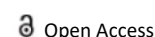




RESEARCH ARTICLE



Reducing Downtime and Improving Workers Efficiency in Oil Servicing Companies in the Niger Delta through Health Promotion Programmes Advocacy

Godspower Imie*, Kpang Meelubari Barinua Tsaro, Prince Ch. Mmom

Department of Geography and Environmental Management, University of Port Harcourt, Choba, Nigeria

ABSTRACT

Over the years, work place accident occurrence has been a day to day event in many oil servicing firms globally leading to morbidity, mortality and also incapacitation or disabilities of oil servicing workers. Significant capital expenses are made in health by companies globally not necessarily to keep their employee's healthy rather to keep them in shape for production to yield consistent rise in productivity. On the contrary, expenditure in treatment/health cost of employee ranging from morbidity rate, absenteeism and loss of work hours remains quite alarming. Consequently, this study was established to survey the existing health promotion programmes practiced in selected oil servicing companies in the Niger Delta Region, Nigeria and ascertain its level of effectiveness. It was aimed at improving workers performance the encouragement of health promotion programmes. Meanwhile, 395 copies of structured questionnaire were administered to the workers of the oil servicing companies that were sampled. Descriptive and inferential statistics were applied for the analysis. The findings revealed that there are health promotion programs in place in the organisations surveyed and excellently rated by the workers in terms of pursuit and achievement of company's objectives and improvement of employee's performance. However, management's commitment to the workability of the health promotion programmes is not commendable as more than 70% of the workers are unsatisfied with management approach so far. Furthermore, the analysis reveals that there is a significant variation in the health risk reduction programmes across the organisations surveyed ($F=495.211$; $p<0.05$). It was concluded on the bases of the findings the study that health promotions programmes across the area vary from company to company. Therefore health promotion programmes such as work site health promotion, wellness programmes, and improved access to health care services aimed at disease prevention and comprehensive health-promoting activities such as improved sensitization, health education, behavioural change communication, and organizational health initiatives were highly recommended.

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Introduction

A physical activity is described as an integral part of health promotion and disease prevention efforts at workplace over the years. Therefore, many health related efforts have been taking to increase physical activity. In accordance with health promotion strategies eating habits have also been proven to be one aspect of health that needs to be assessed to determine health wellness of a person. Klanz (2002), in his research found that eating patterns have a substantial impact on health and quality of life, therefore advised that workplace nutrition promotion programs provides opportunities to reach employees and their families with information, motivation skills, and supportive environment to en-

hance health through good food. Disease prevention and control by an individual can be effected though a good coordinated eating habit. Obesity or overweight person stands the risk of health issues with heart conditions, high blood pressures, diabetes, problems in breathing and some kind of cancers. Therefore it is very vital for one to maintain a good healthy weight, because it helps in lowering risks associated with these problems. With lifestyle behavioural choices contributing to a significant proportion of chronic diseases globally, evidence-based strategies to improve behavioural risk factors such as healthier eating and regular physical activity should be considered in a variety of settings. The workplace offers several advantages in that a substantial number of the

working population can be reached and multiple levels of influence on behaviour can be targeted. The health of an individual can be endangered by many risk agents. Although the Wellness Council of America in corroboration with has clearly identified health assessment at the organizational level as an important health promotion, planning and evaluation tool because of it benefits in providing information on many aspects of employee and organizational health and wellbeing, motivation of employee to make positive lifestyle changes that reduce the risk of diseases since disease precursors are interconnected to some kind of factors like demographic variables, individual behaviours, family and individual historic and physiologic changes [1-3]. Health promotion programmes has not still been given deserved attention as companies mostly invest more in keeping their employees in shape for production. However, rather than the expected consistent rise in productivity, the Wellness Council of America as cited by reveals the alarming rate of expenditure in treatment/health cost of employee annually due to high rate of absenteeism, high morbidity rate, and loss of work hours, accidents and also low productivity [4]. On this note, this study is necessitated to establish whether there is a significant relationship between health risk behaviours and employees performance. Also to find out if there is a significant variation in the health risk reduction programmes across the organisations surveyed.

Materials and Methods

The Niger Delta region which is located in the Atlantic Coast of southern Nigeria at the point where River Niger divides into numerous tributaries lies between latitudes 4°25'40"N – 8°32'0"N and longitudes 4°45'0"E – 8°51'20"E). The companies were coded and the random

sampling technique was employed to select 50% of the companies for detailed study using the balloting method according to [5]. Similarly, the population of the selected companies was further subjected to Taro Yamane (1967) formula.

Taro Yamane formula for sample size determination

$$n = \frac{N}{1 + N(e)^2} \text{----- Eqn1}$$

Where e=level of precision (0.05 at 95%)

N=Target Population, e=0.05, n=sample size

$$n = \frac{32724}{1 + 32724(0.05)^2}$$

$$n = \frac{32724}{1 + 81.81}$$

$$n = \frac{32724}{82.81}$$

n=395

Meanwhile, the main instrument used for data gathering was questionnaire. Accordingly 395 copies of validated questionnaires were distributed across the sampled companies. The Analysis of Variance (ANOVA) statistical tool was deployed for the analysis of the formulated hypothesis (Table 1).

Table 1. List of sampled companies in the area.

S/NO	Location	Code	Population	Sample Size
1	Rivers	RV1	1500	18
2		RV4	2800	34
3		RV6	2500	30
4	Delta	DT3	1420	17
5		DT4	1800	22
6		DT5	600	7
7	Edo	ED2	1300	16
8		ED4	2200	27
9		ED5	560	7
10	Bayelsa	BY1	1000	12
11		BY2	1700	21
12		BY4	1100	13
13	Akwa-Ibom	AK1	1100	13
14		AK3	700	8
15		AK6	580	7

16	Cross River	CR3	2100	25
17		CR2	480	6
18		CR5	420	5
19	Ondo	OD1	1050	13
20		OD3	1000	12
21		OD6	1750	21
22	Abia	AB2	1150	14
23		AB4	450	5
24		AB6	384	5
25	Imo	IM1	1210	15
26		IM2	1200	14
27		IM5	670	8
	Total		32724	395

Results and Discussion

The socio-economic characteristics of the respondents are presented in table 2 and the sex of respondents displayed shows that the males were 67.6% and females were 32.4%. This shows that the males were more than females in the companies used for the study. The table also shows the marital status of the respondents as displayed in Table 1 whereby it is shown that 15.9% were single, 49.1% were married, 19.2% each were divorced and widowed. It is thus seen that many of the respondents were married and it is expected from them to show certain level of responsibility. The analysis of the age of respondents presented in Table 2 shows that 7.1% had their ages below 25 years while 28.6% of respondents were between 26 and 30 years and 8.9% were between 31 and 35 years. However, 30.1% of respondents were between 36 and 40 years, 11.1% were between 41 and 45 years while 10.1% were between 46 and 50 years and 4.1% were above 50 years.

Table 2. Socio-economic characteristics of the respondents.

Characteristics	Frequency	Percentage (%)
Sex		
Male	267	67.6
Female	128	32.4
Marital Status		
Single	63	15.9
Married	194	49.1
Divorced	76	19.2
Widowed	62	15.7
Age (Years)		
Below 25	28	7.1
26-30	113	28.6
31-35	35	8.9

36-40	119	30.1
41-45	44	11.1
46-50	40	10.1
Above 50	16	4.1
Educational Status		
FSLC	25	6.3
SSCE	64	16.2
OND	70	17.7
HND	64	16.2
B.Sc	119	30.1
PG	53	13.4
Income per month (Naira)		
Less Than 50,000	28	7.1
51-100,000	53	13.4
101-150,000	56	14.2
151-200,000	183	46.3
Above 200,000	75	19
Number of Years of Service		
Below 2 yrs	51	12.9
2-5yrs	48	12.2
6-8yrs	49	12.4
8-10yrs	173	43.8
Above 10yrs	74	18.7
Respondents' Department		
Security	35	8.9
Store	36	9.1
Safety	69	17.5
Personnel	61	15.4
Accounts	56	14.2
Operation	81	20.5
Others	57	14.4
Total	395	100

The educational status of respondents are equally displayed in Table 2 and it shows that 6.3% of total respondents had primary education, 16.2% had secondary education while 77.4% had higher education with either Ordinary National Diploma (OND), Higher National Diploma (HND), Bachelor's and post graduate degrees. Although majority of the respondents had a minimum of HND, those with Bachelor's degree dominated the companies.

The income per month is also presented in Table 2 and it is found that 7.1% had an income less than 50,000 Naira, 13.4% had between 51,000 Naira and 100,000 Naira, 14.2% had between 101,000 Naira and 150,000 Naira, 46.3% had between 151,000 Naira and 200, 000 Naira while 19% had above 200,000 Naira. This shows that more than 70% had a minimum monthly income of 151,000 Naira which demonstrated that their living condition is quite an encouraging one. On the aspect of number of years in service of the respondents shown in Table 2, it is revealed that 12.9% of total respondents had spent below 2 years, 12.2% had spent between 2 and 5 years, 12.4% had spent between 6 and 8 years while 43.8% had spent between 8 and 10 years and 18.7% had spent above 10 years in service.

The designation of respondents shown in Table 2 reveals that 11.9% were Clerk/Messenger, 19.5% were Supervisors, 45.1% were Technician and 23.5% were Managers. The analysis therefore shows that majority of the respondents were Technicians and the least were Clerks/Messenger. The digital world that is being executed in majority of the oil servicing companies might have been responsible for the reduction in the number of the Clerks. The table shows the respective departments of the respondents and clearly indicates that 8.9% were in the Security Department, 8.5% were in Stores, 17.5% were in Safety, 15.4% were in Personnel, 14.2% were in Accounts while 20.5% were in Operations and 14.4% were in other departments other than the listed ones.

It is discovered in Table 3 that 42.8% of respondents washed their hands regularly while 20.0% washed their hands occasionally. It is also recorded that 17.0% of total respondents washed their hands only at the working place, 13.7% only at home while 6.6% washed their hands after everything they have touched. The workers in the oil servicing companies have the knowledge of washing their hands regularly, although there are few of them that restricted themselves only to the place of work or home or occasionally. Considering the frequency of eating meal or food served with fish and vegetables as shown in Table 3, 24.6% always eat their meals and food with fish and vegetables while 49.9% said seldom and 13.4% said never. It is discovered also that 12.2% do that occasionally. It highly encouraging that some respondents in the study location could be taking fish and vegetables together with

the food and meals served them. Majorities that eat the combination of food seldom may still meet up with the calories of supplements gained from eating fish and vegetables. But being seldom is an indication the items may not be available or accessible or affordable for majority of the workers. Those few that never eat such combination or people with occasional character in eating is an indication that their body metabolism may not be adequately functioning.

Table 3. Health Promotion Activities.

Frequency of washing hands	Frequency	Percentage (%)
Regularly	169	42.8
Occasionally	79	20
Only when at working place	67	17
Only when at home	54	13.7
After everything one touch	26	6.6
Frequency of eating meal or food served with fruit and vegetables	Frequency	Percentage (%)
Always	97	24.6
Seldom	197	49.9
Never	53	13.4
Occasionally	48	12.2
Driving with seat belt	Frequency	Percentage (%)
Always	228	57.7
Not at all	36	9.1
Some times	54	13.7
Seldom	77	19.5
Checking Engine before mobilising the car	Frequency	Percentage (%)
Yes	286	72.4
No	109	27.6
Number of times to check the engine	Frequency	Percentage (%)
Regularly	190	48.1
Occasionally	52	13.2
Every morning	74	18.7
At the close of work	20	5.1
Periodically	17	4.3
Weekends	42	10.6

Availability of Fire Extinguisher at Home	Frequency	Percentage (%)
Yes	98	24.8
No	297	75.2
Frequency of checking the fire extinguisher	Frequency	Percentage (%)
Occasionally	251	63.5
Regularly	99	25.1
Quarterly	45	11.4
Total	395	100

The analysis on driving with seat belt can be found in Table 3 whereby it is shown that 57.7% of respondents agreed to be using it always, 9.1% said they have not been using it while 13.7% said sometimes and 19.5% said seldom. There is a big plus for the workers in the oil servicing company for the majority believing in the seat belt usage. This ensures more safety in their way of driving and the higher respondents believing in using seat belt can be attributed to the knowledge gained over time in the companies because safety is a major issue in the oil servicing companies.

Checking engine before mobilising the car is another attitude that can promote safety and the analysis on this is displayed in Table 3. It is observed that 72.4% of respondents attested that they always check their engine while 27.6% did not. This is another attitude that promotes safety in the oil servicing company in which majority of the workers saw as their daily duty. This informs that safety is seriously taken as a paramount action in the study area. It is observed in Table 3 that 48.1% of respondents agreed that they regularly check their engine before mobilising the car, 18.7% said every morning, 13.2% of respondents occasionally do that, 5.1% each agreed on the closing time of work, 4.3% periodically while 10.6% agreed on weekends. This invariably informs that the knowledge to be checking the engine regularly and every day is an imbibing culture of individual in the oil servicing companies and this also promotes safety in the life of individual.

The availability of first aid box at home among the respondents in the study area is displayed in Table 3 whereby 27.3% have it while 72.7% did not have it. The first aid at home is a necessary item that can rescue somebody being affected with a serious injury or unplanned sickness before being taken to the hospital where the health personnel can attend to the person professionally. The analysis shows that majority did not have the first aid at home and this could be dangerous to the personal health status of an individual.

The frequency of taking unprescribed drug is displayed in Table 3 whereby 61.8% reported that they take the drugs always, 26.6% said occasionally while 11.6% said never. It is few respondents that believed in the correct prescription of drugs by the health professionals but majority believed in their own knowledge or self-medication. This means that majority are risking their lives with respect to the normal consulting of the health professionals.

The investigation about the availability of fire extinguisher at home is shown in Table 3 whereby it is revealed that 24.8% said they have it but 75.2% said they don't have it. This shows that majority may not be aware of the importance of the use of fire extinguisher at home and this shows the level of risk towards fire incidence at home which could claim lives and properties if care is not taken. The analysis on the frequency of checking fire extinguisher by the respondents is shown in Table 3 and it is revealed that 63.5% admitted occasionally, 25.1% said regularly while 11.4% agreed on quarterly. Looking at this analysis, it can be deduced that majority are not careful of checking the status of their fire extinguisher and this type of situation can ignite a serious destruction if any fire incidence happens. It is admitted that several persons do not have fire extinguisher at home but majority that have it are also careless to check the status and believe that they have fire extinguisher.

It is seen in Table 4 that 72.9% of the respondents agreed that there are health promotion programs in their place of work while 27.1% disagreed. Although majority of the workers affirmed that there health promotion programmes in their work place. The management's approach and reactions to issues arising from health risk behaviours are not commendable as the analysis shows that 13.7% are of the view that the company management is serious, 12.2% said very serious while 36.7% and 37.5% representing more than 70% of the respondents believed that the company management do not handle matters concerning health risk behaviours of their workers seriously as they are either not too serious or do anything at all respectively. On the other hand, the analysis of the rating of the health program in terms of achievement of company's objective is presented in Table 4. The analysis shows that 19.2 % agreed that it is excellent, 10.4% said very good, 22% agreed on good while 48.4% said it is unsatisfactory. In a nutshell 51.6% agreed that the rating of health program in terms of achievement of company's objective good while 48.4% disagreed. This suggests that the management of oil servicing companies is doing absolutely well in attending to health program but again many workers still fell that performance so far is absolutely unsatisfactory.

Table 4. Health promotion program in the organisations surveyed.

Are there health promotion program in your place of work?	Frequency	Percentage (%)
Yes	288	72.9
No	107	27.1
Rating of the health program with respect to achievement of company's objective	Frequency	Percentage (%)
Excellent	76	19.2
Very Good	41	10.4
Good	87	22
Unsatisfactory	191	48.4
Rating of the health programs in terms of improving employee's performance	Frequency	Percentage (%)
Excellent	69	17.5
Very Good	43	10.9
Good	132	33.4
Unsatisfactory	151	38.2
Seriousness of company management to issues arising from health risk behaviours	Frequency	Percentage (%)
Serious	54	13.7
Very Serious	48	12.2
Not too serious	145	36.7
Not at all	148	37.5

The analysis in Table 4 also reveals that 17.5% of respondents agreed that rating the health programs in terms of improving employee's performance was excellent while 10.9% said very good, 33.4% said it was good and 38.2% agreed that it was not satisfactory. Thus majority believed that the health programs are good in terms of improving employee's performance.

Table 5 shows the analysis of variance of the health risk reduction programmes across the organisations surveyed within the study locations. The analysis reveals that there is a significant variation in the health risk reduction programmes across the organisations surveyed ($F=495.211$; $p<0.05$). Thus, the alternative hypothesis is retained while

the null hypothesis is rejected.

Table 5. ANOVA of health risk reduction programmes across the organisations surveyed

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	352.976	8	44.122	495.211	0
Within Groups	34.392	386	0.089		
Total	387.367	394			

Health risk reduction programmes across the organisations surveyed

Findings revealed that majority of respondents believed that the company management is not always serious about the health risk behaviours of their workers and majority of the workers are not satisfied with respect to rating the health program in terms of achievement of company's objective. The management has a duty of care to make sure, as far as possible, health, safety and welfare of workers while at work is guaranteed. They should start with a risk assessment to spot possible health and safety hazards. Furthermore, the Health and Safety Authority (HSA) is responsible for enforcing health and safety at work as it provides information to employers, employees and self-employed people on workplace health and safety. As an employer, it is important to understand who is responsible for health and safety in the workplace and what actions you can take to ensure the health and safety of your employees, contractors and others who may be affected by your operational activities [6]. It is essential that employers especially in low income settings identify health risk assessment in the workplace as a cost saving measure to improve productivity. It may increase labor cost but the benefits garnered from productive workforce may be greater [7]. Early detection of risk provides opportunity to implement measures to prevent development of health complication and loss of productivity [8-11].

Driving with seat belt is another way of displaying health risk behaviours. Majority of the respondents are aware of the usage of seat belt and very few are not. Similarly majority check the engine before mobilising the car. Seat belts are the best defense against impaired, aggressive, and distracted drivers. Being buckled up during a crash helps keep you safe and secure inside your vehicle; being completely ejected from a vehicle is almost always deadly. Despite recent safety features, seat belts are still the most effective injury-prevention devices in your vehicle. Fortunately, more people are buckling up every year. According to the Centers for Disease Control and Prevention (CDC), 83% of Mississippi drivers and passengers wear their seat belts [12].

The knowledge about using fire extinguisher is frail and occasional. Being occasionally checked is a dangerous

attitude because of the time it will be required for use especially for an emergency way. Impact Fire noted that whether at home or at work, portable fire extinguishers are one piece of equipment that is often taken for granted [13]. Someone may think that fire extinguisher is always ready and waiting to be called into service, but if it has not been inspected recently, it may not be as operational as one think and could even pose a danger to you or others attempting to use it. Most dry-chemical fire extinguishers come with a pressure gauge that indicates whether or not the extinguisher is properly pressurized. If the indicator is pointing to "Recharge," the pressure in the extinguisher is likely too low to expel the chemical that extinguishes the fire.

Majority does not have first aid at home and this may be attributed to their ignorance about the importance of the first aid. According to First Aid Priority, first aid is to preserve life, prevent the injury/illness from becoming worse and to promote healing [14]. Everybody or every household are expected to have this at home to achieve the stated goal concerning first aid. Also, the frequency of taking unprescribed drugs is high in the study area. This could be dangerous to human body because of the ignorance about the dosage to use for a particular drug at different ages. Most often this is called self-medication in which defined as the selection and use of medicines by individuals (or a member of the individuals' family) to treat self-recognized or self-diagnosed conditions or symptoms [15].

Several benefits have been linked to appropriate self-medication, among them are increased access to medication and relief for the patient, the active role of the patient in his or her own health care, better use of physicians and pharmacists skills and reduced (or at least optimized) burden of governments due to health expenditure linked to the treatment of minor health conditions. However, self-medication is far from being a completely safe practice, in particular in the case of non-responsible self-medication. Potential risks of self-medication practices include: incorrect self-diagnosis, delays in seeking medical advice when needed, infrequent but severe adverse reactions, dangerous drug interactions, incorrect manner of administration, incorrect dosage, incorrect choice of therapy, masking of a severe disease and risk of dependence and abuse. In this short review the author analyzes recent literature on some of the most important dangers related to self-medication practices, particularly: polypharmacy and drug interactions, medications abuse or dependence, misdiagnosis and incorrect choice of treatment [15]. Personal and workplace distresses are common among the workers in the study area. There is considerable evidence that psychological distress is often co-morbid with other

health conditions and can worsen health outcomes [16].

Conclusion

In most of the oil servicing companies, health promotion programs are in place and the knowledge about health programs aiming at improving performance is gained by majority of the respondents. However, the analysis reveals that more than 70% of the workers believed that the company management is not always serious about the health risk behaviours of their workers while the rating of the health program in terms of achievement of company's objective is unsatisfactory. Notwithstanding, a significant proportion of the workforce still believed that the health programs is good in terms of improving employee's performance.

Recommendations

In the light of the findings revealed by this study, management programmes at the workplace designed to focus on disease prevention and health promotion including work site health promotion, wellness programmes, and improved access to health care services; also comprehensive health-promoting activities such as creating awareness, health education, behavioural change communication, and organizational health initiatives to engender increased physical activity is imperative and therefore recommended.

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