2014. Data was collected using self-administered and well-structured questionnaire on a sample of 403 respondents. Statistical Package of Social Science application, version 17 was used in data analysis. Findings: the affirmative response to the statement "supervision of subordinates increased between 2005 and 2010" was statistically significant ($p < .05$, Df 1, $X^2 = 62.7$). Similarly, the affirmative response to statement "use of checklists by supervisors in health sector in Enugu state" was statistically significant ($p < .05$, Df 3, $X^2 = 663.7$). The affirmative response of the statement "Supervisors provided feedback on performance in health sector in Enugu state" was statistically significant ($p < .05$, Df 3, $X^2 = 684.5$). The affirmative response to the statement "Feedback provided by Supervisors led to improvement of Health Workers Performance" was statistically significant ($p < .05$, Df 3, $X^2 = 365.6$). In conclusion, supervision of health workers has a significant effect on the improvement of health workers performance in Enugu State. This effect is translated through the provision of feedback, increased number of supervisory visits and use of checklist, in decreasing order.

Keywords: supportive supervision, health workers performance, Feedback, checklist, and Enugu state of Nigeria

Introduction

In order to achieve an increase in productivity, certain activities such as monitoring, evaluation, and supportive supervision are necessary in every organisation. The main objective of any health organization is to provide a high level of patient care, usually administered by people. Therefore, supervision of these medical personnel is very important in achieving the organizational goals. Campbell (2007) defined supervision as "an educational process designed to aid employees to improve their knowledge and skills through objective evaluation of their performance for the delivery of best quality services to their consumers". Supervision is a critical component for continuously improving the quality of services and safe guarding high standards of care. National Demographic Health Survey (2008) report indicated that both health facility and community based maternal and newborn cares lack effective supportive supervision aimed at helping staff improve their practice. Good supportive supervision and management include, adequate technical support and feedback, recognition of achievements, good communications, clear roles and responsibilities, norms and codes of conduct, which are critical to the performance of health workers.

Hill and Benton (2010) opined that the need for supervision of health workers was highlighted during the primary health care movement, where remote and rural health workers were perceived as needing supervision to link them to the health system and to supplement their often limited training. They, however, asserted that although increasing the frequency of supervision is often the goal of supportive supervision intervention programmes, there appeared to be little evidence on the optimal frequency of supervision. They noted that supervision intervention included: developing supportive supervision guidelines and tools, improving communication lines, monitoring and evaluation, and providing funding. Marquez and Kean (2001) observed that some lessons should be learnt from supportive supervision, which included: that adopting new behaviours and attitudes by both supervisors and staff required motivation and also commitment by top managers; that supportive supervision took time and investment to implement; that some decision making authority should be decentralized to front line supervisors; that implementers should select which range of supportive supervision mechanisms/tools that are appropriate for the context and adapt and test them. Dieleman et al (2009) also wrote in support of supportive supervision but stressed that contextual factors that support performance and motivation such as the availability of drugs and community support should be in place for supervision to be effective. Human resource planning tools comprise the policies, practices and activities at the disposal of managers to obtain, develop, use, evaluate, maintain and retain the appropriate number, skills mix and motivation of employees to accomplish the organisational objectives. These tools form the basis for improving management, together with monitoring and evaluation systems that link health worker performance to supportive supervision and appraisal (Henderson and Tulloch 2008).

Study Objective

To determine the effect of feedback by supervisors on the improvement of health workers' performance in Enugu State.

Hypothesis

- H₀ Feedback by Supervisors has no significant effect on the improvement of health workers' performance in Enugu State.
- H_a Feedback by Supervisors has significant effect on the improvement of health workers' performance in Enugu State.

Methodology

The research design used in this study is the cross - sectional survey approach. The research was conducted in the health sector in Enugu State, Nigeria. The study focused on the activities of health workers in selected Local Health Authorities in Enugu State from 2005 to 2010. Four District Health Boards were purposively selected from the seven District Health Boards in Enugu State. Care was taken to ensure that each of the three senatorial zones in Enugu State, namely, Enugu North, Enugu East and Enugu West were represented in the study. The sources of data in this study were health workers in the selected Local Health Authorities under study.

The total population of health workers in Enugu State in 2010 was 2,533. This is stated in the table below.

Table 1: Total Number of public health workers in Enugu state ministry of health in 2012.

Number of Health Workers in Enugu State, According to their Profession	
Medical Doctors	69
Nurses and Midwives	260
Community Health Extension Workers	1066
Community Health Officers	482
Environmental Health Officers	308
Health Attendants	243
Pharmacy Technicians	35
Medical Laboratory Technicians	28
Entomologists	18
Health Educators	24
Total	2533

Sample Size Determination

There are seven District Health Boards, and fifty-six Local Health Authorities in Enugu State. Four District Health Boards were selected purposively from the seven, while twenty- Six Local Health Authorities were randomly selected from the DHBs for the study. The purpose of selecting four District Health Boards and twenty-six Local Health Authorities was to get results from very remote, rural, and semi-urban Local Government Areas. Thus, a total of one hundred and thirteen (113) respondents were selected from Enugu Ezike District Health Board, followed by Awgu District Health Board that had one hundred and ten (110) respondents, while Udi District Health Board had ninety (90) respondents and Agbani District Health Board, ninety (90) respondents as well. In this regard, a total of four hundred and three (403) respondents were selected for the study. The basis for the selection of these persons was because they were heads of departments and units in their respective primary health care centers and Local Health Authorities.

In this study, the formula and procedure for determining the appropriate sample size (n) as propounded by Taro Yamani (1964) was used.

The formula is $n = \frac{N}{1 + N(e)^2}$

Where n = appropriate sample size; N = population (2533 health workers as at 2012); 1 = constant; e = acceptable margin of error (5% or 0.05)

The choice of this formula is informed by its wide acceptability.

By substitution, $n = 345.45 = 345$. For attrition 20% was added (i.e. 69)

That is $n + 69 = 345 + 69 = 414$ approximately.

The sample technique applied in this study was the multistage random sampling procedure. First, the researcher selected four District Health Boards (DHBs) purposively out of the seven district health boards in Enugu State. Then, within the four DHBs, simple random sampling was used to select six Local Health Authorities (LHAs) from two semi-urban DHBs and seven LHAs from two rural DHBs, making it a total of twenty-six Local Health Authorities selected for the study. Finally, from the twenty-six LHAs selected, simple random sampling method (lucky dip), was used to select two hundred and seven primary health centers where questionnaires were distributed to two respondents each, making it four hundred and fourteen questionnaires that were distributed for the study, while a total of four hundred and three questionnaires were returned and used for analyses.

The instrument used for data collection was self-administered questionnaires from respondents. The questionnaire items were structured using 5-point Likert Scale, and values assigned to each option to measure the magnitude of the responses namely: Strongly Agree (SA = 5); Agree (A = 4); Don't Know (DN = 3); Disagree (D = 2); Strongly Disagree.

To ensure that the structured questionnaire instrument developed for the study measured what it was supposed to measure, that is, that they satisfied the requirements of content validity (adequate coverage of the research topic), and construct validity (capacity of the instrument to actually measure the meaning of the concept/construct of the research). The author carried out a pilot study to test the validity of the instrument. Observations, suggestions made and recommendations were reflected and the instrument was amended accordingly.

To ascertain the reliability of the instrument, the researcher used the test-re-test method whereby the modified instrument was given to twenty respondents from Enugu Metropolitan District Health Board. They filled the questionnaire and submitted, and after two weeks, the same questionnaire was issued to the same respondents from Enugu Metropolitan District Health Boards to ensure consistency of the outcomes. The data analysis in this study was done using Statistical package for social sciences (SPSS). The data gathered from the respondents were presented in a tabular form and analyzed, first using simple percentages and mean. Every statement in the questionnaire whose mean score was 3.0 and above was accepted, otherwise, it was rejected. The hypotheses were tested using Linear Regression. Subsequently, Pearson Correlation Coefficient and Analysis of Variance (ANOVA) were used to test the strength of linearity.

FINDINGS

Out of the four hundred and fourteen questionnaires distributed, four hundred and five were returned, but two questionnaires were not filled properly, so four hundred and three (95 %) were duly completed and used for the analysis.

Table 2: The Frequency Distribution of Respondents in DHBs in Enugu State

DHB	Frequency	Percent
Agbani	90	16.4
Awgu	110	32.0
Enugu Ezike	113	35.2
Udi	90	16.4
Total	403	100.0

Table 2 shows the four DHBs selected for the study. Enugu Ezike DHB had the highest number of respondents, followed by Awgu, Udi and Agbani respectively.

Table 3: Distribution of Some Socio Demographic Characteristics of Respondents

	Frequency	Percent
Community Health Extension Workers	247	61.3
Community Health Officers	58	14.4
Doctors	28	6.9
Environmental Health Officers	37	9.2
Nurses	19	4.7
Health Assistants	8	2.0
Pharmacy Technicians	6	1.5
Sex distribution		
Female	335	83.1
Male	68	16.9
Age Groups (years)		
20 -24	6	1.5
25 – 29	14	3.5
30 – 34	20	5.0
35 – 39	87	21.6
40 – 44	104	25.8
45 – 49	96	23.8
≥ 50	76	18.9
Work Experience (years)		
0 - 4	33	8.2
5 – 9	16	4.0
10 – 14	24	6.0
15 – 19	88	21.8
20 – 24	146	36.2
≥25	96	23.8

Table 3 above, shows the official designation of the health workers selected for the study. A majority of the respondents, 247 (61.3%) was Community Health Extension Workers (CHEWs), while 58 (14.4%) respondents were Community Health Workers (CHWs), 37 (9.2%) Environmental Health Officers (EHOs), 28 (6.9%), Medical doctors, 19 (4.7%), Nurses, 8 (2.0%) Health Assistants, and 6 (1.5%) Pharmacy Technicians.

Also, 335 respondents (83.1%) were female staff, while 68 (16.9%) were male staff. This gives a ratio of 4.9: 1.

The most frequent age group was the 40 - 44 years age group (104 or 25.8%), while about 76 (18.9%) respondents were 50 years and above.

The majority of the respondents 146 (36.2%) had a working experience of between 20-24 years, while about 16 (4.0%) respondents had 5-9 years working experience.

Table 4: Descriptive Statistics of Responses to Statements on Supervision of Health Workers in Enugu State.

Statement	N	Mean	Std Deviation	Variance	Minimum	Maximum
Supervision of subordinates increased from 2005 to 2010	403	4.70	.460	.212	4	5
Supervisors use check list	403	4.63	.878	.772	1	5
Supervisors provide Feedback on performance	403	4.62	.912	.833	1	5
Feedback by supervisors improved Health Workers Performance	403	4.24	.681	.463	2	5

Table 4 above indicates that the response to the statement "Supervision of subordinates increased from 2005 to 2010" on a five point Likert with a Mean±SD, 4.70±.460. The minimum score was 4 while the maximum was 5.

On the statement "Supervisors use checklist in the supervision of health workers in Enugu State", the Mean±SD was 4.63±.878. the least score by respondents was 1, while the highest score was 5.

The response to the statement, "Supervisors provided feedback on performance", shows that Mean±SD was 4.62±.912. The least score was 1, while the highest score was 5.

The response to the statement, "Feedback by supervisors improved health workers performance in Enugu State", shows that Mean±SD was 4.24±.681. The least score was 2, while the highest was 5.

Table 5: Respondents Opinion on Supervision of Subordinates.

Score	Response	Frequency	Percent	X ²	Df	P.value
Supervision of Subordinates increased between 2005 and 2010.						
5	Strongly agree	281	69.7	62.732	1	.000
4	Agree	122	30.3			
3	Don't know	0	0			
2	Disagree	0	0			
1	Strongly disagree	0	0			
Use of Checklists by Supervisors in Health Sector in Enugu State						
5	Strongly agree	323	80.1	663.730	3	.000
4	Agree	46	11.4			
3	Don't know	0	0			
2	Disagree	32	7.9			
1	Strongly disagree	2	.5			
Supervisors Provided Feedback on Performance in Health Sector in Enugu State						
5	Strongly agree	327	81.1	684.533	3	.000
4	Agree	40	9.9			
3	Don't know	0	0			
2	Disagree	32	7.9			
1	Strongly disagree	4	1.0			

Feedback provided by Supervisors led to improvement of Health Workers Performance

5	Strongly agree	138	34.2	365.685	3	.000
4	Agree	241	59.8			
3	Don't know	8	2.0			
2	Disagree	16	4.0			
1	Strongly disagree	0	0			

Table 5 reveals that 281 (or 69.7%) respondents, strongly agreed that Supervision of subordinates increased from 2005 to 2010, and 122 (or 30.3%) respondents equally agreed with the statement. This means that 100% of the respondents answered in the affirmative, so we accept the statement that Supervision of subordinates increased from 2005 to 2010. Table 5 above reveals that 323 respondents (80.1%) strongly agreed that supervisors make use of checklist during supervision of health workers in Enugu State. 46 respondents (11.4%) agreed, 32 respondents (7.9%) disagreed, while 2 respondents (.5%) strongly disagreed. Majority of the respondents (91.6%) agreed with the statement, so we accept it as true.

In table 5 above, 327 respondents representing 81.1% strongly agreed with the statement that supervisors provided feedback on performance in health sector in Enugu State. 40 respondents representing 9.9% also agreed, while 32 (7.9%) and 4 (1.0%) disagreed and strongly disagreed. This shows that a good majority of the respondents (91.1%) agreed that supervisors provided feedback on performance in health sector in Enugu State, so we accept the statement.

Table 5 indicates that 241 respondents (or 59.8%) agreed that the feedback provided by supervisors improved health workers performance in Enugu State. 138 respondents or 34.2% strongly agreed, 16 or 4.0% of the respondents disagreed, while 8 or 2.0% of the respondents don't know. This means that majority of the respondents (94.0%) answered in the affirmative, so we accept the statement as true.

Hypothesis Testing:

H₀ Feedback by Supervisors has no significant effect on the improvement of health workers performance in Enugu State.

H_a Feedback by Supervisors has significant effect on the improvement of health workers performance in Enugu State.

Table 6: Linear Regression of Supervision of Health Workers and Reduction in Child Hood Mortality

Model	Unstandardized Coefficients		Standardized Coefficients Beta	t	Sig.	95% Confidence Interval for B	
	B	Std. Error				Lower Bound	Upper Bound
1 (Constant)	1.176	.279		4.220	.000	.628	1.725
Supervision of subordinates increased between 2005 and 2010	.218	.060	.148	3.620	.000	.100	.337
Supervisors use check list	.024	.037	.031	.646	.518	.048	.096
Supervisors provide FB on performance	.418	.037	.560	11.404	.000	.346	-.490

a. Dependent Variable: Feedback by Supervisors improved health workers' performance in Enugu State of Nigeria.

Table 6 shows statistically significant linear relationship between the independent variables "Supervision of subordinates increased between 2005 and 2010", "Supervisors use check list", and "Supervisors provide feedback on performance" and dependent variable "Feedback by supervisors improved health workers performance". The p values are .000, .000, .518, and .000, respectively. All the B coefficients are within the 95% confidence interval and show a linear relationship, except with the statement "Supervisors use check list during supervision", which was also not significant. The standardized coefficient (.560) indicates that the statement "Supervisors provide Feedback on health workers' performance. This is followed by the predictor "Supervision of subordinates increased between 2005 and 2010" with standardised coefficient of .148.

Table 7: Supervision of Health Workers and Reduction in Childhood Mortality (ANOVA)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	77.347	3	25.782	94.533	.000 ^b
	Residual	108.821	399	.273		
	Total	186.169	402			

a. Predictors: (Constant), Supervisors provide feedback on performance, supervision of subordinates increased between 2005 and 2010, supervisors use check lists.

b. Dependent Variable: Feedback by Supervisors improved Health Workers' performance.

The ANOVA table 7 used to check the model fit shows that the linear relationship between the predictors and the dependent variable is accounted for by the sum of squares 77.347 of 186.169, while 108.821 of 186.169 is residual or non-linear. This shows a slightly weak statistically significant relationship between the predictors and the dependent variable "Feed back by supervisors has significantly improved health workers performance. The F ratio 94.933 was significant (p=.000). ANOVA tests the model's ability to explain any variation in the dependent variable.

Table 8: Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.645 ^a	.415	.411	.522

a. Predictors: (Constant), supervisors provide FB on performance, Supervision of subordinates increased between 2005 & 2010, supervisors use check list,

b. Dependent Variable: feedback by supervisors improved HWP

The model summary table 8 shows that the strength of the relationship between the model and dependent variable (R column = .645) is very large, while the R square is .415 less than half of the variation is still explained by the model. The standard error of .522 is slightly large.

Testing Hypothesis

If < .05 reject the null hypothesis and accept alternate hypothesis.

Decision Rule: If the P value of the F ratio is > .05 accept the null hypothesis.

Applying Decision Rule: F ratio = 94.533, P. value = .000 (<.05), the null hypothesis, which states that "Feedback by Supervisors has no significant effect on the improvement of health workers' performance in Enugu State" was rejected and the alternate hypothesis, which states that "Feedback by Supervisors has significant effect on the improvement of health workers' performance in Enugu State" accepted.

DISCUSSION

The findings in this study show that majority of the respondents affirmed that supervision of subordinates increased between 2005 and 2010, supervisors used check lists during supervision and supervisors provided feedback, which improved health workers performance in line with set targets in Enugu State. This agreed with the study by Freedy, et al (2009), where 63% of the respondents agreed to

have been supervised regularly, as against 28% of the respondents that asserted that they had not received any supervision at all.

Supervision is a critical process that ensures that health workforce carried out their tasks as recommended in the guidelines issued by top level management to enhance performance. The feedback provided during supervision help to ensure that the system is still on course and that organisational objectives can be achieved. The implication of this finding is that there is need for increase in supervision to ensure improved performance of health workers with better human resource planning and updating. Supportive supervision has been shown to be a motivating factor and when done properly with checklists act as a training opportunity for the lower cadre health workforce. This view is in tandem with the findings by Marquez and Kean (2002) which stated that the use of checklists for supervision has gained popularity in many low income countries, especially with donor supported projects as a way of structuring supervisory visits. They agreed with this study that checklists were usually adopted as part of supportive supervisory packages as well as problem solving interventions aimed at identifying problems and weaknesses.

Supervision is an input factor in systems theory which helps in improving health workers' performance that would ultimately translate to the achievement of healthcare delivery services. Supportive supervision is the modern approach that is aimed at correcting workers on the spot if found engaging in wrong techniques, while reinforcing acceptable behaviours of health workers in service delivery. Tavrow, et al (2002) also agreed that supportive supervision has clear roles and responsibilities; gives constructive feedback; educate and train the provider; facilitate problem solving, discusses previous visits, as well as the next visit.

Mwita, et al (2009) also supported the view that supervision is an important human resource planning activity. More than 50% of the respondents in their study agreed that supervision involved assigning staff to tasks at the workplace, monitoring and evaluation of day – to – day activities, participating in disciplinary committees, and enforcing regulations and codes of conduct. Planned personnel supervision is part of a strategy to achieving set targets in health planning and prevents redundancies.

Hill and Benton (2010) equally stated that supervision can increase the effects of training if it is directed at the indicators that are easy to supervise and amenable to change. Evidence from their study revealed that supervision targeted at one performance area can influence other performance areas. This agreed with the findings in this study where regular supervision of health workers led to an increase in their performance in these areas. However, the finding by Hill and Benton (2010) does not agree with the findings of this study in the case of regular or frequent supervision. They believed that the quality of supervision done is better than the frequency of supervision visits. To them, “when quality is poor, the quantity of supervision appears to have no impact on performance”.

Although, this study did not go out to evaluate the effect of quality of supervision on performance, there is an element of quality and standard where checklist is developed and used in supervisory visits. The use of checklist in the supervisory visits was to ensure standard and focus by those supervising the workers.

Conclusion

In conclusion, supervision of health workers has a significant effect on the improvement of health workers performance in Enugu State. This effect is translated through the use of checklist, provision of feedback and increased number of supervisory visits.

Supervision of health workers using checklists and feedback serve as monitoring, evaluation and supportive tools for the lower cadre of health workers.

Recommendations

In the light of the findings in this study, the following recommendations are made;

Supervisors should be updated regularly to be acquainted with modern trends in supervision such as supportive supervision, use of checklists, provision of feedback and regular supervisory visits.

In human resource planning there may be need for routine monitoring and evaluation as well as focused operational research initiatives.

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