COMPENSATORY HEALTH BELIEFS, LOCUS OF CONTROL, SOCIAL SUPPORT AND QUALITY OF LIFE IN OIL SPILLS-PRONE ENVIRONMENT

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Abstract

The role of compensatory health beliefs, locus of control and social support on quality of life in oil-spills prone environment in developing countries, especially Nigeria has not been explicated. This study examined the role of compensatory health beliefs, locus of control and social support on quality of life among 453 (age 21-50 years; $M = 36.02$; $SD = 12.04$) residents in Ilaje and Ese-Odo Local Government Area (LGA's) in Ondo State of Nigeria. A purposive sampling technique was adopted in selecting participants. Data were collected through a self-administered questionnaire that measured socio-demographics, compensatory health beliefs, locus of control, social support and quality of life. Results revealed that compensatory health beliefs predict quality of life in the study area. Also, social support contributes to quality of life. We suggest that a comprehensive psychosocial intervention program should be carried out to improve quality of life in oil spill-prone communities.

Keywords

compensatory health beliefs, locus of control, Niger Delta, oil-spills prone, quality of life, social support

Introduction

In recent years, quality of life (QoL) has received tremendous research attention from various interdisciplinary fields and disciplines. QoL is employed as a generic label for an assessment of physical functioning and psychosocial variables (Smith, Avis & Assmann, 1999). According to Smith et al. (1999), the improvement over a period of time in any of these variables is claimed to be proof of improved QoL. The term QoL is known to have evolved from the constructs of life-satisfaction and subjective well-being (Frisch, 1994). Researchers have asserted that QoL could be used interchangeably with life satisfaction (Frisch, Cornell, Villanueva & Retzlaff, 1992). QoL is used to evaluate the general well-being of individual and societies. The World Health Organization (WHO, 2000) defines QoL as "individual's perceptions of their position in life in context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns". In addition, QoL is considered to be encompassing health, psychological, economic, and social domains (Frisch, 1994).

The Niger Delta region of Nigeria is known to be the oil-producing area in Nigeria with the economic survival of the country depending largely on the importation of crude oil which is extracted in oil producing states in Niger Delta of Nigeria, a region characterised by

swamp lands in Southern, Nigeria. However, this region has been reported to be one of the most polluted regions in the world (Ayanlade & Howard, 2016; Babatunde, 2020). This was because the degradation of the Niger Delta region has reportedly been associated with the oil industry. As such the oil industry appears to have impacted quality of life in the region. The impact of human beings and oil-exploration by major multinational oil firms has led to depletion of the Niger Delta environment, hence environmental disasters such as biodiversity loss, coastal erosion, flooding, gas flaring, air pollution, oil spillage, water contamination and soil infertility are very severe in this Niger-Delta region (Oweikeye, 2017).

Environmental problems have indirectly or directly adversely affected the inhabitants and host communities in the region (Gabriel, 2004). Among the ecological disasters in the Niger Delta region of Nigeria, oil spill is considered as one of the biggest problems caused by petroleum industry (Mohamadi, Liu & Xie, 2016). Oil spills constitute the major environmental hazards in the oil and gas industry in Nigeria (Oweikeye, 2017). Evidences suggest that oil spills in the Niger Delta region have led to widespread contamination of the environment posing serious threat to the immediate localities and sustainable development (Agbonifo, 2016). Adebayo (2016) asserted that majority of households in the Niger Delta region claimed that an oil spillage allegedly resulting from the activities of some indigenous oil companies in the community has ruined their habitat and deprived them of their means of livelihood. Latest situation indicates that communities affected by environmental pollution often stage protests against the oil firms, causing continual demand for a clean-up of the environment, and compensations for the attendant loss of farmlands and fishing settlements activities. Oil spill is characterized by release of liquid hydrocarbons into the environment (Adelana, Adeosun, Adesina & Ojuroye, 2011). Oil spills also impair inhabitant's well-being and has been linked to poor potable water, insufficient insecurity, unemployment, and loss of livelihoods. Agbakuwara (2014) opined that oil spillage occurs as a result of sabotage, corrosion of pipes and storage tanks. Other sources include drilling and production operations, refineries, oil tankers and natural sources. The level of pollutants discharge into the environment through oil spills has constituted critical environmental problem manifesting in long influence on immediate ecosystem and socio-economic life of inhabitants (Eregha, 2009). The toxicity of the oil adversely affects the soil, plant, animals, and water resources (Ikporukpo, 1988).

Studies on QoL in the Niger Delta of Nigeria were often viewed from the ecological perspectives neglecting the psychological indicators that may affect QoL in oil spill communities in the Niger-Delta region of Nigeria (e.g Atubi, 2015; Ayanlade et al, 2016). Thus, identifying factors that contribute to this detrimental ecological disaster is vital for prevention and appropriate intervention strategies. This present study tends to investigate the role of compensatory health beliefs, locus of control and social support on the QoL of residents in oil-spill prone communities in Ondo State, Niger Delta region of Nigeria. A growing body of literature suggests that an individual compensatory health belief is associated with QoL (Dogan & Goris, 2018; Nooijer, Puijk-Hekman & Assema, 2009; Shabaraya, Romate & Bhogle, 2011). The World Health Organization (2000) defines health as a state of complete physical, mental and social well-being, and not merely the absence of disease or infirmity. In this present study, a compensatory health belief was explored. Conner and Norman (2006) define health belief or behaviour as any activity undertaken for the purpose of preventing or detecting disease or for improving health and well-being.

Compensatory health beliefs are considered to be beliefs relating to the view that individual can compensate for unhealthy behaviours with healthy behaviour (Knäuper, Rabiau, Cohen & Patriciu, 2004). Applying the Health Beliefs Model, an individual ability to have protective health behaviour will be influenced by an evaluation of its feasibility and its

benefits weighed against its cost, in other words, people considering their behaviour engage in a cost-benefit analysis. The applicability of the Health Belief model focuses on preventive health behaviour. The HBM is a theoretical construct formulated to explain the reason and under what situations people take preventive actions (Nemcek, 1990).

Recently, Compensatory Health Belief (CHBs) Model has been used extensively to explain why people hold CHBs (Rabian, Knauper & Miquelon, 2006). According to the model, a motivational conflict otherwise known as cognitive domain occurs between affective states (e.g. desires) and motivation. According to Rabian et al (2006), this conflict is handled using different strategies. The first of these strategies involves a behavioural response to the motivational conflict. The second one is changing beliefs to correspond with the behaviour. Also, the third strategy indicates that an individual can give in to the temptation and thereafter compensate for the harm caused by ones' behaviour. Generally, CHB is used to justify unhealthy choices because they are planning healthy ones (Rabian et al.2006). Thus, it is expected in this study that compensatory health beliefs will contribute to the QoL of residents in the study area.

Locus of control is another psychological factor under consideration in this study. The concept was developed by Rotter (1966) and has since become an important aspect of personality studies. Locus of control is a concept derived from the Social Learning Theory, which focuses on individuals' beliefs as regards factors that influence their behavior (Mostafavian et al., 2018). Evidence in literature suggests that locus of control has a significant relationship with QoL (Ilevbare, Idemudia & Atiola, 2018; Mostafavian, Shaye & Pour, 2018; Shariff & Khanekharab, 2017). Internalizes judge outcomes of events to be internally controllable that is, they believe that their own personal efforts, behaviors, competence, ability, or skills will influence and determine outcomes, and they take responsibility for their actions. Internalizes are likely to belief that personal actions are needed to reduce littering, rather than dependence on actions by authorities. Externalizes attribute events to external sources. They believe and behave as if forces beyond their control such as chance, luck, fate, or powerful others represent the important variables responsible for the occurrence of reinforcing events. Therefore, it becomes imperative that the way individuals attribute causes for their actions go a long way in their perception and subjective ratings of QoL in the oil-spill environments.

There are scare studies investigating social support and QoL, particularly in the oil spills prone communities in the Niger-Delta region of Nigeria. Hence, the inclusion of social support was justified in this present study. Scholars have linked social support to QoL (Fuochi & Foa; 2018; Ilevbare, Idehen & Ilevbare, 2016). For instance, Cohen and Willis (1985) asserted that the quality of social support contributes immensely to well-being through a perceived availability of interpersonal resources, especially in a stressful situation. Social support can be explained as the perceived availability of support, affection, and instrumental aid from significant social partners, including family members, close friends, neighbors, and co-workers. (Antonucci, 1994; Shumaker & Hill, 1991). Evidence from the theoretical models of social support emphasized that it helps to buffer stress and depression, in addition enhancing an individual's morale, health, and wellbeing (Berkman, 2000).

Statement of the Research Problem

Overtime, Ondo State like most oil producing states in Nigeria has been severely affected by the negative impacts of oil-related activities (Babatunde, 2009). Studies have linked illegal bunkering, artisanal refining, and militancy activities to oil spillage and thus the in bearing degradation (Babatunde, 2020; Nnodim, 2016). In 1998, incidents of oil spillage occurred at the Ewan oil fields, causing significant number of damages to farmlands,

vegetation and major occupation, especially fishing and rearing of animals in the area. In 2002, huge crude occurred at Chevron wells A and B located between ‘Ojumole’ and ‘Ikorigho’ communities in Ondo state. Idowu (2017) also reported incidence on oil spills, where affected communities demanded over US 3billion Dollar’s compensation in parts of the Niger-Delta.

Despite the impact of oil exploration, most oil companies have rarely conducted environmental impact assessment in order to determine the extent of damage to the environment and the inhabitants of host communities (Anyanwu, 2012; Ibeawuchi, 2016). The United Nations Environment Program (UNEP) in 2011 submitted an environmental assessment report to the Federal Government of Nigeria on the extent of oil pollution in part of the Niger-Delta. Among others, it was reported that pollution caused by oil-related activities has led to groundwater contamination, and diseases in communities of Niger-Delta. The devastating ecological consequences caused by oil spills in coastal communities of Ilaje have been associated with damages to farmlands, vegetation and worst hit are vulnerable children and women exposed to environmental pollutants; the pollution of source of drinking water has affected people’s health, for example skin diseases, especially rashes, have become rampant among children, who have suffered from various forms of skin and gastric infections (ERA, 1998).

In an attempt to tackle the ecological disaster, several oil spill agencies were put in place to reduce the menace of oil spill incidents. For instance, the Oil Pollution Act (OPA) of 1990 was enacted to provide guidance for government and industry in oil spill prevention, mitigation, clean-up and liability. Also, the Federal Government in compliance with the international convention in Oil Pollution Preparedness Response and Cooperation (OPRCGO) established a National Oil Spill Detection and Response Agency (NOSDRA). This agency mandate was to intensify efforts towards compliance monitoring and enforcement of oil and gas regulation and standard. Furthermore, the Niger-Delta Development Commission (NDDC) was created by the Federal Government to liaise with the various oil mineral, gas prospecting and producing companies on oil matters of pollution prevention and control. The Ondo State Government established the Ondo State Oil Producing Areas Development Commission (OSOPODEC) to tackle oil related activities so as to improve the quality of life of residents. Despite all these efforts and initiatives of the aforementioned agencies to alleviate the suffering and QoL of residents, the QoL of the residents has yet to improve significantly because policy makers and stakeholders have failed to address the psychological factors that could influence QoL of residents in oil spill prone communities.

The Present Study

In the present study, we examined how compensatory health beliefs, locus of control and social support may play a predictive role in respect of QoL of residents in the oil-spills prone communities. We were primarily interested in testing which of the psychological variables (i.e. compensatory health beliefs, locus of control and social support) contributes most significantly to QoL.

Methods

The study adopted and utilized ex-post facto design, such that the researcher was not involved in active manipulation of variables of interest. The independent variables of the study were compensatory health beliefs, social support, and locus of control. The dependent variable was QoL.

Participants and Settings

Participants were 453 residents, who ranged in age from 21 to 50 years ($M = 36.02$ years; $SD = 12.04$) in Ilaje and Ese-Odo Local Government Area of Ondo State, Nigeria. Two Local Government Areas of Ondo state (Ilaje and Ese-Odo local Government Areas) were purposively selected for study. The justification for this is because major oil exploration is dominant in these areas. Ilaje local Government Area (LGA) has its headquarters in Igbokoda. Residents in the study area are distinct migratory coastal linguistic group of Yoruba tribe that are distributed along the coastal belts of Ondo, Ogun, Lagos and Delta States in Nigeria. The LGA has an area of 1,318 km² and a population projection of 391,200 as at 2016 (NPC, 2016). Apart from petroleum, minerals found in commercial quantity found in Ilaje include glass sand, salt, tar sand/Bitumen, quartz and clay. People's occupational activities include fishing, canoe making, lumbering, net making and mat making. The second Local Government Area, Ese-Odo, has its headquarters in Igbekebo, with an area of 762 km², and it has a projected population of 213,600 (NPC, 2016). A summary of the socio-demographic information is presented in Table 1.

Measures

A questionnaire consisting of four sections was used for data collection. The first section of the questionnaire tapped socio-demographic information such as gender, age, educational level, area of residence/locality and income level. The second, third and fourth sections contained measures of compensatory health beliefs, locus of control, social support and QoL respectively.

Compensatory health beliefs were measured using the 17-item Compensatory Health Belief Scale which was developed by Knäuper et al (2004). Response option ranged from 0= not at all to 4= very much. Summations of items were scored to get a composite score for the scale. Sample of the items in the scale includes "Stress during the week can be made up for relaxing on the weekend", "smoking can be compensated for by exercising" and "It is alright to drink a lot of alcohol as long as one drinks lots of water to flush it". Knäuper et al (2004) reported an internal consistency values of the subscales to between $\alpha = 0.63$ and $\alpha = 0.74$; except for the weight regulation dimension ($\alpha = 0.57$). A test- Retest correlation of 0.75 ($p < 0.0001$, $N = 141$) was found for the scale. In this study, a Cronbach alpha of 0.85 was reported for the scale. Furthermore, locus of control was measured using the 24-item Multidimensional locus of control scale (MLOCS) developed by Levenson (1973). Items on the scale were scored on a five-point Likert scale, ranging from Strongly Disagree =1 to Strongly Agree= 5. The scale yields three distinct factors. The internality subscale (e.g., "Whether or not I get to be a leader depends mostly on my ability"); the Powerful others subscale (e.g., "I feel like what happens in my life is mostly determined by powerful people"). The Chance subscale (e.g., "To a great extent my life is controlled by accidental happenings"). The author got a minimum Cronbach's alpha of 0.74 for internality, 0.79 for powerful others, and 0.79 for chance. The mean value was 27.88 ($SD = 4.88$) for internality, 14.51 ($SD = 6.76$) for powerful others, and 13.40 ($SD = 6.78$) for chance. In this study, Cronbach alpha of 0.62, 0.63 and 0.62 was reported for internal, chance and powerful others locus of control respectively. Social support was also measured using the 12-item Multidimensional Scale of Perceived Social Support. The instrument was developed by Zimet, Dahlem, Zimet, and Farley (1988). The scale was intended to measure the extent to which an individual perceives social support from three sources: Significant Others (SO), family (FA) and Friends (FR). The MSPSS is rated on a seven-point Likert-type scale with scores ranging from 'very strongly disagree' (1) to 'very strongly agree' (7). Cronbach alpha obtained for the family, friends, and significant other

subscales were 0.90, 0.94, and 0.95 respectively. The reliability of the entire scale was 0.91. These values indicate a good internal consistency for the scale as a whole and for the three subscales. The Cronbach alpha of 0.76 was reported for the scale in this study. The norm for this scale was established among 154 people with mean age = 26.5 years, SD =7.4. Lastly, quality of life was measured using the World Health Organization Quality of Life Questionnaire-Shorter Version (WHOQoLBREF). The questionnaire consists of 26 items in four domains. The four domains of QOL are physical health domain, psychological health domain, social relationships domain and environmental domain. This instrument emphasizes the subjective response of individual rather than objective conditions. The mean score was transformed from 4 – 20 range. The higher the scores, the better is the QoL. Scoring format ranging from 1=Not at all, 2 =Not much, 3 = moderately, 4 =a great deal, 5 = completely was adopted. A Cronbach alpha of 0.93 was reported for the scale in this present study.

Procedure

Ethical clearance was obtained from the institutional review committee at the Department of Psychology, Faculty of Social Sciences, Obafemi Awolowo University, Ile-Ife, Nigeria. Thereafter, permission was sought from the community leaders and major stakeholders in selected Local Government Areas before administering the questionnaire to the participants. This was considered appropriate for easy mass mobilization of participants in the study area. Ethical issues of assurances were given on the basis of confidentiality and discretion of the study. Direction on how to complete the questionnaires were given and participants were encouraged to be truthful as possible in their responses. The questionnaire was distributed to participants, and afterward, the completed questionnaires were collected immediately. This was to guide against loss of questionnaire. However, during the course of administration of questionnaire, incentives were given to the participants' due to the nature of the riverine oil producing communities in the study area. The period of data collection took three months.

Results

Table 1: Participants' socio-demographic variables (N= 453)

Variable	Level	Frequency	Percentage (%)
Age	<21	45	9.9
	21-30	118	26.0
	31-40	144	31.8
	41-50	92	20.3
	>50	54	11.9
	Total	453	100.0
Gender	Male	259	57.2
	Female	194	42.8
	Total	453	100.0
Religion	Christian	344	75.9
	Muslim	86	19.0
	Traditional	23	5.1
	Total	453	100.0
Occupation	Civil Service	82	18.1
	Student/Corper	69	15.2
	Fishing	85	18.8
	Artisan/Trading	122	26.9

	Professional	12	2.6
	Others	83	18.3
	Total	453	100.0
Marital Status	Never Married	134	29.6
	Married	263	58.1
	Widowed	28	6.2
	Separated	28	6.2
	Total	453	100.0
Educational level	Pry/Sec	169	37.3
	NCE/OND.	124	27.4
	BSC/HND	137	30.2
	MSc	17	3.8
	PhD	6	1.3
	Total	453	100.0
Monthly Income	<20000	173	38.2
	21000-50000	152	33.6
	51000-100000	92	20.3
	>100000	36	7.9
	Total	453	100.0
Household Size	1-3	58	12.8
	4-6	257	56.7
	7-10	122	26.9
	>10	16	3.5
	Total	453	100.0

Table 2 indicates that there is a significant positive relationship between QoL and health belief { $r(399)=.30$, $p<.01$ }, QoL and family domain of social support { $r(399)=.15$, $p<.01$ }, QoL and Friend domain of social support { $r(399)=.22$, $p<.01$ }, and QoL and Significant Other { $r(399) =.19$, $p<.01$ }. Furthermore, the analysis indicates that compensatory health belief is positively related to internal locus of control { $r(399) =.12$, $p<.05$ } and powerful Other { $r(399) =.11$, $p<.05$ }, family domain of social support { $r(399) =.18$, $p<.01$ }, friend { $r(399)=.20$, $p<.01$ }, and significant Other { $r(399)=.18$, $p<.01$ }. The analysis also indicates that internal locus of control is positively related to chance locus of control { $r(399) =.41$, $p<.01$ }, powerful Other { $r(399) =.43$, $p<.01$ }, family domain of social support { $r(399) =.14$, $p<.05$ } and friend domain of social support { $r(399) =.11$, $p<.05$ }. Chance locus of control is positively related to powerful other { $r(399) =.65$, $p<.01$ } and friend domain of social support { $r(399) =.14$, $p<.01$ }. The analysis also indicates that powerful other is positively related to friend domain of social support { $r(399) =.12$, $p<.01$ }. The analysis similarly reveals that family is positively related to friend domain of social support { $r(399)=.59$, $p<.01$ } and significant other { $r(399) =.49$, $p<.01$ }. Lastly, friend domain of social support is positively related to significant others { $r(399) =.45$, $p<.01$ }.

Table 2: Mean, Standard deviations and Correlations for Observed Variables

Variables	M	SD	QOL	CHBS	I	C	PO	Fa	Fr	SO
Quality of Life	73.11	17.88	1							
Compensatory Health Belief	47.40	11.75	.30**	1						
Internal	28.97	4.51	.05	.11*	1					
Chance	26.79	5.41	.00	.00	.41**	1				
Powerful Others	26.28	5.21	-.02	.11*	.43**	.65**	1			
Family	19.15	5.27	.15**	.18**	.14*	-.01	-.02	1		
Friend	17.64	5.47	.22**	.20**	.11*	.14**	.12**	.57**	1	
Significant Others	19.26	7.40	.18**	.18**	.06	-.00	.00	.48**	.45**	1

Note; **= Correlation is significant at 0.01 (two-tailed), * =Correlation is significant at 0.05 (two-tailed), QOL= Quality of Life, CHBS = Compensatory Health Belief Scale, I=Internal, C=Chance, PO=Powerful Others, Fa=Family, Fr=Friend, and SO= Significant Others.

Table 3 indicates the means of the dimensions of quality of life. The physical domain shows a mean of 19.50 and S.D of 4.95 with score between 8-36. The psychological domain shows a mean of 17.36 and S.D of 4.50 with score ranging from 16-30. The social relationship domain shows a mean of 8.38 and S.D of 2.61 with score ranging from 3-15. Finally, the environment domain revealed a mean value of 19.18 and S.D of 5.73 and score ranging from 7-35.

Table 3: Summary table of Quality of life

Quality of life dimensions	Mean domain	Range	S.D
Physical Health	19.50	8-36	4.95
Psychological	17.36	6-30	4.50
Social Relationship	8.38	3-15	2.61
Environment	19.18	7-35	5.73

As displayed in Table 4, compensatory health belief significantly and independently predicted QoL among residents in oil spills prone communities ($\beta = .30$; $p < .05$). This infers that compensatory health belief accounted for 9% of the variance observed in QoL. Similarly, when locus of control was added in step two, locus of control did not independently predicted QoL ($\beta = .00$; $p > .05$). However, when social support was added to the third step, the result of independent prediction showed that social support significantly independently predicted QoL ($\beta = .16$; $p < .05$), indicating that the huge amount of social support received by residents of oil spills prone communities, the favorable will be their QoL. The same result indicates that all the three predictor variables jointly predicted QoL adj. $R = .11$, $F(3, 448) = 20.18$, $p < .05$. This joint prediction accounted for 11% of the explained variance of QoL among residents in oil spills prone communities.

Table 4: Three-model Hierarchical Multiple regression analysis of compensatory health belief, locus of control and social support on quality of life

Predictor variables	Step 1	Step 2	Step 3
Compensatory health belief	.30*		
Locus of control		.00	
Social support			16**
R	.30	.30	.34
R ²	.09	.09	.11
Adj. R ²	.09	.08	.11
R2 change (%)	.09	.00	.02
F-ratio	46.13**	23.01	20.18**
F change	46.13**	.00	13.25**
**p < .01.			

Discussion

This study aimed to investigate the predictive role of compensatory health beliefs, social support and locus of control in the QoL of residents in oil spills environments of Ilaje and Ese-Odo LGAs in Niger-Delta region of Ondo State, Nigeria. A total of 453 individuals were evaluated in this study. The findings of the study indicated that compensatory health beliefs significantly predicted QoL in the oil spills prone communities, such that participants with higher compensatory health beliefs pertaining to their behaviour were more likely to experience better QoL. This outcome is in line with the findings by Aliha (2015); Dogan et al. (2018) and Shabaraya, Romate and Bhogle (2011) who argued that health beliefs have a relationship with QoL. This implies that individuals who justify their unhealthy choices in the process of anticipating for healthy ones will be less vulnerable to diseases and illness such as diarrhea, cholera, and malaria, which is common in the riverine oil communities. Thus, this will directly or indirectly influence their QoL. The reason is not farfetched because a healthy behaviour is an imperative precursor of QoL and general well-being. Therefore, it is expected that individuals who think that he or she can compensate for unhealthy behaviour such as drinking, and smoking are less likely to engage in health-risk behaviour thereby improving their QoL (Nooijer, et al. 2009). This finding is also in support of the studies of Shabaraya, Romate and Bhogle (2011) who argued that health beliefs have a relationship with health behavior.

Findings also revealed that locus of control did not independently predicted QoL. This outcome suggests that locus of control either by internal, powerful other and chance, has no influence in the manifestation of QoL among residents in oil spill prone communities. This finding is in consonance with the works of Shariff and Khanekharab (2017), who found a negative relationship between powerful others and patients' quality of life and the mediation of active-emotional coping between powerful others and QoL. The reason for this outcome may be attributed to the fact that residents who are internally oriented are of the opinion that

events in their life derive primarily from their own actions and have no consequences on their QoL. However, the finding of the study contradicts the works of Ilevbare et al. (2018) and Mostafavian et al. (2018) whose studies found a significant relationship between health locus of control and QoL outcomes. These contradictory findings could be attributed to peculiarities of the sample in terms of cultural orientation and beliefs among African settings that individual outcome in life as regard success or failure are predetermined by a higher being.

Findings also revealed that social support significantly independently predicted QoL. This implies that the higher the amount of social support received, the more likely a better QoL is experienced by residents in the oil-spills communities. This finding is consistent with previous studies, both locally and globally, confirming that social support is a crucial factor to be considered in enhancing well-being and QoL (Ilevbare et al., 2016; Fuochi et al., 2018). Social support is, therefore, essential for inhabitants in the oil spills prone communities, as it will help ameliorate their suffering and can serve as a buffer to a well meaningful life. Such support can come from any significant stakeholder, such as government, non-governmental organization, and oil companies operating in these areas. Thus, the amount of social support like provision of social infrastructure could go a long way in boosting the QoL of residents. Arising from this development, Ilevbare and Idemudia (2019) suggest creating of recreational facilities as a means of social network where friends and families can have social interaction in a stress-free environment and share their experiences together. These are necessary in enhancing well-being and improving QoL of residents in the oil spill prone communities.

Implications

The current findings have practical implications for assessing and improving QoL in oil-spill communities in the Niger-Delta region of Ondo State, Nigeria, which has not been given enough attention. Compensatory health beliefs and social support significantly contribute to QoL among residents in the oil-spills communities. This implies that QoL of residents will continue to deteriorate if these psychological indicators are not given cursory attention by policymakers. The significant independent contributions of compensatory health belief and social support on QoL indicate that lack of these variables may also reduce QoL of residents in the study area. This implies that there is need for trained environmental, health, clinical and social psychologists to design intervention programs that are aimed at increasing general health beliefs, locus of control and social support in order to boost the QoL of residents living in oil spill prone communities in Niger-Delta region of Ondo State. In addition, the Niger Delta Development Commission (NDDC) and Ondo State Oil Producing Communities Development Commission (OSOPADEC) should improve on existing facilities in oil-spills prone communities to enhance the QoL of residents.

Conclusion

According to the findings, compensatory health beliefs significantly contributed to the QoL of residents in the study area. The study also concluded that locus of control did not have any significant influence on QoL. Furthermore, social support predicted QoL implying that increase in social support variably leads to better QoL of residents in the oil-spill prone communities in the Niger-Delta region of Ondo State. Therefore, conducting research set out to examine the roles of compensatory health beliefs, locus of control and social support in contributing to QoL of residents in oil-spills prone communities is a step in the right direction. The findings of this study have demonstrated that compensatory health beliefs and social support are valid predictors of QoL of residents in oil-spills communities.

The study is by no means exhaustive. One of the major limitations is the sample from which data were collected. This may limit the external validity of the findings. Future

research should re-examine the current research with a more diverse sample of oil-spill prone communities in Nigeria. Second, the self-reported nature of the survey research could warrant participants' responses to test questions to be influenced by social desirability and other demand characteristics which may results to inaccurate reporting. Therefore, we recommend that future research should utilize more objective and behavioral assessments to investigate the study of this nature. Third, more-in-depth testing of mediatory variables such as hardiness, environmental resilience, and environmental self-efficacy should be considered for future research. Hence, future studies should incorporate the afore-mentioned variables into the broader framework, to ascertain their individuals and joint prediction to improve the overall QoL of residents in the oil-spills communities of Niger-Delta region in Nigeria.

REFERENCES

- Adebayo, F. (2016, July 12). Community tackles firms over pollution. *Punch Newspaper*. .pp 18
- Adelana, S.O, Adeosun, T.; Adesina, A.O & Ojuoye, M.O. (2011). Environmental pollution and remediation challenges and management of oil spillage in the Nigerian coastal areas. *American Journal of Scientific and Industrial Research* 2(6), 834
- Agbonifo, P. (2016). Oil spills Injustices in the Niger-Delta Region: Reflections in oil industry failure in Relation to the United Nations Environment Programme (UNEP) Report. *International Journal of Petroleum and Gas Exploration Management* 2(1), 26-32
- Aliha, J.M. (2015). The relationship between quality of life and health locus of control beliefs in Hemodialysis Patients. *Client-Centred Nursing Care* 1(2), 83-90
- Antonucci T.C (1994). A life-span view of women's social relations. In: Turner B, Troll LE, Turner B, Troll LE, editors. *Women growing older: Psychological perspectives*. Thousand Oaks, CA US: Sage Publications, Inc; 239–269
- Anyanwu, C.U. (2012). *The Oil Industry and the Nigerian environment. Conference Proceedings*. (27th May-1st June) Energy Future. The Role of Impact Assessment, 32nd Annual Meeting of the International Association for Impact Assessment. Porto, Portugal
- Atubi, A.O. (2015). Effects of Oil Spillage on Human Health in Producing Communities of Delta State, Nigeria. *European Journal of Business and Social Sciences*, 4(8), 14-30
- Ayanlade, A & Howard, M.T. (2016). Environmental Impacts of Oil Production in the Niger Delta: Remote Sensing and Social Survey Examination. *African Geographical Review*, 35(3), 272-293.
- Babatunde, A.O. (2020). Oil pollution and water conflicts in the riverine communities in Nigeria's Niger-Delta region; Challenges for and elements of problem-solving strategies. *Journal of Contemporary African Studies* 38(2), 274-293.
- Berkman L.F (2000). Social support, social networks, social cohesion and health. *Social Work in Health Care*, 31(2), 3–14
- Cohen S, & Wills T.A. (1985). Stress, social support, and the buffering hypothesis. *Psychological Bulletin*, 98(2), 310–357
- Dogan, N; & Goris, S. (2018). The effect of pain levels and pain back beliefs of elderly people living in Nursing home on Quality of life. *International Journal of Caring Sciences*, 11(2), 947-954
- Frisch M. B. (1994). *Test manual and treatment guide for the QOLI (Quality of Life Inventory)*, Minneapolis, MN: Pearson Assessments (formerly NCS Assessments
- Frisch, M. B, Cornell, J, Villanueva; M, Retzlaff, P.J. (1992). Clinical validation of the Quality of Life Inventory: A measure of life satisfaction for use in treatment planning and outcome assessment. *Psychological Assessment*. 4(1), 92–101
- Fuochi, G; & Foa, C. (2018). Quality of life, coping strategies, social support and self-efficacy in women after acute myocardial infarction: a mixed methods approach. *Scandinavian Journal of Caring Sciences*, 32, 98-107 doi.10.1111/Scs.12435
- Ibeawuchi, I.V. (2016). *Environmental Impact Assessment of Oil and Gas Industry in Niger-Delta, Nigeria: A Critical Environmental and Legal Framework Assessment*. Master of Applied Science Thesis Submitted to Dalhousie University, Halifax, Nova Scotia. Canada

- Idowu, S. (2017, November 8). Bonga oil spill victim claim 3,6 billion Dollars suit against Shell in the UK. *Thisday Newspaper*.
- Ilevbare F. M, Idemudia E.S, & Atiola, S. (2018). Environmental identity, health locus of control, and quality of life in oil-producing community. *Environmental Quality Management*, 28:123–129. <https://doi.org/10.1002/tqem.21580>
- Ilevbare, F.M. & Idemudia, E.S. (2019). Psychosocial factors and psychological well-being in Ilaje oil-producing community, Niger-Delta region of Ondo State, Nigeria. *International Journal of Happiness and Development* 5, 57-65 Inderscience publishers. Geneva, Switzerland.
- Ilevbare, O. E Idehen, E. E & Ilevbare, F. M (2016). Influence of Psychosocial Factors on the Quality of Life of Diabetics Patients at Obafemi Awolowo University Teaching Hospital. *Ife psychologia*, 24(1), 66-75.
- Knauper, B, Rabian, M, Cohen, O, & Patriciu, N (2004). Compensatory health beliefs: Scale development and Psychometric properties. *Psychology and Health*, 19(5) 607-624.
- Mohamadi, B, Liu, F & Xie, Z. (2016). Oil spill influence on vegetation in Nigeria and its determinants. *Polish Journal of Environmental Studies*, 25 (6), 2533-2540
- Mostafavian, Z; Shaye, Z.A, & Pour, A.F. (2018). The data on health locus of control and its relationship with quality of life in HIV-positive patients. *Data in Brief* 18, 1967-1971
- Nnodim, O. (2016, December 1, 2016). Federal Government Steps up Response Against Oil Pollution. *Thursday Punch Newspaper*, PP- 30
- Nooiijer, J, Puijk-Hekman, S; & Assema, P.V. (2009). The compensatory health beliefs scale: psychometric properties of a cross-culturally adapted scale for use in the Netherlands. *Health Education Research* 24(5), 811-817
- Oweikeye, P.E. (2017). *GIS-Based Mapping and Analysis of Oil-pollution in Niger-Delta Coastal Environment*. M.Sc Thesis Submitted to University of Aberdeen, Scotland
- Shabaraya, G; Romate, J. & Bhogle, S. (2011). Relationship between adolescents' health beliefs and Health behaviour. *International Journal of Medicine and Public Health* 1(3), 55-59
- Shariff, S. P. & Khanekharab, J. (2017): External locus of control and quality of life among Malaysian breast cancer patients: The mediating role of coping strategies, *Journal of Psychosocial Oncology*, DOI: 10.1080/07347332.2017.1308984
- Shumaker S.A & Hill D. (1991). Gender differences in social support and physical health. *Health Psychology*, 10(2), 102–111
- Smith; K.W; Avis, N.E & Assmann, S.F. (1999). Distinguishing between quality of life and health status in quality of life research: A meta-analysis. *Quality of life Research*, 8, 447-459
- UNEP (2011). *Environmental Assessment of Ogoniland*. United Nations Environment Programme.
- World Health Organisation (WHO, 2000) *Promoting Mental Health: Concepts, emerging evidence, practice; the report of the World Health Organisation*, Department of Mental Health and Substance Abuse in collaboration with the Victorian Health Promotion Foundation and the University of Melbourne. Geneva: World Health Organisation