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The Effects of Filters on Colour Vision

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Abstract

Colour vision is important in everyday life and colour vision deficiency generally lowers the quality of life. The objective of the study was to perform tests and measurements to investigate the effects of gelatine filters on colour vision. Colour vision measurements were carried out using the Ishihara and Dvorine colour test plates. The visual acuity measurements were obtained using the Snellen letters. A total number of 12 subjects were tested. The results of the measurements showed that colour vision improved significantly using the red and orange filters but worsened using the green and blue filters. Therefore the use of red and orange filters as spectacles is recommended for those individuals with red-green deficiency.

Keywords Colour Vision, Filters, Visual Acuity, Snellen Letters, Ishihara Dvorine Colour Test, Gelatine

Introduction

The importance of colour vision cannot be overemphasized and it is hypothesized that colour vision in the visual system evolved as a means of overcoming the extremely unfavourable lighting conditions in the natural environment of early vertebrates.¹ Colours are the basic information carriers

of any natural scene.² Daily life depends on colour to an enormous extent in education, packaging, medicine, sport, horticulture, transport, and many industrial activities.³ Minor frustrations for the colour abnormal individual include weather forecast (because of the colour coding on the legends), light emitting diodes, traffic lights, purchasing clothing, bank tellers (normally in triplicate, each for a specified box) e.t.c. According Lennie⁴, colour vision has attracted scientific attention for at least 275 years, though it was not until the nineteenth century that we began to understand it properly. Since then, Scientists have provided very precise descriptions of the phenomena of colour vision and provided much new information on the mechanisms of colour vision. The loss of information due to inadequate colour decoding prevents or slows down comprehension, increases reaction time and generally lowers the quality of life. 8% of men and 0.5% of women have colour deficiency or colour blindness in the civilized world. It is more prevalent among the whites than other racial groups^{5,6} and colour vision tests are necessary for different professions.⁷ In order for colour to be seen, electromagnetic energy has to reach the eye. An object is seen when light is reflected from it. If it looks green in daylight, then this must imply that it is only reflecting the green part of the light back to our eyes. The remainder of the spectrum is absorbed.

Colour vision deficiency is a condition in which certain colours cannot be distinguished, and is mostly due to an inherited condition. Red-Green colour deficiency (blindness) is by far the most common form, about 99%, and causes problems in distinguishing reds and greens. Another colour deficiency, Blue-Green also exists, but is rare and there are no commonly available tests for it. Abnormal colour vision interests a wide range of people, including the millions who realize that their appreciation of colour is 'defective', their families and many more who are responsible for the dangers and other consequences of their condition, including industrial and professional implications. The objective of this study was to perform tests and measurements to investigate the effects of filters on colour vision.

Using Colour Filters

Interesting results are obtained when light filters, in the form of sheets of gelatine coloured with various dyes, are placed in front of white light. By this means, the light transmitted by the filter can be analyzed into its component colours. It is observed that certain colours depending on the colour of the filter, are now absent from the spectrum. The missing colours are those of light which have been absorbed by the filter, while remaining colours have been transmitted. Now one would expect red gelatine to transmit only red light, green gelatine only green light and so on. Indeed, this generally proves to be so when tested by experiment. But an unusual result is obtained with yellow gelatine. The spectrum of light passing through most types of yellow gelatine is found to consist of red and green as well as yellow. What is even more striking is that this particular yellow light looks just the same to the eye as that which comes from a filter passing only pure yellow. To distinguish between the two, the former kind of yellow is called compound yellow light. Filters modify the visual system⁸ and are used to alter and cause a lot of effects in the performing arts. By additive mixing using multiple sources and by using multiple filters in units, a virtually unlimited palette can be achieved.

Materials and Method

The investigations were carried out in four parts: Visual Acuity Measurements^{9,10} Ishihara Test¹¹, Dvorine Colour Test¹² and Colour Naming Test. All sessions were done under normal natural lighting room condition, which was good for near and distance acuity measurements. All subjects on glasses were tested without their glasses on to avoid any effect of such on the measurements. The colour plates were held at a distance of 75 cm and tilted so that the plane of the paper was at right angle to the line of vision. Each plate was to be read within a maximum of three seconds. In some sessions, the order of the plates was varied to avoid subjects reading from memory.¹³ Since the focus

of the work is on the effect of filters, details of the visual acuity and colour vision measurements are described in an earlier paper.¹⁴

Griffin gelatine -film colour filters were also used in the experiment to observe the effect of filters on colour vision. The filter was used for each eye separately placed on a spectacle frame.

Results

Table 1 shows the responses of the 12 subjects for no filter, red filter, orange filter, yellow filter, green filter and blue filter respectively for the Ishihara and Dvorine colour plates. The subjects were of different ages and visual acuities. The eye column indicates either the right eye R, or the left eye, L response.

Discussion and Conclusion

Figures 1 and 2 show graphically the comparison of the filters used. The results show a remarkable improvement using the red and orange filters but a poor response from the green and blue filters. The results indicated 3 persons with colour deficiencies that are acquired, rather than congenital shown clearly by failing to read four or more of the Ishihara colour plates and a 100% score in colour naming. Those with congenital colour deficiencies were 3. The Ishihara test had a total of 17 plates and a failure to read four or more plates indicated a colour vision deficiency. Using the red filter therefore enabled the subjects but one to read almost all the plates correctly. The subject with a poor visual acuity of 6/60 rather had a worse perception which was not necessarily a colour vision deficiency but of the acuity. A similar result was obtained the orange filter. The red and orange filters used on the Dvorine plates also showed some little improvement. Green and blue filters had a rather negative effect on the reading of the plates. This could be due to the fact that the red and orange filters compensated for the spectrum not distinguishable to the colour deficient subjects. Therefore the use of red and orange filters as spectacles is recommended for those individuals with red-green deficiency particularly in fields where colours are encountered daily as in the computer and its various applications.

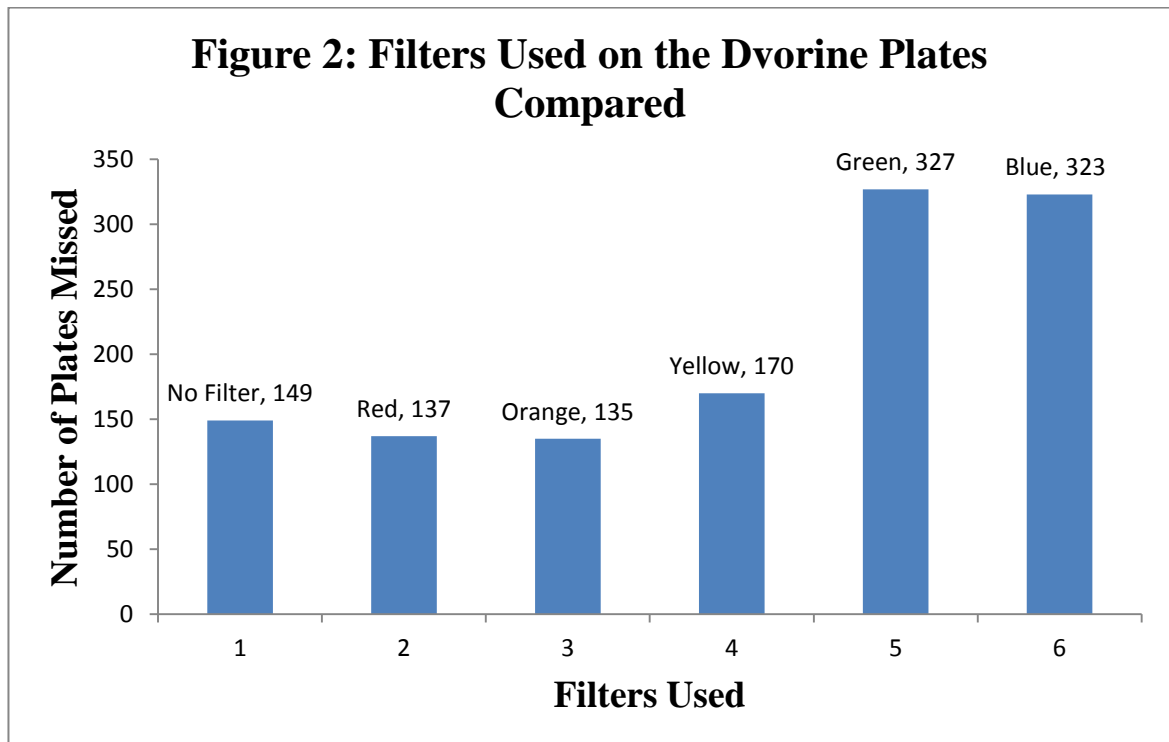
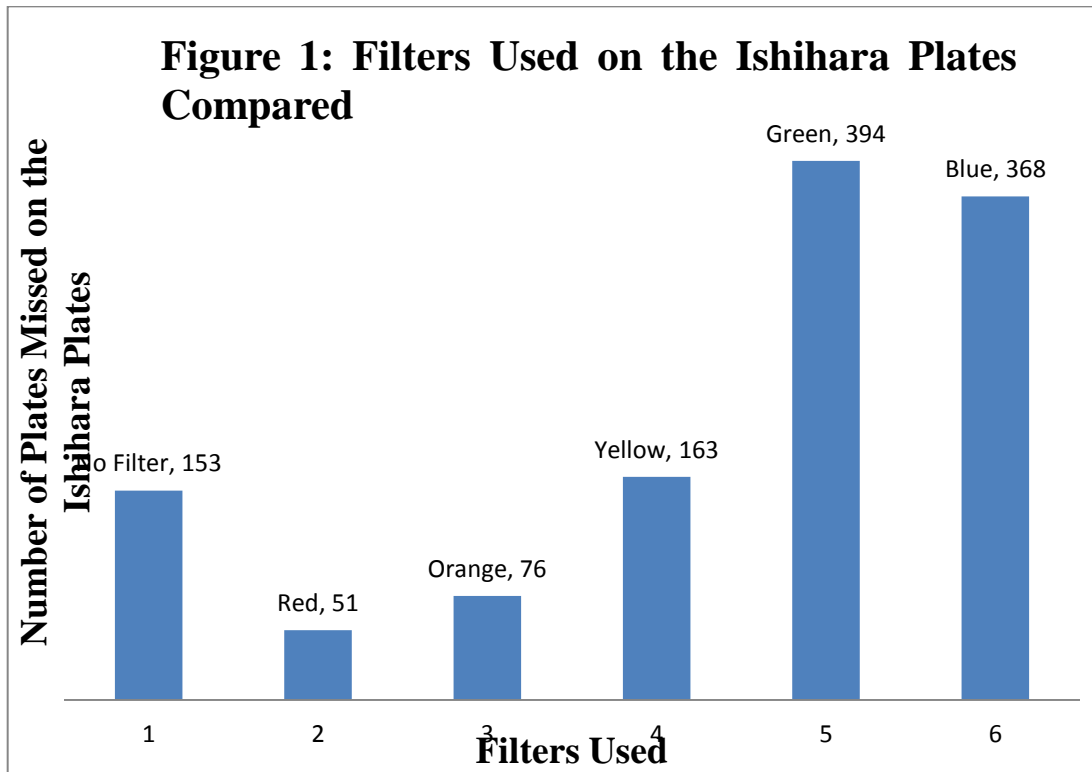
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Appendix

Table 1: Results of the Filters Used.

S/No	Age (Yrs)	Acuity	% Colour Naming	Eye	Number of Ishihara Plates missed					Number of Dvorine Plates missed						
					None	R	O	Y	G	B	None	R	O	Y	G	B
1	25	6\6	37.5	R	14	0	0	16	17	14	13	1	3	14	14	14
	25	6\6	37.5	L	13	0	1	15	17	14	14	4	4	14	13	13
2	23	6\6	100.0	R	6	1	0	8	17	14	8	6	6	7	14	14
	23	6\6	100.0	L	6	1	1	10	16	14	8	5	5	7	14	14
3	19	6\6	100.0	R	14	0	3	16	17	16	13	6	6	13	14	14
	19	6\6	100.0	L	14	1	3	16	17	16	13	6	6	13	14	14
4	24	6\9	100.0	R	10	3	4	4	17	16	9	6	4	13	14	14
	24	6\9	100.0	L	10	3	6	7	17	16	9	8	5	13	14	14
5	41	6\5	62.5	R	16	0	4	16	17	16	13	7	8	14	13	13
	41	6\5	62.5	L	16	0	5	16	17	16	13	5	8	14	13	13
6	35	6\5	87.5	R	1	0	2	1	17	16	0	4	3	0	14	12
	35	6\5	87.5	L	1	0	1	0	16	16	0	4	4	1	14	11
7	50	6\9	100.0	R	1	1	0	2	16	16	1	6	6	2	14	13
	50	6\9	100.0	L	1	0	0	0	16	15	1	7	5	2	13	13
8	20	6\6	100.0	R	0	0	0	0	16	16	0	3	2	3	14	14
	20	6\6	100.0	L	0	1	0	0	16	16	0	3	2	0	12	13
9	23	6\5	62.5	R	0	3	3	3	15	16	2	4	5	3	12	14
	23	6\5	62.5	L	0	0	0	1	17	16	2	6	5	2	13	13
10	20	6\60	87.5	R	12	16	16	16	17	17	14	14	15	14	15	14
	20	6\60	87.5	L	12	15	16	14	17	17	14	15	15	14	15	15
11	45	6\6	100.0	R	2	1	4	0	15	11	0	3	3	1	13	13
	45	6\6	100.0	L	2	1	3	0	15	12	0	2	3	1	13	13
12	21	6\6	62.5	R	1	2	3	1	16	16	1	6	5	2	14	14
	21	6\6	62.5	L	1	2	1	1	16	16	1	6	7	3	14	14
TOTAL					153	51	76	163	394	368	149	137	135	170	327	323



Socio-Cultural Impact of Religion on Sports Participation in North East Geopolitical Zone of Nigeria

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Abstract

This paper examined the socio-cultural impact of religion on sport participation in North East Geopolitical zone of Nigeria. A total of 400 students were randomly selected from eight schools as sample. Questionnaire was the instrument for data collection whose reliability coefficient was computed as 0.87. Three research hypotheses were formulated and tested. Independent t-test was the statistical tool used for analysis. Data revealed that Muslim mode of worship and mode of dressing as well as attitude has a great influence on sport participation and development in North East Geopolitical Zone of Nigeria. As a result of the above findings, some realistic recommendations were also proffered.

Introduction

The practice of indigenous sporting activities has become an important part of this nation's culture as well as of other cultures throughout the world. While some cultures strengthen the practice and propagate sporting programmes in their communities, others do not for reasons they consider perfect to their religious inclination. Islam and Christianity are religions that are alien to African cultures especially the stoppage of the killing of twins that was in practice in Africa before the coming of Mary Slessor to Nigeria and the introduction of Western Education to Africa and abolition of slave trade.

Nick and Daniel (2005) stated that the interaction between sport and religion has been a significant area of study for Sport Sociologists, who have recognized the importance of religion and spirituality in athletes' lives. Accordingly, as the two religions (Islam and Christianity) were introduced to Africa and Nigeria in particular, each came with the mindset to anchor all their cultural practices on the soil of Africa. Sport wise, Christianity warmly encouraged and recognized the relevance of sport to the well being of their followers. In this vein Mohler (2010) emphasized that, sports have taken an increasingly influential role in the lives of evangelical Christians. He went further to state that, sports have the potential to give Christians a good platform for Christian witness, and the potential to lead Christians into idolatry. On the other hand, Islam too recognizes the impact of sport on the health of a believer and encourages her followers to partake in sports as long as such participation does not run counter to Islamic accepted lay down principles and practices. On Muslims participation in sports, one of the renowned scholars Sheik Al-Munajjid (2011) has made some statements to the question: "What is the ruling on our body building in Islam? Are we allowed to put our bodies in structures like the wrestlers so long as we do not show it out and it is to our good?"

This renowned scholar among his responses stated that: "Body building aims to make the body strong and sound, which is an important and desirable goal. He further observed that Islam is concerned with man's well-being in both body and soul, and it encourages all kinds of sports that will strengthen the body and maintain good health as well as providing relaxation and leisure, such as swimming, shooting, horse riding, sword fighting and wrestling. He also added by quoting from "Hadith" that, "The strong believer is better and more beloved to Allah than a weak believer". Al-Munajjid further stated categorically that in Islam, if the aim of sport is relaxation and maintaining good health, then sport is permissible. If it involves something "Haraam" (sinful act), such as missing prayers, uncovering any part of the "Awrah" or mixing with women and so on, then it is "Haraam" (sinful).

In Northern Nigeria, sports and its programmes of activities are an integral aspect of the culture of the people and they have been practicing their indigenous sports before the advent of Christianity and Islamic religion that have now absorbed a larger number of people. The role of sports in the cultural setting and practices among these ethnic groups even though organization differs cannot be overemphasized. Also, importance attached to sport varies from one community to the other. For instance, while some of the communities use sport as the only means of recreation, others use it for the test of strength and development of physique among youths. On a communal level Ali (2011) asserts that, participating in sport is an effective way of grooming children into becoming individual's islamically, and organizers in some Muslim communities have had success with the programmes. This paper therefore is an attempt to x-ray the socio-cultural impact of religion on sports development in North East Geo-political zone of Nigeria.

Research Hypotheses

The following null hypotheses were formulated and tested.

- 1) The mode of worship between Christians and Muslims does not significantly affect their participation in sports.

- 2) There is no significant difference between Christians mode of dressing and Muslims model of dressing with regard to their participation in sports.
- 3) There is no significant difference between, attitude of Christians and that of Muslims with regard to their participation in sports development.

Methodology

The study was essentially a survey design. The population consisted of all the senior secondary school students in North East Geo-political Zone of Nigeria. Eight schools were randomly selected for the study. A simple random sampling technique was used to sample fifty students from each school. The study sample therefore consisted of 400 senior secondary school students randomly selected from the secondary schools. The instrument for data collection was questionnaire which consisted of 30 items tailored to the research hypotheses to guide the study. The questionnaire was made up of three sections. Section A, deals with demographical data. Section B deals with mode of worship, mode of dressing and attitude of students, while section C deals with sport development items. The response pattern of the questionnaire was of the six point Likert scale of Very Strongly Agree (VSA), Strongly Agree (SA), Agree (A) Disagree (D), Strongly Disagree and Very Strongly Disagree (VSD). Two experts in measurement and evaluation were engaged to ascertain the face and content validation of the instrument, and their expert judgment and inputs were adequately incorporated. To determine the reliability of the instrument the questionnaire were pilot tested in a study. The reliability of the instrument was determined using the split – half reliability method, and the index of 0.87 was obtained.

Data Analysis and Results

Data collected for the study were analyzed using independent t-test. The analysis are shown in Tables 1, 2 and 3.

Table 1

Independent t-test analysis of the difference between Christians mode of worship and Muslims mode of worship with regard to their participation in sports.

Variable	N	X	SD	t-cal
Christians mode of worship	200	9.45	7.02	7.65
Muslims mode of dressing	200	7.23	3.55	

$P < 0.05$, $df = 398$, critical $t = 1.96$

The results from table 1 reveal that there is a significant difference between Christians mode of worship and Muslims mode of worship with regards to their participation in sports. The calculated t-value of 7.65 was greater than the critical t-value of 1.96 at 0.05 level of significance with 398 degrees of freedom. With this result, the null hypothesis was rejected while the alternate hypothesis was accepted.

This implies that there is a significant difference between Christians mode of worship and Muslims mode of worship with regard to their participation in sports.

Table 2

Independent t-test analysis of the difference between Christian's mode of dressing and Muslims mode of dressing with regard to the impact on sport participation.

Variable	N	X	SD	t-cal
Christians mode of dressing	200	7.41	4.10	5.68
Muslims mode of dressing	200	5.25	3.40	

$P < 0.05$, $df = 398$, critical $t = 1.96$

Result from Table 2 reveals that there is a significant difference between Christians mode of dressing and Muslims mode of dressing with regard to their impact on sport participation. The calculated t-value of 5.68 was greater than the critical t-value of 1.96 at 0.05 level of significance with 398 degree of freedom. So, the null hypothesis was rejected, while the alternative accepted. This therefore implies that there is a significant difference between Christian's mode of dressing and that of the Muslims with regard to the sports participation.

Table 3

Independent t-test analysis of the difference between attitude Christians and attitude of Muslims with regard to their impact on sport participation.

Variable	N	X	SD	t-cal
Attitude of Christians	200	8.60	4.35	4.76
Attitude Muslims	200	6.55	4.20	

$P < 0.05$, $df = 398$, critical $t = 1.96$

Results in table 3 revealed that there is a significant difference between the attitude of Christians and attitude of Muslims toward sport participation. The calculated t-value of 4.76 was greater than the critical t-value of 1.96 at 0.05 level of significance with 398 degree of freedom. Therefore, the null hypothesis was rejected and the alternative hypothesis accepted. This implies that, there is a significant difference between Christians and Muslims with regard to their attitude towards sports participation.

Discussion of Findings

The result of the study from Table 1 has revealed that Muslims mode of worship does not encourage their participation in sports. This result is contrary to what a great Islamic scholar like Sheik Al-Munajjid (2011) said that body building aims at making the body strong and sound. That Islam is concerned with man's well-being in both body and soul. He said further that it encourages all kinds of sports that will strengthen the body and maintain good health. He, Sheik Al-Munajjid (2011) and Sheik Atiyya (2011) all added by quoting from Hadith that, "The strong believer is better and more beloved to Allah than a weak believer". As a general principle, Charles (1998) and Sheik Al-Munajjid (2011) have all maintained that, the Islamic mode of worship has set forth that Muslim men and women minimize casual mixing of the sexes in society. Charles further stressed that, in terms of mixing in physical education classes, segregated sports and activities are preferred by Muslim parents.

For the Christians like their Muslim counterparts, sporting activities are highly encouraged also but not to the detriment of church activities. That when athletes are preparing for competitions, most of them pray to God for a successful and safe competition. Corroborating the above, Nick and Daniel (2005) opined that, the use of religious rituals in sport especially Christian players, is one area of research that has begun to receive particular attention. In line with the above, a number of

investigations have shown that the use of prayers by athletes before, during and after competition is a common and valuable practice for enhancing performance and overall well-being (Czech & Burke, in Press; Czech, Wrisberg, Fisher, Thompson, & Hayes 2004; Park, 2000; Vernacchia, McGuire, Reardon, & Templin, 2000). They also engage in prayers whether they win or lose. So, mode of worship or religion has no significant effect on people's participation in sporting activities. All depends on skills acquisition and interest or value derived from the participation in these activities. I think the respondents must have misunderstood the questions posed under this variables.

In trying to ascertain the impact of mode of dressing on sport participation, it was discovered that Muslims mode of dressing has a significant effect on sport participation. This agrees with the views of Adewunmi (2008) that, Muslim women are not supposed to wear shorts, shirts, and trousers in public places and schools. She also reported that it is an offence for the males to expose their body parts which is in line with the Sharia Law. Similarly, Charles (1998) in support of the above asserts that, Islam places great emphasis on modesty in dressing and behavior for both sexes. Men and women are expected to dress in clothings that do not reveal the features of there bodies. He further stressed that, physical education classes can pose certain problems for Muslim children, since such courses typically require students to wear shorts and tank tops. Such attire he maintained is not permissible for Muslim women and girls and that men and boys must wear shorts that reach at least the knees.

On attitude towards sports participation, it was also discovered that attitude of Muslims has a significant effect on sport participation. This finding corroborates with the findings of Carol (1993) and Adewunmi (2008) who reported that the negative response or attitude of Muslims boys and girls toward sports in the North especially is as a result of either actual or perceived restriction placed on them by their culture and religion. Conversely, Ali (2011) however is in support of Muslim parents and their children developing attitude of having similar hobby such as playing a sport or watching a game which he said can prove critical in the upbringing of a child. He further stated that, when a child and parent have bonding time due to a common hobby, a friendship is established which would allow the parent to also serve as a friend whom the child can talk to.

Conclusion

From the foregoing, it can be deduced that religion can be used to determine the extent of sports development in North East Geo-political Zone of Nigeria. Islamic beliefs have great influence on the development of sports in Northern Nigeria. Also, the principles of Sharia Law runs counter to the general principles and practice that govern sports and so it does not give room for social interaction among youths of opposite sex. Also, unacceptable practices in Islam that cannot be avoided in sports, such as men and women mingling together, shaking of hands by opposite sex, hugging, etc have some what deprived Muslims especially women from participating in sporting activities.

Recommendations

Based on the findings and conclusions drawn, this paper strongly recommends that:

1. Since majority of Muslim scholars and literatures support sports participation because of its inherent health benefits, sports programmes must be designed in such away that it does not affect Islamic mode of worship.
2. Since mode of dressing does not affect Christians in sports participation but conversely affect Muslims, sports wears should be modernized to cover all the parts of the body and approved for Muslim states of the North to attract especially Muslim women into sports.
3. Students with Islamic background should develop positive attitude toward sports participation and are even advised to enroll into the department of Human Kinetics and

Health Education, in order to acquire the knowledge about the theory and practice of sports.

4. The Muslims especially the girls in particular that are into sports should be heavily rewarded to attract others into sport participation.
5. More number of Muslims (male/female) to take up jobs in the Sports Council in the North East Geo-political Zone as coaches to be able to give attention to or encourage young Muslims wishing to go into sports because of the numerous benefits of sports acknowledged by many Islamic Scholars.

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Overcoming Problems Militating Against Utilization of Family Planning Services: Road Map to Realization of Selected Millennium Development Goals in Cross River State, Nigeria

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Abstract

This study focused on family planning as virile tool for effective implementation of selected Millennium Development Goals in Africa, with Nigeria in focus. Survey data were analyzed to determine the factors that undermine married teachers' utilization of family planning services in Cross River State. Three factors were identified and studied, namely: level of disposition of consumers; consumer's perception of level of training of care-givers; and consumer's perception of policy/programme designers' attitude towards their roles; with the aim of ascertaining the aspect(s) that influence low utilization of family planning services. Ex-post facto design was adopted for the study. Data was generated using validated and reliability certified structured questionnaire. Data generated were treated using Independent t-test and Pearson Product Moment correlation statistics. The result of data analysis showed that the level of disposition of consumers is low; training of care givers as perceived by consumers is low; and consumers perception of policy/programme designer's attitude toward their roles significantly influence low utilization of family planning services in Cross River State. It was recommended among others that public enlightenment on the health and economic benefits of family planning should be vigorously pursued by the government, health agencies, and Non-governmental organizations (NGOs).

Key Words: Overcoming, Problems, Utilization, Family, Planning,

Introduction

Following the United Nations Declaration adopted at the Millennium Summit of September 2000 in New York, it was noted that Nigeria has been committed to the realization of the Millennium Development Goals (MDGs) by the year 2015 (Soludo, 2004). The goals are targeted at making measurable improvements in the lives of the worlds poorest citizens.

How much is being realized since the year 2000 when these goals were articulated as the road map for sustainable development, and how realistic is the 2015 target? The table below shows a summary of the situation report.

Table 1

MDG STATUS AT A GLANCE

GOALS TARGETS	WILL THE GOAL/TARGET BE MET?				STATE OF SUPPORTIVE ENVIRONMENT			
	Probably	Potentially	Unlikely	Lack of data	Strong	Fair	Weak but improving	weak
Eradicate extreme poverty and hunger. Halve the proportion of people living in extreme poverty and those suffering from hunger by 2015.				X			X	
Achieve universal primary Education. Ensure that by 2015 children boys and girls alike, will be able to complete a full course of primary schooling.		X			X			
Promote gender Equality and Empower women. Eliminate gender disparity in primary and secondary education preferably by 2015, and all levels of education no later than 2015.	X				X			
Reduce Child Mortality. Reduce by two-thirds between 1990 & 2015, the under-five mortality rate.			X				X	
Improve Maternal			X				X	

Health Reduce by $\frac{3}{4}$ between 1990 & 2015 the MMR.								
Combat HIV/AIDs, Malaria & others diseases. Have halted by 2015 and begun to reverse the spread of HIV/AIDS and the incidence of malaria & other major disease.			X				X	
Ensure Environment Sustainability Reverse loss of environmental resources by 2015.		X					X	
Develop a Global Partnership for development. Deal with the debt problems to make debt sustainable and make available the benefits of new ICT.		X						X

Adapted From Nigerian Mdgs Report, 2004

The report shows that the progression towards the realization of the MDGs is far below expectation. As shown in table one,

- a. For MDG 1, there is lack of data to measure progress, coupled with a weak supportive environment.
- b. MDG 2 has the potentiality of being achieved, and supportive environment is strong.
- c. MDGs 4, 5 and 6 according to the table has the unlikelihood of being met, with a state of supportive environment that is weak, but improving.
- d. MDGs 7 and 8 has the potentiality of being met, the former has an environment that is weak but improving, while the later has weak supportive environment that has not yet shown any improvement.

Nigeria is one of the most populous countries in the world, with an estimated population of 160 million people. Its population is roughly equal to that of all other West African Countries combined. The reasons according to Olugbenga-Bello, Oboro, Araoye, and Musa (2009), federal Ministry of Health (2001), and Catley-Carison (1994) are owed to the fact that:

- contraceptive use and disposition to family planning is very low in Nigeria is very low
- Less than 2% of government spending in developing countries, and less than 2% of all international aid is currently devoted to family planning programmes.
- An estimated 120 million women in developing countries who do not want to become pregnant, but who are not using any modern method of family planning exist.

- Non use of modern family planning method results to at least one unwanted or unplanned pregnancy in every five. According to Federal Ministry of Health (2002) and Swenson (1978), the high fertility level in Nigeria is due to
- Negative socio-cultural beliefs,
- Poor access to family planning service due to inadequate skills of providers, and
- Lack of male involvement, among others.

Ihejiamizu (2005) submitted that it is the responsibility of local and state government to provide family planning services for her citizens. WHO (1971) observed that family planning can effectively contribute to the social development of a people or country. WHO defined family planning as a way of thinking and living, adopted voluntarily upon a basis of knowledge, attitude and responsible decision in order to promote the health and welfare of the family group, thus contributing to the social development of a country. While Park (2000) and Cartely-Carson (1994) proffered that family planning can assist in the attainment of the following objectives:

- Avoid unwanted births
- To bring about wanted births
- To regulate the intervals between pregnancies
- Control the time at which births occur in relation to the ages of the parents.
- To determine the number of children in the family
- To prevent spread of STDs such as HIV/AIDs.

The above objectives if vigorously pursued by a well developed family planning programme, may assist tremendously in meeting the MDGs 1, 2, 3, 4, and 5. Moser, Gatehouse and Gracia (1996) and UNICEF (2007) have posited that household size is intimately related to poverty, and correlates with high poverty levels. Another dimension is that the longer time women spend bearing children, the higher the poverty risk for both the women and children. Child bearing reduces the chances of women improving themselves and maintaining good jobs. Dingle (1974), Swenson (1978) and UNICEF (2007) had opined that increased number of children leads to increased likelihood of poverty. This is so because more children means more mouths to feed, more space to accommodate, more medical bills, more constraints for working time, among others.

Same source further revealed that family size is related to incidence of adverse circumstances. For example, incidence of communicable diseases like diarrhea and measles tend to correlate positively with family size (Dingle, 1974). According to Martin and Guzman (2002), the lack of family planning impacts on women most severely. Among other factors that interact with mother and child health include nutritional state and status, birth intervals, and total family size. Swenson (1978) noted that pre-school child mortality is much higher among children in families with short birth intervals. Same studies also revealed that short birth intervals are also associated with a higher prevalence of malnutrition.

Thus, family planning may assist in the reduction of maternal and child morbidity and mortality. This will further assist in the improvement of maternal and child health; create opportunity for mothers self improvement; result to generation of savings for the family in terms of health services; such savings can be used to improve educational status of the children and the living condition of the entire family.

Adebanjo (1997) on the other hand lamented that social problems are precipitated by population explosion, with the effects hitting harder on families with larger population. But if birth rate is checked, population growth can be controlled and plans for development can be effectively pursued.

Methodology

The ex-post facto research design was adopted for the study. The design is one in which cause-and-effect relationships are investigated by first identifying some existing consequences and searching back by analyzing data to establish possible causative factors (Denga & Ali, 1998).

A total of 300 married and non-married professional teachers, which included male and female teachers in both public and private secondary schools in Cross River State were used for the study. All the subjects utilized for the study were within the age range of 18 and 40 years of age, which is considered to be a high fertility stage. The subjects included teachers with National Certificate of Education (NCE) and First Degrees (BA.Ed, BSc.Ed), years of experience notwithstanding. Accidental sampling technique was utilized in selecting the 300 subjects studied.

A survey instrument – structured questionnaire, was used to generate data from the respondents. The structured questionnaire titled, “Questionnaire of factors militating against the utilization of family planning services”, was designed by the researchers for the purpose of this study, with the assistance of two experts in public health and Human Kinetics and Health Education Departments of the University of Calabar. The instrument comprised sections A and B. Section A had five items which sought the demographic data of the subjects, while section B contained twenty items on the Likert type 4 point scale, which examined three aspects of family planning programme. Items 1-5 examined level of consumers’ disposition toward family planning services, items 6-10 investigated consumers’ perception of the level of training of family planning personnel/care givers, items 11-15 investigated consumers’ perception of family planning policy/programme designers’ attitude toward their roles, while items 16-20 examined utilization of family planning services. The researchers with the assistance of 3 trained research assistants administered the questionnaire on the respondents, which was retrieved on the spot to guarantee maximum returns.

The purpose of the study was to examine the problems militating against the utilization of family planning services in Cross River State, as high fertility rate has been identified to be undermining recorded successes toward the realization of some MDGs of the UN. Three areas identified by experts indicated above were investigated. The following hypotheses were thus tested in the study:

- (i) Level of disposition of consumers towards family planning is significantly high in Cross River State.
- (ii) Consumers’ perception of the level of training of family planning personnel does not significantly influence their utilization of family planning services in Cross River State.
- (iii) There is no significant relationship between consumers’ perception of policy/programme designers’ attitude toward their role and their utilization of family planning services in Cross River State.

Data generated for the study were analyzed using the independent t-test and the Pearson Product Moment Correlation statistics. The instrument had face validity, while its reliability estimate was established through the test-retest reliability method. The test retest reliability coefficient of the Scales ranged from 0.79 to 0.87.

Data analysis and results

Analysis of data was done hypothesis by hypothesis as presented below.

Hypothesis one

Level of disposition of the consumers towards family planning services is significantly high in Cross River State. Level of disposition of the consumers of family planning services was categorized into two (high and low). Independent t-test analysis was adopted to test this hypothesis. The result is presented in table one.

Table 2

Independent t-test analysis of the level of disposition of consumers (N=300)

Level of disposition	n	X	SD	t-value
High	149	19.06	2.13	4.14*
Low	151	17.99	2.33	

*significant at .05 level, critical $t=1.96$, $df = 298$

The result of data analysis revealed that the calculated t-value of 4.14 is higher than the critical t-value of 1.96 at 298 degrees of freedom. This result implies that level of consumers' disposition towards family planning services is significantly low in Cross River State.

Hypothesis two

Consumers' perception of level of training of personnel/care givers does not significantly influence the utilization of family planning services in Cross River State, as presented in table 3.

Table 3

Independent t t-test analysis of the influence of consumers perception of the level of training of personnels/care givers and their utilization of family planning services (N=300)

Level of training	n	X	SD	t-value
High	140	19.88	2.41	9.54*
Low	160	17.33	2.19	

*significant at .05 level, critical $t=1.96$, $df = 298$

The result in the t-test analysis indicated that the calculated t-value of 9.54 is higher than the critical t-value of 1.96 at .05 level of significance with 298 degrees of freedom. With this result the null hypothesis was rejected. This result means that consumers' perception of level of training of peronnels/care givers has a significant influence on their utilization of family planning services.

Hypothesis three

There is no significant relationship between consumers' perception policy/programme designer's attitude towards their roles and the utilization of family planning services. Pearson Product Moment Correlation analysis was employed to test this hypothesis. The result is presented in table four.

Table 4

Pearson Product Moment Correlation analysis of relationship between consumers' perception of policy/programme designers attitude towards their roles and utilization of family planning services (N=300)

Variables	Σy	ΣX Σy^2	ΣX^2	Σxy	r
Govt. policis/programme	5289	8746			
				138955	0.65*
Utilization of family planning services	4939	6546			

*Significant at .05 level, critical r= .113, df = 29

The result of the Pearson Product Moment Correlation analysis shows that the calculated r-value of 0.65 is higher than the critical r-value of .113 at .05 level of significance with 298 degrees of freedom. With this result it is clear that consumers' perception of policy/programme designer's attitude towards their roles has a significant relationship with low utilization of family planning services.

Discussion of findings

As shown in table two, the result of hypothesis one analysis revealed that level for disposition of consumers towards family planning services is low. Family planning services include attending of counseling session, assisting client to trace health history, adoption of suitable contraceptive method, check-ups, among others. This finding confirms the assertion of Olugbeng-Bello, et al (2009) and Federal Ministry of Health (2001) that contraceptive use in Nigeria is very low. Over 98% of the population sampled indicated that they have discussed family planning with their spouses. But a closer perusal into the responses revealed that about 55% of those who indicated that they had discussed family planning with their spouses agreed that they have never had any contact with experts for counseling on family planning. This is also in consonance with the position of Catley-Carlson (1994), Federal Ministry of Health (2001), and Olugenga-Bello et all (2009) that an estimated 120 million women in developing countries who do not want to become pregnant are not using any modern/scientific method of family planning. They further posited that non use of modern/family planning method results to at least one unwanted/unplanned pregnancy in every five. Conclusively, this study corroborates the findings of most scholars that the level of disposition of the public towards scientific/modern family planning programme in Nigeria is very low.

Hypothesis two analyses gave that consumers perception of the level of training of care givers has a significant influence on the low utilization of family planning services. This is in line with the submissions of Federal Ministry of Health (2002) and Swenson (1978). They opined that low quality of family planning services due to inadequate skills of providers is among the reasons for high fertility rate in Nigeria. Only about 40% of respondent attested to have been promptly and adequately attended to; while for the other 60% the reverse was the case. 70% of those who were counseled attested that the family planning method they adopted based on counseling, was ineffective. A closer perusal into the responses of the subjects whose method failed 73% of them were lowly educated (school certificate and diploma holders), while the remaining 27% were degree holders. The researchers thus suggest that literacy level of consumers of family planning service may

also affect their understanding/utilization of the information being made available to them by experts/care givers. This notwithstanding, 80% of respondents indicated that the quality of services available is very low.

The result of hypothesis three analysis revealed that consumers' perception of policy/programme designers' attitude toward their roles has a significant relationship with their utilization of family planning services. According to data generated, 80% of respondents agree that if the government enact as policy, the maximum number of children a couple should have in Nigeria, it may alert citizens on the need to embrace family planning which will assist them in planning, as per child birth/spacing. Majority of respondents (65%) also noted in their response that not much has been done by the government in sensitizing the public on the importance and need for family planning programme. This findings corroborated the findings of Olugbenga-Bello et al (2009), FMOH (2002) and Catley-Carison (1994) that less than 2% of government spending in developing countries, and less than 2% of all international aid is currently devoted to family planning programmes. This according to experts accounts for the low disposition, access, and adoption of contraceptive use in Nigeria. Since poor access to family planning services and low quality of family planning services due to inadequate skills of providers prevail, the public may not be adequately motivated toward family planning programme even when the disposition is there.

Conclusion

In the light of the findings of this study, if the government does not initiate policies to control birth rate in Nigeria, since it is her duty to formulate and enforce policies, the gains from her efforts to meet the MDGs target will be negated. For example, birth intervals and family size have been found to have a close link with maternal/child morbidity and mortality, level of impact of poverty, nutritional status of household, inadequacy of available social infrastructure such classrooms among others. Thus, future gains on government efforts toward meeting the MOGs may become evident if birth rate is properly controlled in Nigeria.

Recommendations

Based on the findings of this study, the following recommendations were proffered;

1. Public enlightenment through various medias should be vigorously utilized by government, health agencies and related NGOs in creating awareness on the importance/benefits of family planning programme to maternal and child health.
2. Government should consider/enact policies targeted at birth control, stating and enforcing a maximum of four children per couple in Nigeria.
3. Health care givers should be made to undergo special training/workshops on best practices in modern family planning.
4. Government at state and local Government levels should work hard to increase access to family planning services at both the urban and rural settings, by the creation of well serviced counseling centers.

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Without Mathematical Relations, the Actual Property of the Light and Black Hole.

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Abstract:

Since more than two thousand years, there are a lot of theories were explained the light. These theories have almost same explanations about light property which is a small particles produced from the light's source (Wikipedia (Light), 2008). This research was indicated that the light has a different property than all above theories. This indication comes from; this research's results, many life's evidences, some information about universe and some information about earth's atmosphere. However, according to this research's results, light's definition and properties has explained by clear scientific style without mathematical relations. In fact, research's results were obtained from different sixteen scientific tests (A-P) will illustrate later. Finally, this research light's explanation leads to explain the natural phenomena "Black holes".

Keywords: Light, Black holes, sixteen tests, Oxygen, Nitrogen, ether theory, lighting units, box of mirrors, light pressure and speed of light.

1- Introduction:

Since human being has been on this Earth, they want to know every about everything surrounding them. This desire led them to discover many things about life, but there are many important phenomenons that are still unclear or do not well understood. Light is one of these phenomenons over more than twenty centuries it has different lines for its explanation (Wikipedia

(Light), 2008). One of these explanations was indicated that the light is particles producing from the light source to radiant everywhere. While other explanation illustrated that the light was carried by special medium called “ether” and its theory was named “ether theory” (Wikipedia (Light), 2008). The two theories lines were still together side by side in light explanation until twenty century when relativity theory came and finished or destroyed the “ether theory”. However, unfortunately this happened by mathematical relations does not by real scientific experiments. Most modern theories were depended on mathematical relations to find an explanation for many aspects of this life.

Although relativity theory indicated that the light is a small particles producing from different light's sources and ether theory went away, scientists don't agree about the property of the light either it is photons or it is waves (Wikipedia (Light), 2008). This means that the light explanation was not unclear enough for giving one real explanation either it is photons or it is waves.

However, principles of this research are similar to “ether medium theory” but it differs than this theory and also all light's theories in many important aspects such as:

1. This research based on real experiments (more than 15 tests) without any assumptions.
2. It depends on a lot of life's evidences from this life which mean real evidences.
3. It is written by very simple language without any complicated symbols.
4. In this research there are no constants, everything as it is, if it is constant it will be constant or its variable will be a variable.
5. There is not unusual or illogic phrases in this research such as light's theories which indicated that there is not frictions or collisions of the light with air molecules! Photons do not have a real mass!
6. In this research, because there is no mathematical relations, there is no approximation factors such as C^2 in $E = m C^2$ equation.
7. Finely, it is important to mention that this research does not contain any mathematical relations especially integral equations for finding an appropriate explanation for the light phenomenon.

2- Materials and Methods:

In this section there are fifteen tests for explaining the research's target which are as follow:

A – Four light's sources of 220 volts was put in a room of (4 * 4 * 3 meters), they are in each corner of the room also they are connecting each other by one switch for electric power. This room is completely isolated from any interactions. The test was opening and showdown the electric power for specific time. The first time was one minute and when the electric has showdown it should see the results and recording them. This test was repeated for five times to be sure from the results. After that it was repeated for three times but for 10 minutes not for one minute. Then it repeated for different times; 15 min., 30 min., 1 hr., 2 hr., 5 hr., 10 hr., and 12 hr. Finally collect the results for discuss them.

B – Box of Mirrors (15.5*15*15 cm) which reflecting faces of these mirrors were inside the box, also thickness of these mirrors is 0.3 cm. In this box there was a circular hole (5 cm diameter) in the center of one face of box's faces. Furthermore, there were two thermometers one of them was put inside the box while the other was outside the box. This test idea was to push a large amount of light through the box's hole by a light source (6 Volts) whereas the two thermometers are for calculating the temperature degree inside and outside the box. However, for starting this test it was opened the light's source for entering a large amount of light inside the box and watching the thermometers for calculate the temperature inside and outside the box. The time of this test mean how long the light source pushing the light inside the box therefore this test times were; 15 min., 30 min., 1 hour, 5

hours, 12 hours, 24 hours. In another hand, another test was done same principle of above test but instead of normal light it was used a source of powerful light “laser light (4.5 volts)”. Times of this test were; 15, 30, 1 hour, 5 hours, 12 hours. Finally, it was collected the results of above tests for discussing them in the discussion section.

C – It was put six beakers (500 ml) in one line on a suitable table. They were at different temperatures; (room temperature, 25°C , 20°C , 15°C , 10°C , 5°C , and 0 °c respectively), although there is a wall behind these beakers in a distance of 30 cm, seven light sources were put front off all beakers with a distance of 30 cm, all light s sources are at same color and its concentrated toward the six beakers, six of them are in a front off six beakers while the rest one there is nothing front off it, in case of beaker (7) the light pass from light source to the wall directly. This test was when showdown the light of the room and opening the electric circle of the seven lights, light will pass through the beakers to the black wall and will appeared as a light s circle on the wall differs from beaker to another. This test is comparing process between the seventh beakers which are in different temperatures. Each circle of the light on the wall will call it “the density of the light” at the black wall in this research. This mean in this test it can be seen seven circles of light on the wall each one represented the density of one specific beaker for comparing them in the discussion, This was repeated for three times.

D* - This test contains the main point of this research for this there is a star on the test s letter (D*), it same as (C) test but instead of six beakers there are three beakers, two of them are like C test beakers number of (2) and (7), while the third one has a volume of (1) liter not 500 ml such as other beakers. The two beakers contain water in different temperature at room temperature and at zero temperature (ice). This means that the two beakers contain water as liquid and solid. However, the third beaker (1liter volume) was contained 500 ml of distilled water after that during the test it will put on a specific burner to produce water vapor and the light source will concentrated at the top of this beaker for making the light passing through the water vapor not through the liquid water. These situations of the three beakers are for getting three states for water molecules. Specific three white light s sources concentrated on above beakers also a wall will be behind these beakers at 30 cm distance same as in test (C).

A conclusion of this test, the three beakers was contain three water states; gas, liquid, and solid and this for comparing them in the light density at the wall. This test was repeated for many times more than five times and records the results to discuss them.

E- In a dark room it was put three glasses (10*5 cm) at same line on suitable table for 30 cm distance between them also behind them there was a black wall at 30 cm. in front off these glasses there are three white light s sources at 30 cm and they were connecting each other by same switch for electric power. Three glass details were: one of them was thin normal flat, the second one was normal flat too but fatter than the first one, the third one was warped or up normal and fatter than the first one. This test was opening the electric power of the light s sources for 30 minutes for seeing the amount of the light at the black wall for the glasses which it called the density of the light on the wall for compared between them, record what have seen for discuss them later.

F - Three beakers (500 ml) filled by; ammonia solution (80%), aluminum sulfate (20%), and distilled water respectively for two subtests:

F.1- This test there are three sources of yellow light at a dark room were passed through these three beakers respectively; noticed the results which they are about what will happened to the light beam in the three solutions?

F.2- In this test repeating the above subtest but the three solutions was cooled to (5°C).

For two tests was checked the temperature of above solutions if there is anything unusual that may happened during the two subtests, after that recording the results for comparing them in the discussion section.

G - This test is present a comparing process between light which is well known thing with well known energies such as; heat energy, sound energy, and wind energy as follow:

It was put 500 ml of distilled water in four beakers. However, There were three energy sources; small heater for heating energy, small fan for wind energy, and source of voice for sound energy, all these equipments were at the top of each beaker exactly near the water surface by 2 - 3 cm. The rest beaker was put a source of light. The test was to open the electric power of four energies sources for two hours for watching the water surface in the beakers if it is changed or not during two hours? Record the results of two watching hours to compare them in the discussion.

H – This test is a repeat of above (G) test but instead of four beakers of water were added 5 g of flour powder in a appropriate watch glass, same as (G) test, there are four equipments (small heater for heating, small fan for wind, source of voice for sound, light source for light) near the top of four watch glasses which means that the energies are near the surface of flour powder. It was watching the four watches glasses for one hour to record the results.

I – This test is a repeat of above (H) test but instead of flour powder it was put 5 g of cement powder in same four watch glasses, watching the watch glasses for one hour for recording the results.

J – This test is a repeat of above (I) test but instead of cement powder put appropriate amount of about (0.9 - 1.2 g) of very small pieces of paper in four watch glasses, Near each one by 2-3 cm three were sources of known energies (small heater for heating, small fan for wind, source of voice for sound and source of light for light). However, up the fourth watch glass there was light's source for light. This test was for watching the four glasses for one hour to notice the changes may occur for the small paper's pieces in the four watch glasses for comparing these results in discussion section.

K – In a front of two ices cube (3*3*4 cm) by 2-3 cm there were two sources: a source of whiting light (12 volts) and a small burning candle. This test is for watching ices cube for half hour and record the results for discussing them later.

L – At a big tank (700 liter) adding 500 liter of pure water and then put carefully two covering sources of light in the tank at different places. This test is to wait 15-25 minutes for the water in the tank to be clear then watching the tank every 15 minutes for 4 hours and record the results.

M – In this test it was put a whiting light source (12 volts) focusing on butterfly. In fact, the light was concentrated toward the wings of butterfly for one hour. This for seeing the changes may occur at the wings of butterfly after one hour. Record these results for discussion section.

N – This test was put a very smooth paper on a source of whiting light (12 volt) watching the paper for one hour and record the results.

O – This test was asked from three persons to concentrated those eyes to a source of light as much as they can, also asked them to mention everything may occur for their eyes during this test, record them notices about this test for discuss them later.

P – This test was, using a small car with four lights put it at 500 meters directed toward a wall leading to concentrate the four car lights toward the wall, then when opening the car four lights there is someone near the wall record the results if he saw the light or not? Repeated the test for different distances called them points between the car and the wall, the first point at 500 meters as mention before, the second point at 450 meters, the third point at 400 meters, the fourth point at 350 meters, the fifth point at 300 meters, the sixth point at 250, the seventh point at 200 meters, the eighth point at 150 meters, the ninth point at 100 meters, the tenth point at 50, and the eleventh point at 10 meters. Record the results for discussing them. Noticing that all distances are approximately values they are plus minus 10-20 meters.

3-Results and discussion:

Results of this article will discuss in same order as above order from test (A) to test (P) as follow:

In (A) test when it opened the electric switch for getting the light from the four light's sources, the room was filled by that light as it was expected. In fact, a large amount of the light was put in that room, or a large amount of electromagnetic waves was put in relatively a small area (4*5*3) meters. However, after one minute when electric power was cut off all these amount of the light has disappeared immediately without any trace just nothing left. When repeating this test for many times the results were same. This is unbelievable results may be because there were four eyes two persons only in that room or may be they cannot recognized the photons very well or they were not enough for seeing the electromagnetic waves therefore another persons were asked to cooperate in this test to be seven person. This test was repeated for five times and same results were obtained. There was nothing left from light in that room after one minute it was gone at once. The five persons were seen same results it just a small part of a second time and the dark has returned. This test was repeated for five times with fourteen eyes and the results were same. Because the light was disappeared quickly it was asked from the five person to concentrate them eyes at the light's sources may be they can see some of photons or even one photons before its left but they did not see anything there is nothing left in that room even one photon.

According to the light's theories, the light is a photon with a powerful energy which means the light has an energy whatever this energy be but it must follow energy rules especially the rule of the energy can not be disappeared or created therefore if the light is an energy then where this energy gone in above test? All energy theories indicated that if the light is a kind of energy it must be not disappeared like what happened in above test this is a scientific fact and it is difficult to find any explanation for this behavior according to the light theories! However, results of above test may be because the time is not enough after all it was just a one minute so it must be increase the time's duration of the electric energy to be 10 minutes instead of 1 minute.

Again the four light sources gave a large amount of the light in 10 minutes but when cut off the electric energy same results were obtained there is no light left even when repeating this test for three times but there the results were same, then was given electric power much more time for duration as; 15 min., 30 min., 1 hr., 2 hr., 5 hr., 10 hr., and 12 hr., but the results were same when the electric power was cut off the light will gone immediately. May be the reason in the walls of the room! They took the light in this test but during this test the wall was checked every 20 minutes and resulting for this the wall was normal at room temperature nothing changed. According to all energy scientific experiments there must be a something consumed the light in this room mean it must be not disappear like this unless something take it or absorbed it because the test is clear and very simple therefore the question is where the light's energy gone?

Energy approaching to infinity was gone immediately without anything remains that is logically unacceptable, so there are two logic ways either the energy law may be wrong or light theories may be wrong?

About the energy law which is very simple; "the energy must be not disappeared and cannot be create from nothing", this is a simple definition of energy law which depending on our life and it does not concluded from integral equations.

Any energy in this earth may convert from one shape to another but do not consume like the light in (A) test! without any trace!?

As evidence of test (A), its common, and well known there are many people in this earth do (A) test daily, They may be let one or more lights open for all night in their houses, may be for 12 hours or more and when they cut off the electric power the light was gone immediately without any trace same as (A) test results.

Light is differing than other energies? Depending on results of above test (A test) is light energy or not?

It is possible to store all known energies except light! When a piece of iron or any other metal put on a fire for a while the piece will get heat energy and become warm even the fire gone, it store heat energy for relatively long time. This means that the piece can store heat energy which is get from fire. Another example for energy examples is the wind energy it can store this energy by filling a balloon with it and when release the air from that balloon wind energy will appear. This means it can store this energy. Sun heat energy can be stored in the buildings and release it after specific time. Finally, the last example is electric energy and it can be stored by specific equipment (specific battery) and release it in any time when need it. This indicates that it can store electric energy. All these indicate that all energies can be stored except light. Light can not be stored as it was seen in above test. Therefore, is the light energy or not? The following test will answer this question.

When highlighting on walls the light will disappear into these walls, it does not reflect from the walls or change in these walls. This phenomenon is well known in this life, even when closing light to the walls the light will absorb by these walls. Furthermore, if it is difficult to notice the changes that may happen for the normal light in the walls, it can be used a more energy light which is laser light in above test. Results of focusing laser's light on these walls are the same of above test. Laser will disappear into walls molecules and this is a fact of this life. Moreover, this may happen for the large amount of light in case of test (A). Light may be absorbed by the walls without changing internal energy of walls molecules. Therefore, for solving this problem test (B) is done because the walls in test (B) are simple mirrors of mirror's box. Mirrors reflecting the light do not absorb it. Furthermore, the size of the box in test (B) is smaller than the room in test (A). Size factor is more important for the idea of test (A) and to explain the solution of (A) test question.

In (B) test, the light was focusing in small closing area (15.5*15*15 cm) instead of large closing area (4 * 4 * 3 meters). However, the results of (B) test are nothing happened to the box during the test's times. Also the temperature degrees inside and outside the box are the same during test's times in both cases in case of normal light and in case of laser light. In fact, there was fear from doing (B) test because according to light mathematical theories the light has powerful energy equal to infinity energy (Light, Wikipedia, 2011) so when continuous flux this energy in limiting small area (the box), it may cause big explosion or an nuclear bomb. It Takes two weeks before doing (B) test because it was thought about all relating persons near the this test place. At the first 15 minutes the fear was gone with continuous experimental test with other times of the two tests of (B). It unbelievable results when nothing happened to the box.

According to mathematical light theories if radiation is totally reflected, the radiation pressure is doubled (Radiation pressure, Wikipedia, 2011). Therefore, in (B) test there are two cases either light was reflecting from the mirrors or mirrors absorbing it! In case of totally reflecting, if the light has so small energy or it has whatever energy, it was reflected at least more than millions times in mirror's box according to light's energy which means each time will doubled the light pressure to be more than million times more strong than before leading to at least breaking one mirror or all the box. Or at least it should notice fissures or one fissure in the mirror box. The fact is that the box was remained as it is without any changes in its mirrors also the temperature degree stayed the same during the test. However, the second case is when mirrors absorbing light energy. This will lead at least to increase them internal energy for breaking the mirrors or increasing them temperature but the fact is all above cases are not happened for the mirror of the box. Furthermore, when the light is showdown in test (B) the light disappeared immediately as same as (A) test. Even it was used laser instead of normal light the results are the same nothing changed in the mirrors of the box. It supposes that laser is more energy than normal light but the results are the same even it used in this test. If it was used another energy such as heat, wind, or electric, the box molecules will changed and should notice something in the mirrors of the box.

During the last thousands years, all scientists who tried to explain the light believed that the light is something get out from the light's sources. However, for last two hundred years, a lot of scientists indicated that the light behave either as waves or as photons, energy or mass but they stay believed that the light are small particles get out from light sources. Therefore, according to all these indications, light is something get out from light source whatever it is. Scientists indicated that this something has a velocity (299,792,458 m/s) also they said it has powerful energy approaching to infinity. In addition, when it totally reflected, the radiation pressure is doubled (Radiation pressure, Wikipedia, 2011). Light is totally reflecting from mirrors such as what they used in this test. However, there are a lot of additional assumptions for the light but above properties according to all light's theories are enough for explaining the light.

Something or in fact Photons as they said with high energy approaching to infinity moving by powerful velocity (299,792,458 m/s) totally reflecting from mirrors. When these things or photons enter mirror's box what should expect happened for this box?

There are two possibilities either the light is energy or it is mass!

Therefore, when it is an energy it should at least change temperature degree of the box. Noticing that the light can not get out from the box through the hole of the box because there are a flux of light's things enter continuously the mirror's box prevent other light's things to get out from the box. However, light energy should do something for the mirrors specially thickness of these mirrors is 0.3 cm easy to break it by smaller force not like light's energy as they indicated. Finally, because light energy is totally reflecting from the mirrors therefore they should stay inside the box at least for few minutes reflecting before they gone after the source of light is turn off in this test. In fact, when this source is turn off all the light is gone without any trace. Laser energy is powerful than normal light therefore it should stay inside the box reflecting at least for few minutes. The fact is that laser is disappeared at once light source is turn off. Furthermore, times of this test indicated that there are a huge of photons entered mirror's box so if the light is an energy must these amount do something for the box but they did not do that because the light is not an energy it is something else.

If the light is not an energy therefore it may be a mass. This is absolutely not acceptable in this life because if the light is a mass it should collide or rub with air's gases or other gases of universe leading to many assumptions because this collision or friction will produce many unwanted products such as nuclear bomb according to modern theories or human should feel about the light on his eyes or skin if the light is a mass . However, it assume that the light is a mass because as mentioned before there are two explanations for the light either it is an energy or it is a mass. However, second possibility is the light may be a mass therefore when huge amount of this mass enter this test box what should expect!?


Furthermore, these masses are totally reflecting from the mirrors therefore they should stay reflecting for at least few minutes before they gone but they did not do that they disappeared at one when the source of light is turn off.

In fact there are a lot of questions about (B) test, one of these questions is that the times of this test means that the light enter mirrors box continuously for 15 minutes,...to 24 hours. There is not an exit for this light in mirror box. The hole of the box is for entering the light it is a source of light which means a huge amount of the light entering that box through this hole so it prevent the light from get out from the box. Therefore, where the light went inside the box? Mirrors box stay without any changes with continues entering of light. Therefore, where this light disappear inside the box? Either energy or mass light continues entering mirror box for 15 minutes. A huge amount of the light keep entering inside the box or the box keep taking this amount without any changes even that the volume of the box is so small for this amount of the light but the fact is that there is not any changes for the box for all times of (B) test. Although laser is more energy than the normal light, mirrors box does not changing during test's times (15 minutes, ... to 12 hours). Huge amounts of

laser disappeared just when entering mirrors box. Where this amount gone inside the box? Obviously it is so difficult or impossible to explain above phenomenon of mirrors box depending on light's theories.

Therefore, depending on (B) test results and a conclusion of it, light is not an energy or a mass it is something else also the following tests will illustrate what the light is!

In case of (C) test results can be listed as in the following table:

NO. Of the beaker	Temperature degree	The light density
-1-	Room temperature	The density of the light on the black wall was decreasing as 
-2-	25°C	
-3-	20°C	
-4-	15°C	
-5-	10°C	
-6-	5°C	
-7-	0 °c	

It should be clarified the term of “density of the light” before discussing above results. As it mention in above table it was referred to the amount of the light which appeared at the black wall during this test or other tests which means it was referred to amount of the light pass through the six beakers for appearing at the black wall. Noticed that this term is for this research only not represented anything it is for explanation only. Although according to above test's results there are three most important points as; first one is if the light was independent on the temperature degree then why the density of the light was changed at the black wall from (2) to (7) beakers, the medium is same and it is just a water but its degree was changed!

This is simple fact is not integral equation the density of the light on the black wall has decreased from beaker (2) to (6). This means one think which cannot be assuming it the light was changed depending on the medium's temperature which passes through.

Second point is that in the beakers (2) and (7), The state of water was changed from the liquid state to a solid state according to this the density of the light appearing at the black wall was changed too. It means amount of light is depending on the state of the medium which pass through. Finely as a conclusion of (C) test the light was depend on temperature and the state of the medium which pass through. According to these facts the light's density on the wall was changed from beaker (2) to beaker (6).

However, (D*) test results were; liquid state > solid state > vapor state.

This mean in case of liquid state the density of the light on the wall is more than in case of solid state, also in case of solid state the light's density on the wall for solid state more than in gas state, finely the gas state or vapor state is the lowest one of the three water states.

According to these results and as its known these three states are for same molecules (H₂O) for this the question is;

What happened to the water molecules in these three states? Or what the differences between these three states?

As simple information, the density of water increased contrasting than above results mean as: vapor state > solid state > liquid state, this mean density of vapor water more than density of ice water, and density of ice water is more than liquid water. This is the only difference between water molecules. Furthermore, increasing in density means the volume will increase which means the

volume of three states is increasing in order; vapor state > solid state > liquid state. Volume of vapor is more than ice and ice is more than liquid. This means more volume more spaces between water's molecules or increasing the internal spaces between water's molecules in same order, the density or volume has increased as; vapor state > solid state > liquid state. All these aspects increased in contrast of this test's results!

According to above facts there are many empty spaces in case of vapor state or the ice state, but the highly energy photons (Photon, Wikipedia, 2008) don't pass through them! it was preferred the less internal spaces state, Therefore according to all light modern theories the light is a photons has powerful energy then why these photons do not pass through the free internal spaces in the vapor or ice and preferring less internal spaces state in liquid state!

Depending on these facts the results of this test are unacceptable for all modern light theories for this it was repeated many times but the results are same.

According to this research's target, this test results are more than enough for explaining what the light is. It can be proved that the light's theories are wrong, incorrect and far from the real life because of many facts such as; all light's theories were assumed that there is an empty space between the sun and the earth. In fact, they built them theories about this assumption. This because they did not reach the atmosphere or universe, at them time there were not spaceships or likes ships. Therefore, the real fact is another different thing than what these theories assumed. There is not an empty space in this earth or in the universe. This is what the science indicated now, there are many gases filled the atmosphere and space such as; O₃, N₂, O₂, CO₂, H₂ and H, these gases enter in everywhere in the earth and universe. It should notice that above assumption true for a period time of 1900 to 1940 because at that time all peoples on this earth believed that there is an empty space between the earth and sun. While nowadays after 1950 when human reached the atmosphere, moon and universe it found another fact indicated from real evidences not assumptions. The fact is that the empty space in the universe is existed in the mathematical relations. However, as it mentioned before that this research depends on facts not assumptions for explaining the facts or phenomena as they are. However, another fact about the light's theories is that most of light's theories are mathematical products such as $E = m * C^2$. This equation is a product of integral equations. Most light's theories are mathematical products while the mathematical relations can not able to explain the real life or real phenomena.

According to our life there are many real evidences supporting (D*) results which they are as follow:

- 1-At a cloudy day it is difficult to see the light comes from either the sun or the moon clouds prevents them lights to reach the earth. Scientifically the clouds are vapor of water so this evidence indicate that water vapor does not let the light for passing through it same as (D*) results.
- 2- At a foggy day it is difficult to see very well or to see something near your place while in rainy day it is much better than in foggy day. The fact is the fog is just water vapor mean when the water be as a liquid state is a good light conductor than the water as vapor state exactly same as (D*) results.
- 3- At a foggy day sometimes it is difficult to see most powerful lights in the higher buildings or in the big factories which they may be around you by 20 meters. This mean the water vapour is not a good light conductor, and this is same (D*) results.
- 4-The drivers when they are driving them cars in foggy day or in rainy day they can see things or other lights in rainy day much better than in foggy day this is fact same as (D*) results.

5- In the winter, because of the differences in temperature degree between outside and inside the houses the windows at the night will be covered by a white layer that prevents us from seeing the outside things. However, when we drop some water on this window we will see much better than in the case of a white layer which is a vapor of water. This indicates that in the case of liquid water we can see much better than in the case of vapor exactly as same as (D^*) results.

6- At winter season and for many times when pushing some air from lungs to any nearby glass the white cover will be on the glass preventing us from seeing very well but when some of this cover is converted to drops of water then we can see much better. As a scientific explanation, it is pushing a water vapor from lungs to a nearby glass and because of the cold weather the water vapor covers the glass causing a white cover difficult to see through it but after that some of these vapor molecules will convert by the condensation process to be in a liquid state which makes the seeing process much better than in the case of a vapor state, this simple fact is a comparison between the liquid state and vapor state of the water molecules in the light conduction process. Above the real fact is the same (D^*) results. As a light conductor, the state of liquid water is much better than the state of vapor water.

7- In winter season or at cold weather, in the bathroom because of using warm water a white cover will cover the glasses. This white cover prevents human eyes from seeing through it. However, increasing vapor molecules in the bathroom will increase the condensing process of water vapor leading to produce water molecules in a liquid state. Or when the person in the bathroom wants to clean his windows it will do this by liquid water for seeing the outside more better than in the case of vapor water. This difference between liquid water and vapor water on glasses in the bathroom is the same as the D^* test results.

8- It may be noticed that most examples in winter because it is a cold season easy to notice the states of water molecules especially liquid and vapor states. However, in winter at a public bus because of the breathing process of the passengers and because of their high number, the bus's big windows will be covered by water vapor as a white cover. When any passenger cleans his window in the bus by his hand or any other stuffs, he will see outside the bus much better than a vapor cover. This indicates that water vapor is not a good conductor for light as same as D^* test results.

All these facts indicate that D^* test results are as same as real life so above facts are evidences for the main point of this research. However, as it is mentioned before, all above evidences are almost about vapor and liquid water while there are no evidences for ice water? This is because of a clear scientific fact, ice water that is produced from a natural process such as snow is not pure so it cannot be seen through it in about 98%. In fact, natural ice water contains many materials that make it impure leading to difficulty in seeing through it therefore there are no evidences about ice. Furthermore, differences between liquid and vapor water are more important for this research than ice water. However, in all tests of this research, it was used an ice water in all tests, it is a pure ice obtained from the freezing process of distilled water.

Otherwise, the order of (D^*) test results must be in contrast which means it should be such as; liquid state < solid state < vapor state. This order according to light theories, light is an electromagnetic radiation consisting of photons which have powerful energy approaching to infinity (Photon, Wikipedia, 2008). Therefore, it must be easy for photons to pass through the vapor water than through the liquid water. As it is mentioned before, this is because the water vapor has highly internal distances between its molecules so these empty spaces must be easy for highly energy photons to pass through them better than in the case of liquid water. Water vapor has more internal spaces than the liquid water for this the photons should pass through these spaces easier than liquid state. Above explanation is according to light theories which are differing than according to real evidences of this research.

In case of ice water, internal spaces are more than in case of liquid water so that the density of the light must be at the ice more than at the liquid. More spaces must be easy for photons to pass through but the contrast situation was occurred an order of the light densities on the black wall were; liquid state > solid state > vapor state. Therefore, light's theories indicated something differs than real facts. According to all evidences and facts which indicated that the internal spaces between the molecules is very important factor for the light phenomenon. This evidence because in case of liquid water the internal spaces are smaller comparing with spaces in case of ice or vapor. Therefore, according to this test's results and its evidences, liquid water is the best one from the three water states in the light conductance for this it is a good medium for light process.

Above explanation is easy for understand it but the question is why photons preferred the more danger ways in case of liquid water than the easy ways in case of vapour water?

There are many questions about the light or photons but the fact is there is no photons it is not exist. This depending on all previous facts and evidences, photons exist in the mathematical relations just not in the real life. Photons are produced from integral equations which mean that it producing from brain imagination not from real life.

Therefore, main point of this test is that the light was depended on the internal spaces which mean its depend on the distances between the medium molecules when these distances are increase as in case of vapour water the light will be decrease while when these distances decrease the light will be increased. This relation between light and internal spaces is a contrary relation. This indicates that the light was depending on connection factor between the medium's molecules. To be more specific, light depends on connecting process between the electrons of the medium atoms. Above indication is because electrons are existed out of the atoms and atoms are connecting each other by electrons. As a conclusion of this, electrons of any medium are responsible for light conducting process. Light cannot do that itself as it indicated in above explanations and evidences. Furthermore, this indication will be supported by another tests and evidences as follow:

Results of (E) test are indicating the differences between the light density at three different types of glasses and they are as follow:

Thin flat normal > fat but normal > fat and warped glasses.

Although these three glasses are producing from same compounds such as silicon oxide which is a major component of glass components, the light was changed from one glass to another. This means that light depends on situation of glass's molecules. This indicates that light depends on the situation of the medium which pass through it. In fact, it depends on the molecules of the medium which pass through.

Results of (F-1) test are; it is able to see the light's line or the light beam through the two solutions (ammonia solution (80%), and aluminum sulfate solution (20%)), while in case of distilled water it is unable to see this line or beam? another noticing is that in case of aluminum sulfate solution (20%) the beam was most shining and bright look like a stars in the sky comparing with that line in case of ammonia solution (80%)?

Checking process for the three solutions temperature degree during the two tests indicated that the temperature does not changed.

If it is important to explain above results according to the light theories what can be say? If it possible to say that in case of aluminum sulfate (20%) the light beam was collided with aluminum sulfate molecules most than with ammonia molecules. This may be wrong because of that the concentration of ammonia solution is higher four times more than the concentration of aluminum sulfate which mean highly number of ammonia molecules in ammonia solution higher than number of aluminum sulfate molecules in its solution!

This is not what light's theories indicated, light is undependable on the medium which pass through (light, Wikipedia, 2008). Therefore, if it was talked about collisions mean far from physical light theories which ignored medium factor and this gives one explanation, does not understand light modern theories very well. In simple words, light theories indicated this because it talked about most powerful energy in this earth its energy approached to infinite (Photon, Wikipedia, 2008). If there is any probability for photons to collide with any atoms or molecules this mean a big nuclear explosion! Or it may lead many chain reactions to produce a big explosion! If infinite energy photons with no mass colliding aluminum molecules in aluminum solution or ammonia molecules in ammonia solution this should produce a big explosion. Or at least these colliding should increase temperature degree of above test solutions. What should say to explain the above results according to light theories?

What the differences between above three solutions for showing a difference in the light beams? In fact, light beam was seen when it passed through the three solutions therefore it is difficult to say there is another field or there is a security passages for the light to pass through the solutions. It is a fact that the light was passed through the three solutions or it passed between molecules of these solutions also nothing happened when it passed. However, during this test temperature degree was normal there are not changes in the solutions temperatures which mean there is not energy produced from the three solutions.

Now it is simple to know and understand why the light theories assumed that the light is passing through an empty space. They do this to be safe from "collisions" or "frictions" with air's atoms and molecules and other mediums of the real life.

Until now it is obvious that this research is for explaining the facts as they are not for doing some assumptions. According to this research's explanation, this test's results can be explain as; "there are differences between the molecules of the three solutions led to see these differences in the light line or beam".

However, as well known facts that the collisions and frictions will destroyed the light theories for this they were assumed that the photons do not have a mass which means without mass collisions or frictions were gone. However, photons still have infinite energy and highly speed exactly equal to 299,792,458 m/s (light, Wikipedia, 2008) so this likes an enigma; something has powerful energy, high velocity but does not have a mass! Above properties for photons are not acceptable properties how there is something in the universe has a highly speed without mass? When this energy is in the photons? Or where the photons put its energy? Photons speed come from what? There are a lot of questions because there must be a space for the photon to put its energy in or it must be have a volume to be able to move by this velocity. There is not a mass equal to zero and zero mass cannot move by this highly velocity with powerful energy.

However, this is just assumptions for the mathematics relations to get the results without them there are not results. No collisions, no frictions, even no mass just to be suitable for mathematical relations, light theories changed the real phenomenon for not real things.

However, evidence about above indication is that meteor when entering earth's atmosphere, it will be disappear before reach the land that why it does not see most of them. Frictions and collisions with atmosphere molecules make meteors disappear before reaching the land. This happened many times, any small meteor when enter the earth's atmosphere will be disappear due to collisions and frictions with air molecules so what about the sun light? Or in fact, what about photons? Why they not disappear like meteors!

Or sometimes in snow weather when the temperature is not cold enough ice will not reach the earth they will disappear in the sky before reaching the land because frictions and collisions with the air molecules. These phenomenon (meteors, and snow) are not moved by highly speed like photons. What happened to photons when they enter earth atmosphere? As a fact, every atom smaller than

protons or neutrons or bigger than football, when it moving by 299,792,458 m/s will be firstly converted to a ball of fair, then it will disappear in few distance may be 20-30 kilometer. Finally it will disappear. Nothing has small volume or bigger one can still as it is with light speed. Again how can the sun light reach the earth without it disappearing?!

According to this research's results, it can make test (F-1) results more clearness by cooling the three solutions to be (5°C). This for making the molecules of the solutions to be less movement or less vibration lead to decrease in light's losing process while in contrast of this which means more vibration more light's conductance that leads to more light's losing from the water molecules. This happened to the light beam in subtest (F-2) it became more clear and brightness than in case of room temperature in (F-1) subtest.

An evidence of (F-2), it can be noticed that at very cold weather it can be seen that the street's lights more shining or brightness than at higher temperature day or than at normal day. In fact, it can be noticed this from comparing process with the lights inside houses with the lights outside houses at cold weather. This will lead to understand the differences between those two cases outside and inside houses. This because in cold weather air molecules will be less vibration lead to decrease in light's conductance between the air molecules for this air molecules will keep the light as longer as they can before they lose it to another molecule rather than in case of normal temperature. More time for the light in the air molecules means decrease the light losing process.

If we depend on above tests (A-F) that will be enough for main point specially (D*) test with its evidences but may be is not enough yet so we did another tests concentrated on how can feel by light energy? By another meaning, according to light theories it can be felt by powerful energy approach to infinite. This energy score will be the highest energy among other energies in this earth because there is not energy in this earth approach to infinite like light energy. Following experiments will illustrate this, is light energy like other energies or not?

In the results of (G) test, in case of heating energy (the heater) the water in the beaker became warm which means its temperature has increased during the test and this is usual behavior for heat energy. In case of wind energy (the fan) it can be seen that there is a motion in the water surface because of the wind. In case of sound energy in the first time there is no motion but when increased the volume of the sound it can be noticed that there is a motion not like wind but it is at least a motion. Therefore, all these energies has affected water surface but all these energies are less energy than light according to the light theories. The fourth result is that in case of the light there is not any motion not like others energies! Even that it has powerful energy higher than these three known energies but there is not any affect for the light on the water surface! Therefore, according to light theories, if the light has energy more than these three energies then why it cannot affect the water surface like other energies! Is light energy like other energies or not?

Because of above results of (G) test, instead of distilled water it used a flour powder in test (H) to see the difference between the two tests (G, H), but the results were still same all energies have affected the flour surface except the light.

Again replacing the flour powder by cement powder in (I) test but the results same as (G) and (H) tests there is no effect for light on the surface.

Finely, replacing cement powder in (I) test by very small pieces of paper in (J) test because there is no catcher better than the cellulose compound that exists in the paper. For this fact many people used it (existing in vegetables) to clean them colon and stomach. Cellulose is a good catcher and in another side there are a highly energy, and speed "photons". There are two probabilities; either the photons will go through the paper making a lot of holes on paper surface easy to notice them, or the cellulose will catch photons lead to notice some motion in the paper species. Highly speed photons when they collide by anything must be remove it or at least should be seen any motion for this situation. But results of (I) test indicated that there is motions for all three energies easy to

notice them but in case of the light there is no motion, is this acceptable result for an energy like light energy? However, the fact, the light is not energy and it is not approach to infinite. These properties for the light are in mathematical relations only. They are on the paper only not in the real life.

By comparing between the light energy and the heat energy of small candle this the idea of (K) test, its results was same as the results of above tests which means it can be noticed that the candle was made a small hole in the ice cube easy to see it, but there is nothing in case of light even that there is a big deference in the energy score between the light energy and the candle energy as the light theories indicated but the fact is that the small candle is more energy than the powerful energy!


In (L) test, for four hours the results were nothing, temperature degree does not changing during the test also there are not motion or anything for water inside the tank, it is just a big tank contain quiet clear water. According to light theories, where light energy gone or where is the infinite energy gone?

There is nothing more sensitive such as butterfly's wings. Therefore, (M) test was done a source of light was focusing to butterfly's wings. This test for seeing or noticing any motion or activity for the light on the butterfly's wings the most sensitive wings. However, results of this test indicated that there is not activity or motion for the light on butterfly's wings. These wings stay as they are after one hour the duration of this test.

As same as (M) results, nothing happened to the sensitive smooth paper in (N) test, it is still as same as it is nothing changed during one hour the time of this test.

It is well known that there is nothing more sensitive than the human eyes for this test (N) was done. Even these but the results of this test are the same there is not effect of light on human eyes. This indication as three persons was mentioned. This fact from real life, the light does not affect the human eyes. Light make the eyes to see around but it does not affect them.

Finely, results of (P) test can be listed depending on the light density on the wall as in the following table:

Point number or test number	The distance between the wall and the car (m)	The light at the wall	Notices
(1)	500	No light on the wall	the person does not see the light on the wall
(2)	450	No light on the wall	the person does not see the light on the wall
(3)	400	No light on the wall	the person does not see the light on the wall
(4)	350	No light on the wall	the person does not see the light on the wall
(5)	300	No light on the wall	the person does not see the light on the wall
(6)	250	the light on the wall has increased as 	
(7)	200		
(8)	150		
(9)	100		
(10)	50		
(11)	10		

This test from the real life, it can be seen the light which is near any person but when this person move from his place by few steps the light may be gone or decreased until it is difficult to see it at all. Therefore, according to light theories the light is a high energy photons moved by a high speed so why it disappeared in few distance from its source? This indication from this life! It is believed that 500 meters is not too much for photons having powerful energy with powerful velocity (299,792,458 m/s). It was expected that the light will be at that wall at once even that the distance is 500 meters. Something like the light has huge energy approach to infinite addition to huge speed 299,792,458 m/s where it went in the test or in our life?

It is important to explain this by simple physical rules; the velocity of any moving particle can be calculated by $V = d/t$, where $V =$ velocity, $d =$ distance between the two points (starting point and end point), $t =$ time for moving from above points or time of motion.

Therefore, $t = d / V$, which mean the time for the light to reach the wall from 500 meters is $t = 500 \text{ m} / 299,792,458 \text{ m/s} = 0.00000167 \text{ s}??!$

(0.00000167) second is the time for light to be at that wall but the fact and real life indicated that the light does not reach that wall in a distance of 500 meters and also the fact is that this number (0.00000167 s) is a mathematical product is not a real number for real fact!

However, in this test, it was noticed that time for the light for reaching the wall from 200 meters is about 7-11 parts of second, it is not like (0.00000167)! 7-11 is a real value while (0.00000167) is mathematical value. Real life or real phenomenon can not explain by mathematical relation.

Although photons contain powerful energy with high velocity as all modern light theories indicated, it does not reach the wall over than 250 meters to 500 meters. They must reach that wall in few parts of second even distance is over than 1000 meter. This because that scientists said that light's velocity is 299,792,458 m/s which means photons should be on that wall in less than one part of second. This time is more than enough for photons to reach that wall. However, Even above velocity of the light is less than above number because of air molecules according to light theories, it should reach that wall in one part of second. This because above number for light's velocity is for the light when its moving in vacuum which mean it will be less in presence of air molecules as light theories indicated about this point.

However, the real fact is something else, light is not photons contain powerful energy with high velocity. These values are only numbers on papers producing from mathematical relations. They are not real values.

According to main point of this research, light does not reach test's wall in five points (500,450,400,350,300 meters), while it reach that wall at the rest points. An explanation for above results is that light is carried by air molecules and every atom from these molecules that carry it should take very small part of it depending on strength or type of the light and also depending on air molecules so after specific distance with series of air's molecules the light will gone or finished. By another words, every atom that carried the light should take a small part of it and when other atom take it a another small part will be taken too from light amount and also third atoms which take it from the second atom will take another small part,...etc. This process continued until light finished or disappear. This why lights in our life; streets, houses or any other places on this earth disappeared after few meters far from its source or may be disappeared after more distance not few steps depending on the strength and type of the light.

A fact of this earth light can not go far from its sources but laser can go more than its sources more than the light. This is what above explanation indicated about light source and its strength and type.

Test (P) indicated that light depends on the medium that passing through, also it indicated that there are collisions and fractions for the light with molecules of the medium that carried it.

For more than five years now, hoping for finding any evidences for modern light's theories in this life or even in the universe but it is difficult or impossible to find an evidence around or in the universe for modern theories. This because two scientific reasons; firstly, it was mentioned before, all modern light's theories are depending mainly on mathematical relations and assumptions for explaining light's identity. This is a big mistake because mathematical relations with assumptions are limiting relations, they do not have the ability to explain something like "light phenomenon" which has many affecting factors like distances, temperature, pressure, collisions, frictions, light's types and many other factors which are forced the light theories to use and based on assumptions in them explaining. In fact, assumptions help light's theories for explaining light identity by mathematical relations.

Moreover, assumptions are not benefit for real life as real evidences, every assumption may be true or wrong depending on its evidences also they are imagining things. The fact is that evidences of real life are not depending on imagining things or productions from human's brain. For explaining above main point the following test was done. This test is not mentioned in experimental part because it focusing on another matter far from this research targets but now it is useful to mention as follow:

Velocity of any particle moving from (A) to (B) in specific time (t) for known distance (d) can be calculated depending on $V = (d) / (t)$. This equation is a simple definition for velocity therefore the test was a two persons in two points (A, and B), the distance between the two points is 50 meters. Light source in points (A) while the wall is in point (B), this test was done in the night. When opening light source light has arrived the wall (point B) in specific time which is (5-10) parts of second. Repeating this test for many times to be sure from the time. However, light was arrived the wall in between = 5 - 10 parts of second. Therefore, average of above times is = 7.5 parts of second. According to this value, velocity can be calculated from = $50 \text{ m} / 0.075 \text{ s} = 666.667 \text{ m/s}$. However, shall we say that if there was a mistake or may be the time is not correct which means it is not 5 parts of second may be it is 1 parts of second even it was believed that the time is not less than 5 parts but if it say that, it is equal to 1 part of second therefore velocity will be = $50 / 0.01 = 5000 \text{ m/s}$. However, the fact is above values (666.667, 5000) are much more less than 299,792,458 m/s. Furthermore, if the time is less than 1 part of second which may be 0.001 of 1 part of one second this mean the time is = 0.00001 s and the velocity will be $50 / 0.00001 = 5000000 \text{ m/s}$. As a fact of above test is that the light was arrived the wall in specific time and all above results indicated that even it is less than 1 part of second velocity will be 5000000 m/s. There is not any comparing with (299,792,458 m/s). This is just an example of what mathematic relations leading to because of 299792458 is just a number which came from mathematical relations therefore its mathematical production is not a production for real life.

Noticing that in above test it was sure that time of the test is not less than 5 parts of second but even if is less than 5 parts, velocity will be less than the assuming number or mathematical number = (299,792,458 m/s)! This is a simple test had showed the differences between the real facts and the mathematical relations productions.

The second reason about there is not life's evidences for light theories; It is another big mistake more than the first point because it is known that until 1940 all scientists were believed that universe is empty space for this they believed that the sun's light come earth surface through empty space also they believed that outer atmosphere there are nothing just empty space. However, as a real evidence at that time before 1940 scientists do not have the ability to be sure from them idea because they can not reach atmosphere or outer than it in the universe. In fact, at that time scientists can not reach even higher than 50 kilometer so they thought that the atmosphere and the universe are empty just for be suitable for them mathematical theories. However, this just a imagining thought not real.

However, this situation is different now, specially after 1980 when many facts appeared indicated that there are different gases in the earth's atmosphere such as ozone, oxygen, nitrogen, carbon dioxide, water vapor and others. In addition, there is a real medium in the space between the planets called "the Interstellar medium" or (ISM), which is 99% gases and 1% dust. Gases are roughly 90% hydrogen and 10% helium by number (Science Daily LLC (interstellar medium) 2009; National Aeronautics and Space Administration, 2001; University of New Hampshire, 2008). This indicated that the universe is not empty as scientists thought before 1950, the human went to the moon discovering new facts leading to increase his knowledge in many different scientific fields until today there are many facts appeared and many theories disappeared. Therefore, the important point is that before 1940 because of the scientists cannot reach the moon or went to the universe their theories built on wrong assumptions or wrong thoughts which means that these theories are wrong theories so we must check every theory to see if its assumptions are right or wrong just like above case about light theory.

As mentioned before, modern light theories were appeared before 1940 which means that scientists did not know what exactly the universe contains therefore they put wrong assumptions in their mathematical relations about empty space for explaining the light phenomenon. In fact, wrong assumptions must lead to incorrect theories therefore Science must do something for this unacceptable matter. Above indication is so simple therefore something should have happened to correct above wrong situation. However, as this research's title indicated that this research does not contain mathematical relations. However, they will be used because it is important to do that as follows:

Any mathematical relation must be lead to results such as ; $99 + 60 = 159$, when it needs to insure from above result it can be checked by a process such as $159 - 60 = 99$. Or another example $40 * 30 = 1200$ if it is need to check this result the process will be $1200 / 30 = 40$. According to mathematical science and relating sciences it can check every equation to insure from its results except one relation! A relation of $(E = m C^2)$ can be checked its results or not?!

For checking above relation $C^2 = 299,792,458 * 299,792,458 = 8.98755179 \times 10^{16}$ m/s incredible number all moving materials in this earth can reach less than 1% of above number may be after 300 years it can reach 3% or 5% and never ever reach this number $8.98755179 \times 10^{16}$ m/s. it should be noticed that above number is per second is not per one hour or may be 30 minutes above number is per only one second!

However, how it is possible to convert mass to an energy $(E = m C^2)$? Scientists may believe about $E = m C^2$ due to meteors disappearing when they enter the atmosphere but this happened due to air's molecules or due to frictions with air's molecules while C^2 value is for light when it moving in vacuum so how it can be $E = m C^2$?

Therefore, after this is it possible to check $E = m C^2$ or not as a mathematical relation?! According to scientific movies we may check it after 500 years so who find this equation which is a result of its mathematical relations, knowing very well that it is impossible to check its relation. Actually he was and will be in a safe place for very long time. Human should have a brain for using it to explain different aspects around him but should be by reasonable ideas is not by imagining unusual thoughts.

In fact, this research does not need all above tests (A-P tests and others) and life's evidences to prove its main point but it mentioned before this because light's theories are most popular theories in the world so it have to do and mention above tests and life's evidences.

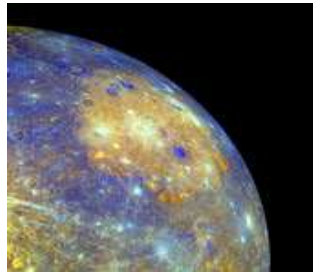
However, it is easy to confirm this research main point by two phenomena: Firstly, it is about the differences between inside and outside earth's layer. Outside earth's layer is dark while inside there is beautiful shining lights?! In fact, the only difference between inside and outside earth's layer is containing gases. As mentioned before, inside earth's layer there are many gases such as nitrogen, oxygen ...etc, while outside earth's layer there are two gases hydrogen and helium. This indicates

that above gases are responsible for making outside earth's layer dark and inside it beautiful shining lights. This is a fact of universe.

Secondly, there is a difference in the outer looking of the earth and all other planets. The outer looking is differ between the earth and closing planets such as the following pictures. Following three pictures showed that it is so clearly there are a big difference between the earth atmosphere and closing planets atmospheres (Mercury and Venus). Depending on the following pictures the shining colors in the earth is better than the other two planets, and question will be why this?



Mercury



Earth



Venus

It believed that above question should be; what the earth has as planet while other above planets do not have?!

It is so simple question because it mentioned before that inside the earth's layer there are many gases such as oxygen, nitrogen, ozone, and water vapor while the other planets do not have such as these gases. Furthermore, there is another difference between the earth and the universe, is that the earth has a high electron density gases while universe has a few low electron density gases such as; hydrogen (90% of universe gases) and helium. However, above differences are main differences between the earth and the other planets, and the earth with universe.

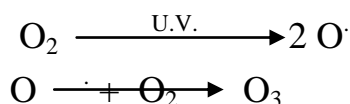
For explaining above facts should be understand the roles of all above gases or what are their jobs inside atmosphere and outside it! For the earth, gases will be the higher percentage and most useful in the lighting process (O_3 , N_2 , O_2) respectively as follow:

Ozone:

It is protecting gas because its job is to make other gases more safety from sun's productions; light, and heat. Ozone is a filter take sun's light and heat and give them less activity. This fact can be noticed from changing of light color. Yellow color of the sun's light converted to blue color. In another words, ozone take yellow light and make it more useful quite blue light. This can be noticed from the distance of ozone layer in the atmosphere is between 10-50 km long distance like a clump in the chemical laboratory. However, at this area ozone has small concentration because of its property it is an active oxidation agent so if it is concentration higher than what it is now, it may be oxidized a lot of gases like nitrogen and oxygen lead to changing them properties that may be caused death for human.

Ozone gas is higher molecular weight than oxygen and nitrogen molecular weights. Therefore, ozone position should be down oxygen and nitrogen gases not up of them! In fact, positions order of the three gases should be ozone, oxygen then nitrogen. However, ozone is up than the two gases!?

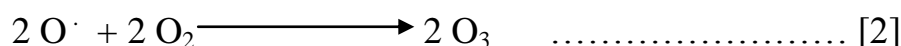
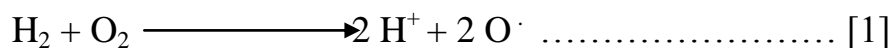
In addition to position fact, science indicated that ozone producing from oxygen and sunlight (U.V.) as follow:



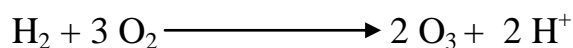
However, above reaction showed that ozone production mainly depends on sunlight so what about the night when there is no sunlight?! As a fact, there is two times for one day which mean there is a sunlight in the day while there is not in the night. Therefore, how ozone producing in the night without sunlight?! Furthermore to night time there is another fact about ozone which is an highly active gas because its in excited state so it will return to its ground state in 20 minutes for giving reactants oxygen molecule and oxygen radical (Education–Yourself the Freedom of Knowledge, 2007).

As a summary, according to molecule weight, ozone should be down atmospheric gases but the fact is, it up than those gases! Ozone depend on sunlight and it gives its components within 20 minutes which mean ozone will disappear in one hour of the night. Even that earth has two halves, when one of them has sunlight the other will be dark or night so it may be occur that sunlight earth half will produce ozone to its half and to other half! However, it talks about huge amounts of ozone which are decompose in 20 minutes! The time is not enough for producing ozone and transferring it to the other half of the earth (dark half). If million molecules producing in sunlight, they will decompose in 20 minutes therefore even this process is continuing, it is not enough for producing ozone as it is now! In addition, concentration oxygen is not enough for producing ozone in hug amount as it is now! Oxygen concentration is decreasing when moving toward higher levels in atmosphere. In fact, ozone production is like a circle, ozone molecules that decompose in 20 minutes sunlight will return them to be ozone molecules again. This correct if oxygen is lighter than nitrogen! Decomposing molecules will fall down because of their molecules weight. Therefore, according to above point, ozone production process will decrease with the time until it finish which mean ozone will disappear according what science have now! In fact, one year is enough for ozone to be gone, but ozone still there from million years and does not disappear so what is the correct explanation?

Al-Darraji's explanation is more than enough for explaining above points. Ozone is up than other gases in atmosphere because it is producing in higher levels of atmosphere and its polarity is differ than oxygen and nitrogen gases. This why ozone is up than other gases (Al-Darraji A. H., 2010). Ozone production is continuing for 24 hours not for the sunlight only because it is producing from reaction of oxygen and hydrogen as follow:



Overall equation is:



An evidence of above reactions is plasma layer of positive ions which is a layer up in higher level of atmosphere up than ozone layer (Al-Darraji A. H., 2010). This indicates that ozone production process is continuous for 24 hours for long time before million years. Furthermore, as indication of above fact, amount of oxygen is effecting ozone production process but sunlight does not effect it.

It should be noticed that nitrogen is most inert than other gases so it does not enter above reaction. However, even nitrogen is inert, there are some amounts of nitrogen oxides. This come from that ozone is more active molecules able to react with nitrogen even its inert.

the role of ozone is not to prevent U.V. light or depend on it as science thought. However, it is a filter for all sun's light to make it less activity more useful. Ozone role come from its flexibility to convert to oxygen molecules and return to be ozone again. It has three oxygen atoms not two so

this give it more activity as a filter. Ozone lose one of its oxygen molecules to reduce the activity and again it take another oxygen atom to return to O₃.

There is another aspects very important for atmospheric gases (O₃, N₂, O₂). Outer shell of electrons in any gas molecules of the three gases is under two or three nucleus. Ozone has 6 electrons in its outer shell, these electrons will be attractive to three nucleus not for one nucleus. This indicates that approximately 70-80% of electrons spin around the nucleus which it will be under the attractive of three nucleus not just one. This attraction made the ozone more strong molecules and prevent the outer shell electrons to leave the atom so the ozone lose an oxygen atom and does not lose an electron from its electrons of its outer shell, also it must noticed that this attraction in case of ozone is more than in case of nitrogen or oxygen this because the ozone has three atoms while the oxygen and nitrogen two atoms. However, this give the ozone its job as filter gas to make sun's heat and light are more useful less activity for the two gases N₂, and O₂ to carry it to all the world.

Nitrogen and Oxygen:

Ozone layer is higher than 10-50 km in atmosphere as mentioned before. it is responsible to make sun's heat more useful as mentioned before. However, lowering than 10 kilometer in the atmosphere there are two important gases for radiating light over the world. Oxygen and nitrogen are important for light because of them properties. They are responsible for carry the light over the world for everywhere. Atmospheric gases are existed as molecules not as a atoms. This because what mentioned before about ozone molecules. Nitrogen and oxygen (99% of atmospheric gases) exist as molecules with two atoms for each molecule which means that in each molecule there are two nucleus effecting outer shell electrons leading to more attractive forces on the outer electrons better than in case of one atom. Outer shell electrons will be under two attractive forces by two nucleus not one nucleus mean may be 60-70% of the electrons spin around the nucleus will be under two attractive forces by two nucleus. In addition, the rest 30-40% will be under one nuclei. Therefore, this will give electrons the strongest to stay in the outer shell of the gases molecules even there is a powerful affects like many factors in the earth.

There are few gases in the periodic table like (N₂, O₂). These gases have ability to be in anywhere in this world for radiate the light especially the nitrogen gas because its concentration in the atmosphere (78%) more than three times than the oxygen (21%) so nitrogen is very important for lighting process.

There are three bonds in case of nitrogen molecule. Five electrons for each nitrogen's atom in the outer shell mean in case of (N₂) molecules it will be two atoms with 10 electron. This situation is benefit for saturated of second shell of each nitrogen atoms of nitrogen molecule which is need for 10 electrons to filed it. This reason why nitrogen is most stable molecule or its inert gas.

However, in case of oxygen molecules each atom contain 6 electron in outer shell means 12 electrons in the two bonding atoms. As mentioned before 10 electrons are enough for the outer shell therefore the rest two electrons will be free. This why oxygen is more active than the nitrogen to bond with other oxygen atom to form ozone (O₃).

The most important thing in the two gases is that the two atoms (nitrogen and oxygen) have smaller atomic radii than other atoms

(N= 0.7 °A, and O = 0.66 °A), high electronegativity value more than many other atoms which mean strong gravity between electrons and nucleus lead to smaller atoms and stronger against many affecting factors, the small radii of (N₂, O₂) make them able to inter in anywhere in the earth. There are additional facts about nitrogen and oxygen indicated that these gases are perfect for radiating light.

There is another evidence about above point is that the moonlight. It is exactly like the lamp called (neon). Electric energy transfers to yellow light depending on glowing wire in the lamp. Some

compounds (one of them neon) in the lamp has change the yellow light of the wire to be white light. This because of some compounds in the neon lamp absorb the yellow light to produce white light same as moon surface compounds (aluminum oxide, silicon oxide, deuterium, helium). these compounds are electron rich can change the sun's yellow light to white light which be seen in the night. This means that the lighting process depend on the electrons density of atoms and molecules. This is like the difference in electron density between hydrogen with oxygen and nitrogen which means the difference between outer and inner of earth atmosphere.

The black Holes:

There is a fact indicated that the holes in the earth do not disappear in few days or minutes. They should stay until something filled them. However, black holes disappear during few time without filling with anything if this is according black hole theories.

According to this research main point the actual property of the black holes is something differ than black hole theories. In fact, black holes are producing when a planet exploding. This will lead to produce a huge amount of positrons which means it will lead to produce just nucleuses without electrons. Explosion make the electrons leave them nucleuses, this process happened in case of copy equipment! when copying some papers there is amount of positrons will be produced in the air.

Therefore, black holes are the same but in case of planet there are a big explosion not like a copying process which means a huge amount of positrons will produce. Positrons are just nucleus without electrons for this no electron mean no visible light will be inter the black holes or out from it just the darkness.

Due to the universe in a equilibrium process which called it "universe's equilibrium point", so after sometimes step by step nucleuses will find them electrons which searching about them to be a hydrogen atom which is 90% of this universe. This is the property of black hole no passenger to another time or anything just it is "intermediate state" between the planet's explosion to universe's equilibrium point. Of course when any planet exploding, it must be there something converted to another thing and finely in the universe. Planet's explosion does not lead to universe's equilibrium point directly. It should be there are a few steps between these two points (explosion, and universe's equilibrium point). one of these including steps is called "black holes". According to above facts and references, black holes can absorb and return a specific light but they do not absorb or return what they called visible or U.V. radiations. They absorb or return the long light what they called "infrared radiation". This because black holes are nucleuses without electrons for absorbing or returning above lights (radiations).

4. Conclusion:

According to this research experiments and evidences the light process depend on two things the light source and the medium which carrying or radiating the light from its sources. Therefore, neither light's source give the light nor the medium, for lighting process there are two important factors; light's source and light's medium. As mentioned before, inside the atmosphere there is an air contain some gases that are responsible for transferring the light also outside atmosphere there is another gases are responsible for the same job, without these gases (mediums) there is no light. Light's sources are same as mediums, sun and electrical lights in the night are the main sources of the light without these sources there is no light. Light's sources and mediums are completing each other.

However, For explaining the light in this research only. It should say that the light is consist of small units called "lighting units". Light's sources should give air's molecules (medium) these units continuously until it showdown. These units are transfer by air's molecules to all places in this earth or by hydrogen molecules in the universe which is less than air molecules as mentioned before. This because that the lighting process is depending on number of electrons that molecules have it.

When this number increase the lighting process increase as in case of air molecules. Opposite situation will occur as in case of hydrogen molecules in the universe. Furthermore, movements or vibration of molecules of light's medium will affect the lighting process. If these movements are faster as in case of warming day the lighting process will be lower than in case of cold day. When the molecules moving in slow movement lead to less losing in amount of light this was mentioned before.

Light is moving in everywhere or it is radiant in every direction comes from the motion of molecules and them electrons around the nucleus. This motion and circle motion make them able to give lighting units in every directions. This why human see light radiant in everywhere in the room or in the house. when opening the light's source such as electric power lights, in the streets or in every place in this earth, light radiant to every directions according to its mediums which contain molecules and electrons which are moving around the nucleus.

Light losing very small amount of its units of lighting units in lighting process leading to disappear at the end of its course after specific distance. This situation is depending on light's type either its strong light's type or its weak type. This means that in case of strong type such as laser or electric sources, it will lead to long distance but in case of weak type such as candle or battery (1.5-6 volts) this means few meters distance.

There is another phenomena for the light which is "reflections". Sunlight or other lighting sources are widespread in everywhere in this earth. Most molecules in this earth are absorb it. However, there are a few molecules or atoms able to reflect it. This property for these molecules or atoms are exactly same as when lecturer teach many students may be more than 40 students and there is one of them is clever. Is clever property for the teacher or for student? Of course it is for student. Lecture is the light while the clever student is the reflecting molecule or atom. As mentioned above this situation is like the reflection process, light widespread in all molecules and atoms but there is a few specific atoms or molecules can reflect it. In fact, one of the best examples of above indication is silver atom which is reflecting atom therefore reflection process for silver is a property for it is not for the light.

Light's deviation phenomena is a simple phenomena. It is due to the lighting unites transfer from specific medium to another medium so this will lead to deviation in their direction. As example when these unites transfer from air's medium to water's medium this will lead to deviate in their direction and this happened in two different mediums.

Shadow phenomena in lighting process is two areas one of them has more lighting units than the other. However, the area that has less lighting units called "shadow". This area is not completely dark, its less shining than other areas, which means less lighting units. It is come from movements of air's molecules and their electrons in everywhere. This will radiant the lighting units in many direction leading to distribution them even to shadow area make it not completely dark. As example for this process, there are hundred lighting units direct toward (T) target and there is a partition between the source of lighting units with (T) target. Therefore, when opening light's source the units will go toward the (T) target by the air molecules. Fifty units will collide with partition leading to prevent them to arrive to the target. While the other fifty will arrive to the target. This why seeing two areas, one of them is more shining than the other. This is the shadow. However, there are many types for shadow such as; there are many shadows for same things or there is a shadow is more darkness than another shadow...etc. Shadow phenomena is depending on light source either it is strong lighting light or it is weak lighting light. Furthermore, is the source near the partition or far from it? In fact, there are many other situations that are depending mainly on the light source. However, in general there are two sources for the light's sources, one of them is sunlight which is the most useful light for human in this earth and the other is human's production sources such as different lights in our houses, streets, everywhere, especially in the night state. While in fact, light's medium are almost the two gases, nitrogen gas which has the major responsibility for lighting

process and oxygen gas which is less concentration than nitrogen. However, oxygen gas has important job in addition to lighting process which is reason of human living or this life because human breath oxygen and his life is depend on it. Oxygen do his job in lighting process with participate with nitrogen and other atmospheric gases. If oxygen does not do that it will see a big dark spots in the air or in the sky!

In addition to nitrogen and oxygen gases, there are another gases such as hydrogen gas and helium gas which are responsible for lighting process in atmosphere in higher levels and in the universe. They are responsible for radiate or spread the light over atmosphere in higher levels and over the universe. However, they are molecules with one or two electrons which means less electron density less than nitrogen and oxygen gases. this why human see that the universe and other planets are in dark states while the earth is in shining or in most brightness state as it showed in previous three pictures. In fact, one or two electrons is not enough for carrying a lot of light's units. This the reason why there is a differences between earth and its atmosphere with other planet or universe.

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Indices of Family Background as Correlate to Immunization Compliance among Nursing Parents in Calabar Metropolis of Cross River State

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Abstract

This study investigated indices of family background as correlate to immunization compliance among nursing parents in Calabar Metropolis. The study specifically examined the relationship between family socio-economic status, religious inclination of parents, previous experiences/fear of side-effects, parents educational status and immunization compliance. A structured questionnaire was used to generate data from 200 subjects among nursing parents in Calabar Metropolis using stratified and convenience sampling techniques. Data generated were analysed using the Pearson Product Moment Statistics. The result of the analysis showed that socio-economic status, religious inclination, previous experiences/fear of side-effects, and parent educational status significantly relate with immunization compliance among parents in Calabar metropolis. Based on the findings, it was recommended among others, that public awareness be vigorously undertaken to let parents know immunization is free and to ensure that health care givers administer same at no cost.

Introduction

Immunity is defined as resistance to infection. This resistance occurs because of antibodies, protein substances, protein substances in human tissues and blood that combats or neutralizes the action of the infecting organism or the toxin produced by it. Antibodies are specific and diverse. For example, an antibody which combats poliomyelitis will not protect against small pox (Schaller, 1981, and Akah, 2012). Weller (2000) noted that immunization is the creation of immunity by artificial means.

Various agents can be used for creating artificial immunity- immunization. Park (2000) submitted that immunization agents may be broadly classified into three:

- (i) Vaccines: This includes live vaccines, inactivated or killed vaccines, toxoids, cellular fractions, and combinations. They provide immunity against typhoid, yellow fever, rubella, yellow fever, mumps, meningitis, etc.
- (ii) Immunoglobulin: Five classes of this category include igA, igO, igE, igG and igM. These provide immunization against hepatitis A, measles, rabies, tetanus, mumps, hepatitis B, Varicella, diphtheria, among other diseases.
- (iii) Antisera: Antisera provides immunity against tetanus, botulism, gas gangrene, snake bites, etc.

Immunization remains the most cost effective tool in reducing childhood morbidity and mortality occurring from vaccine preventable diseases such as tuberculosis, diphtheria, pertussis (whooping cough), tetanus, poliomyelitis, measles, yellow fever, hepatitis B, cerebro-spinal meningitis, and Vitamin A deficiency (National Programme on Immunization- NPI), 2004).

Brown, Foster, Norton, and Naschold (2001) and Obaro, et al in Akah (2012) observed that since the year 2000, there had been a renewed international attention toward immunization. The goal, they observed, is to improve access to immunization services, expand the use of existing vaccines, and to accelerate the development and introduction of new vaccines. This led to the establishment of the Global Alliance on Vaccine and Immunization (GAVI) launched in the year 2000, alongside with its financing mechanism, the vaccine fund. These scholars observed that this renewed international attention came at a time when routine immunization rates were stagnant or falling in most sub-Saharan African countries.

Despite the renewed international and local attention and interventions, scholars have observed that compliance with immunization programme has been low and a major challenge in the bid to reduce infant mortality. UNICEF (2003), Streefland (2001) and UNAIDS and WHO (1998) posited social, economic, geographical setting, and religion as the major factors that influence parents access and compliance with immunization programme. Other factors that have been traced to be responsible for the poor disposition of parents include mothers' knowledge of importance of immunization, beliefs, educational status of parents, income level, family size, ethnicity, and migrant status, among others (Onuoha, 1981, and Helmen & Yogeswaran, 2004). Long in Akah (2012) further observed that apart from supply-demand interactive factors that influences parents attitude to vaccination, previous experiences of secondary effects of vaccines such as fever, abscesses, swelling, vomiting, waiting time, among others have significantly influenced parents compliance with immunization.

Calabar is a cosmopolitan city with people of various economic and social backgrounds, educational status ranging from the professors to the illiterate farmer; and settings - ranging from high riser buildings to thatch/mud houses. Despite the presence of medical facilities such as the University of Calabar Teaching Hospital, General Hospital, and Primary Health Care facilities, infant mortality rate has not shown any remarkable difference compared with other parts of Cross River State (Akah, 2012). Children and infants die incessantly from vaccine preventable diseases. The

researchers in this study delved to establish how family background indices correlate with parents compliance with immunization programme in Calabar metropolis.

Methodology

The survey research design was adopted for this study since it allows the researcher to establish cause and effect relationship by collecting and analyzing data from a sample that can be generalized (Denga & Ali, 1998). The study comprises male and female parents in Calabar South and Calabar Municipal Councils. The population of the study according to the 2006 population census stood at A sample of 200 male and female parents were studied. The stratified and convenience sampling techniques were utilized for data collection. The two identified strata were Calabar South Local Government Area (LGA) and Calabar Municipality. One hundred respondents each were selected from the two LGAs using the convenience sampling technique.

The instrument utilized for the study was a structured questionnaire titled “questionnaire of family background and immunization compliance” designed by the researchers for the purpose of this study. The questionnaire was divided into two sections- A and B. Section A sought information on the respondents demographic data, while Section B which contained sixteen items on a Four Point Likert Scale questionnaire sought data on the variables considered in this study. The instrument was validated, and its reliability was certified. The reliability coefficient which yielded an average of 0.61 was established using the test-retest method.

Data collection was done by the researchers and the engagement of two trained Research Assistants. Retrieval of the questionnaire was on the spot. For data collection, parents who were presently nursing children were given top consideration. This is because this will help assess the present situation with regards to parents compliance and their family background. Data generated was collated and scored appropriately. The Pearson Product Moment Correlation Statistics was utilized for data analysis. Four hypotheses postulated to guide the were:

- (i) Family socio-economic status will not significantly relate with immunization compliance among parents in Calabar metropolis.
- (ii) Religious inclination of parents will not have any significant relationship with parents compliance with immunization in Calabar metropolis.
- (iii) Previous experiences/fear of side effect will not have any significant relationship with parents' immunization compliance in Calabar metropolis.
- (iv) There will be no significant relationship between parents educational status and their compliance with immunization in Calabar metropolis.

Results

The results of analyses which was done hypothesis by hypothesis is here presented in tables 1- 4.

Table 1

Pearson Product Moment Correlation analysis of relationship between family socio-economic status and parents compliance with immunization (N=200)

Variables	$\sum x$	$\sum x^2$	$\sum xy$	r
	$\sum y$	$\sum y^2$		
Family socio-economic status	3246	6347	74325	0.50*
Immunization compliance	3168	5468		

Significant at .05 level, critical r = 138, df =198

Table 2

Pearson Product Moment Correlation analysis of relationship between parents religious inclination and immunization compliance

Variables	$\sum x$	$\sum x^2$	$\sum xy$	r
	$\sum y$	$\sum y^2$		
Parents religious inclination	3346	6378	75721	0.48*
Immunization compliance	3168	5468		

Significant at .05 level, critical r = 138, df =198

Table 3

Pearson Product Moment Correlation analysis of relationship between previous experiences/fear of side-effect and parents immunization compliance.

Variables	$\sum x$	$\sum x^2$	$\sum xy$	r
	$\sum y$	$\sum y^2$		
Previous experiences/fear of side-effect		5459	77215	0.62*
Immunization compliance	3168	5468		

Significant at .05 level, critical r = 138, df =198

Table 4

Pearson Product Moment Correlation analysis of relationship between parents educational status and compliance with immunization

Variables	$\sum x$	$\sum x^2$	$\sum xy$	r
	$\sum y$	$\sum y^2$		
Family educational status	3546	6759	84158	.056*
Immunization compliance	3168	5468		

Significant at .05 level, critical r = 138, df =198

Discussion

The result of the first hypothesis revealed that family socio-economic status has a significant relationship with parents compliance with immunization. This finding is in consonance with the position of UNICEF (2003), Streefland (2001), Onuoha (1981) and UNAIDS and WHO (1998), who posited that social and economic factor are among other factors that influence peoples access and compliance with immunization. A closer peep into the responses of the subjects showed that some have the perception that immunization services are not free, while for others the cost of accessing immunization service centers stood as a factor. The implication of this finding is that with the increase rise in cost of living and stiffer socio-economic measures being experienced, immunization compliance may diminish further, except practical steps are taken to check the cost of accessing immunization services, whether perceived or real.

The result of hypothesis two analysis showed that a significant relationship exist between religious inclination of parents and their immunization compliance. This finding corroborates the position of UNICEF (2003), Streefland (2001), Onuoha (1981), and Helmen and Yogeswaran (2004). They noted that religion and beliefs of parents are strong factors that dictate parents' disposition to immunization. The researchers here observe that this factor (religion) can be harnessed as a tool to rather promote patronage of immunization by parents. This may imply that religious organizations as a social institution has not been adequately sensitized and mobilized for this purpose.

According to the result of hypothesis three as shown in table 3, previous experiences of parents/fear of side-effects significantly related with immunization compliance. This finding is also corroborated by the submission of Akah (2012) in a previous study that parents attitude toward immunization is significantly influenced by previous experiences of secondary effects of vaccines such as fever, vomiting, abscesses, etc. The implication is that immunization service providers may not have taken time to educate parents on what they expect (as per side-effects) and what to do in each situation. Another dimension of this implication is that parents may seek help from unsafe sources that may not present noticeable side-effects as alternative to immunization services, especially those inclined to traditional medicine practitioners. This may spell doom for such children.

Finally, the result of hypothesis four revealed that parents educational status and their immunization compliance significantly relate. This is in consonance with the assertion of Onuoha (1981), and Helmen and Yogeswaran (2004) who observed that educational level of parents have been traced to strongly influence parents' compliance with immunization. On this, the researchers observed that ability to read adverts and leaflets in a key to accessing of available information on immunization. The implication is that if steps are not taken to reduce the number of school dropout today, we may have a more serious problem in the near future with regards to immunization compliance by parents.

Conclusion

This study summarily revealed that family socio-economic status, religious inclination of parents, parents previous experience/fear of side-effects, and parents educational status significantly relate with parents compliance with immunization. The implication is that all hands must be on deck to raise the standard of living of families in all ramification or holistically.

Recommendations

The following recommendations are hereby proffered based on the findings of this study:

- (i) Public awareness and enlightenment be vigorously undertaken to let parent know that immunization is free, and that health care givers comply with this.

- (ii) Government as immunization service providers through her Ministry of Health should consider decentralizing immunization services to make it accessible to every citizen, irrespective of where they live and work to reduce cost of access.
- (iii) Religious institution and their leaders need to be consciously mobilized for this purpose. They can function as opinion leaders if properly trained or informed on the benefits of immunization .
- (iv) Health care givers should consciously educate parents, especially the younger parents on what to expect and what to do with regards to side-effects resulting from immunization. NGOs can also join in public enlightenment to allay the fears of parents in this regard.
- (v) While the government and the private sector are making efforts to see that education is accessible to all, efforts should be reinvigorated toward adult literacy programmes, especially in rural areas, with subject on family life and health included.

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A Historical Analysis of the Impact of Ondo State Housing Corporation on Akure (1976 – 1996)

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Abstract

Housing is globally regarded and accepted to be one of the basic needs of man. This accounts for most governments claim at all levels to vote huge sums of money for the provision of housing to all categories of their citizenry. The Ondo State Government in South-western Nigeria since its creation in 1976 has pursued housing policy with considerable vigour. This manifested in the establishment of Ondo State Housing Corporation (OSHC) in 1976, to make shelter more available, qualitative and affordable to the people of the State. In the light of the above therefore, this paper examines the Ondo State Housing Corporation as agent of growth and development of Akure the capital of Ondo State, Nigeria. The methodology adopted in this work is critical analysis of both published and unpublished materials. The paper argues that the corporation has contributed to the development of the region most especially during the early years of its establishment. It concludes that with better management and commitment on the part of the proprietor of the corporation, a number of the challenges facing the corporation can be surmounted and the agency can still attain the set goals of its establishment.

Key words: Housing Policy, Urban Development, Housing Corporation, Survey.

Introduction

This paper examines the contributions of the Ondo State Housing Corporation (OSHC) to the growth and development of Akure Region from its inception in February 1976 to the present. This discussion is imperative since housing is globally regarded as one of the basic needs of man. This is why most governments at all levels often claim to vote huge sums of money for the provision of housing to all categories of their citizenry. Regardless of the amount of money said to have been expended on housing, the reality on ground is not commensurable with the acclaimed input.

Steward Lansley (1976:3) defines housing as a decent home for every family at a price within their means; a fairer choice between owning a home and renting one, and fairness between one citizen and another in giving and receiving help towards housing cost. Roger Starr (1979:18) in his own contribution, claims that housing involves more than a roof over ones head, but that housing must shield its occupants against snow, rain and wind, against disease, accident, fire outbreak and burglary.

Historical Background

Consequently Ondo State was created out of the defunct Western State on February 3, 1926, this event necessitated a number of development policies, one of which was the establishment of Housing Corporation this was designed to institutionalize the state's housing policy.

Ondo State Housing Corporation was established under the Ondo State Housing Corporation Edict No.3 of 1977 with retroactive effect from 1st Mary, 1976. The Corporation took root from the Western Nigerian Housing Corporation, formerly known as the Western Region Housing Corporation which had been established under Western Region Law No.12 of 1958. This law came into effect through Western Nigeria Legal Notice No.289 of 1958 on the 20th June, 1958. According to the law, the principal function of the Corporation, so far as its resources permit and subject to the provision of the law, is to increase the availability of dwelling houses for acquisition by members of the public in the state. (Hand Book on Western Region Housing Corporation, 1974:5). Among other considerations, the Ondo State Housing Corporation designed two broad objectives in other to be able to deliver its statutory responsibilities to the people. They are: to develop housing estates for acquisition by members of the public and to grant loans to members of the public to enable them build houses of their own taste and requirement in any part of the State.

It should be noted that in the colonial era, there was a public housing scheme known as Government Reservation Areas (GRA), which was essentially designated for the use of the expatriate staff. Government's priority then was to provide suitable accommodation and residential quarters for colonial administrators. Buildings in the Government Reservation Areas were therefore modeled after British houses, well-planned and serviced with water, electricity, open spaces, recreation facilities and club, among others. They were often located in the most highly priced sectors of the communities e.g. Bodija-Ibadan, Abeokuta and Ijebu-Ode.

Similarly a housing scheme was introduced to benefit Nigerians during this era. Thus, African Staff Housing Scheme was established. It was a token offer made to qualified indigenous civil servants through a grant of housing loan up to five times their annual salaries to build houses in estates located at Yaba and Ebute-Meta, among others.

In big cities like Lagos, housing pressures began to rear their heads by the demand for settlement dispute during the 1914 strike which ultimately led to the building of workers' estate at Surulere by the Government through the Lagos Executive Development Board (LEDB). (Oyo State Housing Corporation Management Report, 1994:3). During the colonial era, a momentous healthy event occurred in Lagos the bubonic plague epidemic which led to the establishment of the Lagos Executive Development Board. It was saddled with the building of houses as well as the planning of Lagos. This also led to the inclusion of health consideration in the building settlement in Nigeria.

The development snowballed into the establishment of housing bodies in the three regions created in Nigeria before Independence, i.e Western, Eastern and Northern Nigeria Housing Corporation, all these bodies had functions which included the provision of houses, among others. Moreover, some of the Housing Corporations were then by law empowered to operate savings and loan schemes, which enabled them to grant mortgage loans to would-be house-owners. Public servants enjoyed this privilege in the former Eastern and Western Nigeria Housing Corporations. (Oyo State Housing Corporation Management Report: 1994).

Impact on Development

Before the establishment of the Corporation in 1976, the presence of the Western Nigeria Housing Corporation was less significant in Akure. The only evidence of such presence was Ijapo Housing Estate in Akure, which had been acquired by the Corporation on July 26, 1969. Even at that, only scanty physical development had taken place in the Estate until the creation of Ondo State in 1976.

The main function of the corporation was provided by the Edict was to increase the availability of dwelling houses and commercial and industrial buildings in the State for acquisition by the public (Ondo State Housing Corporation Information Brochure, 1996:1). Towards this end, Corporation and increased the availability of dwelling houses in the State in particular for acquisition by members of the public. Estates were therefore established in different parts of the state where houses and serviced plots were available to members of the public for purchase.

Table 1: Housing Corporation Estates and Available Plots in Akure.

Estates	Available plots of land	No. of Plots used	No.of plots unused
Ijapo Estate	650	650	Nil
Oba-Ile Estate	1,251	1,196	55
Oba-Afunbiowo	2,200	1,550	650

Source: A Special Report by the Management of OSHC, (1991:31)

The number of serviced plots made available for acquisition at Ijapo, Oba Ile and Oba-Afunbiowo Estate as at May, 1999 stood at 4,101 plots of land. Total numbers of 30 houses were built between 1976 and 1979. Ten units of HC 20 houses, 10 units of HC 9 houses and 10 units of HC 208 houses, all at a cost of approximately #535.000.00

On the whole, between 1976 and 1996, about 500 housing unit were built by the Corporation in the State and sold to members of the public. Individuals who purchased serviced plots of land also constructed a number of houses in the State. There were more than 6,000 plots available for residential, commercial and industrial purposes in the Corporations estate located in different parts of the State during this period, at a moderate price. At Ijapo Estate, a square metre of land was sold for #750.00 while at Oba Afunbiowo and Oba-Ile it was sold for #25. (Ondo State Housing Corporation Information Brochure, 1996:2)

The contribution of the Corporation increased immediately the pioneer staff of the corporation arrived the State on May 17, 1976 from the Western Nigeria Housing Corporation, Ibadan. The Corporation's proposed two story office block at Ijapo-Estate had been occupied by other two ministries (Ministries of Local Government and Information, and Justice) and twenty eight of the thirty bungalows built by the Western State Housing Corporation at Ijapo had been taken over by the state government as quarters for civil servants and commissioners, leaving only one to be used by the corporation as temporary office. The accommodations provided in two 3 bedroom available bungalows were grossly inadequate. Thus, steps were immediately taken to extend the two by means of wooden additions.

Table 2: The development of the corporation in Akure

	Pre-creation of	State under	Civilian	Military	Civilian

	State in 1976	military 1976-1983	government 1979-1983	government 1984-1999	government till date
No. of buildings constructed	42 houses at Ijapo Estate	30 completed houses at Ijapo estate	60 medium and high income houses constructed and sold to members of the public at Ijapo Estate. A modest shopping centre of 40 stalls were also constructed for residents of Ijapo estate	Nil	300 blocked at Ibule
Establishment of housing estates	Ijapo Estate was established on July 1969	Nil	Oba-Ile and Oba-Afunbiowo Estate were Established	Nil	Ibule Estate establishment has been carried out at this Estate
No.of plots made available for acquisition		102 plots were demarcated and surveyed for acquisition at Ijapo estate.	60 Residential plots at Ijapo Estate and 150 plots at Oba-Ile Estate were made available	No Data	No Data

Source: Ondo state Housing Corporation Akure in 2006.

Table 2 shows the number of building constructed by the Western State Housing Corporation and those constructed during the creation of Ondo State in 1976 to date. The table also indicates that only Ijapo Estate existed before the state creation and that since the state creation in 1976, Oba-Ile, Oba-Afunbiowo and Ibule Estate were established. It also show the number of plots made available for acquisition. Based on the above analysis, it safe to state that the Corporation performed creditably well during the civilian administration between 1979 and 1983, than during the military rule.

The design of the office and the speed with which it was constructed attracted the attention of the then Military Government of the State. Consequently, during the official visit of the Wing Commander, Ita David Ikpeme to the newly completed Corporation's Headquarters' offices, he directed the Works Division of the Corporation to contract the office of the Military Governor using similar design with minor modifications. The pioneer staff of the Corporation numbered one hundred (100), both permanent and casual workers who put in their best to achieve this lofty achievement (Ondo State Housing Corporation First Annual Report, 1976:1).

The existence of the Ondo State Housing Corporation in the State has some great impact on the residents and non-residents of Akure. In the first instance, the Corporation as a public organisation has provided job opportunities for people, be it on casual, contract and permanent basis. This has in one way or the other affected positively the lives and conditions of the people. Building

contractors, bricklayers, carpenters, plumbers, other artisans and those who sell building materials really made great fortune during the teething period of the corporation,.

At the same time, the Ondo State Government embarked on construction of quarters for civil servants at Alagbaka and Ala areas, both in Akure through the State Ministry of Works, Land and Housing. These quarters also stand as monumental achievement for the State Government in terms of quality of work and materials used (Aliu: 2006). The quarters have added greatly to the beauty and number of housing units in Akure. In the city, private development had been moving in those directions, thereby increasing the growth of the town.

The Corporation has given mortgage loans with affordable interests to some members of the public to build houses of their own. It has also created a savings account in the Corporation; one is entitled to buy either a plot of land or a house of one's choice in any of the Corporation's estates in the State, therefore becoming a landlord. This is hardly possible now due to lack of adequate funding by the Government. The Corporation also has to its credit a bloc of 40 market stalls at Ijapo Estate and Guest House managed now by Royal Birds Hotel, Akure (Ijapo Housing News, 1981:23-27).

Between April, 1976 and March 1977, 262 new mortgage loan applications were received. Approval was also held up for some times because the law establishing the Corporation had not been formally promulgated. By 31st March, 1977, however, a total number of 13 new applications were approved thus bringing the number of mortgage loans paid to 20. Meanwhile, total loans approved was #156,000.00 out of which #141,500.00 was paid to mortgage between 1st April, 1977 and 31st March, 1978, a total amount of #1,605,500.00 was approved to members of the public out of which #1,231,972.00 was paid out. Between 1979 and 10=981, a total of about #10 million was approved by various applications out of which #1.5 million was disbursed to four hundred and fifty (450) applicants (OSHC Second Annual Report, 1978 :12).

Apart from the acquisition of land and estate development, the Corporation also set up a Football Club known as Ondo State Housing Corporation Football Club (now defunct). The club did very well in the National League then. The Football Club was the first to gain national recognition from the State. The football field in Ijapo Estate that was developed for the team by the Corporation has since been a training ground not only for the State Football Club, but also for other amateur teams in the state. In fact, the Corporation football field has been providing extra services for the people who celebrate one ceremony or the other at the instance or permission of the Corporation. The establishment of the football club has been seriously criticized by the activities of the Corporation. It is seen as a deviation from the goal of the Corporation although the reason for this may not be far-fetched, because the founding General Manager of the Corporation, Late Prince Adewole Adesida happened to be an ardent lover of football. He later served in the Board of the Nigeria Football Association.

The Corporation was under the close supervision of Ondo State Ministry of Works, Land and Housing until 1999 when the government of Colonel Fasanya, the then Military Administrator gave the Corporation an autonomous status (Ilemobade, 2007). Since then, the Corporation has been contributing her quota to Housing delivery in Ondo State. In 2003, the Administration of Dr. Olusegun Agagu changed the name of the corporation to Ondo State Development and Property Corporation (OSDPC). The new Corporation has constructed three hundred (300) block of flats in Ibule near Akure for Civil Servants and interested members of the public.

One of the reasons for the change in name had to do with recommendations of a committee set up by the Ondo State Government in 2003, which observed that the former Capital and Urban Development Authority (CUDA) has no viable administrative structure and most of its functions were duplicated by other government agencies. The committee therefore recommended its merger with the Housing Corporation to form a new organization to be named Ondo State Development and

Property Corporation (OSDPC). This recommendation was accepted by the government, thus giving birth to Ondo State Development and Property Corporation. (OSDPC Brief, 2003:1).

It is crucial to mention that Ala and Alagbaka were built by the Ministry of Works, Lands and Housing and the two estates were never at any time under the Ondo State Housing Corporation. This must be put in correct perspective because most people believe that the Corporation is in charge of these estates.

It is observed that the Corporation has contributed to the development of Akure metropolis, Oba-Ile and of recent Ibule. It is believed that more could still be done by the Corporation if necessary mechanisms are put in place by the Government and the Management of the Corporation. Presently, the houses built by the Corporation are insignificant compared with the number of houses in Akure and its environ.

Conclusion

From the foregoing work, an attempt has been made to assess the impact of the Ondo State Housing Corporation on the development of Akure. Although, it is the general belief that the Corporation has failed to live up to expectation, the Corporation has, no doubt, contributed to the beautification and development of Akure, most especially Ijapo, Oba-Ile and Ibule. The Corporation has also opened up Oba-Afunbiowo Estate along Idanre road as the estate is gradually developing.

Besides, in addition to the construction of housing units by the Corporation, mortgage loans were also given out to some interested members of the public to build houses on which affordable interest was charged. The Corporation also provided job opportunities for people as casual, contract, and permanent workers. This has one positive way or the other affected the lives of the people.

The Corporation also contributed in providing some social amenities like ultra-modern buildings, road networks, construction of market stalls and hotels. In the area of sports, the Corporation set up a football club that represented the state in the finals of the National Challenge Cup Competition for several years. To further enhance sporting activities among the people, the Corporation established a football field. The Club also played in the National League for years before it became defunct apparently owing to insufficient funding. In these ways, the contributions of the Corporation to urban development in Akure in particular and Nigeria in general become apparent.

Finally, comparing the achievements of the Corporation with the expectations of the people and growing population also with the financial constraints, one can conclude that the Corporation has achieved greatly from the reviewed period of operation and the limited funds released to carry out its functions. It is however believed that, if given more funds and manpower by the government, the Corporation might be able to achieve more and could then compare favourably well with other significant corporations in terms of positive achievements. Given its mandate and available personnel vis-à-vis the level of funding, it has contributed not only to the beauty of the region, but also to the standardization of building construction and modelling. It can however do more and better than we have shown above.

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Effects of global processes of water purification, human activities and some facts; on human's health and on different environments types of the world.

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Abstract:

Iraq use aluminum sulfate salt ($\text{Al}_2(\text{SO}_4)_3 \cdot 16\text{H}_2\text{O}$) for water purification process instead of potassium alum ($\text{KAl}(\text{SO}_4)_2 \cdot 12\text{H}_2\text{O}$). This salt give two ions when it is hydrolyze in water molecules (2Al^{+3} and 3SO_4^{-2}). Atomic absorption technique indicates that Iraqi tap water contain about (1.89 - 2.1 mg/L) of free aluminum ion (Al^{+3}). However, Iraqi people (35 millions) are use above tap water (350 - 400L/day) and return it again to Iraqi two rivers. These rivers transfer aluminum ion (24.5-28 tons/day) with additional other three products that producing from Iraqi water purification stations. These products are about; (130.76-149 tons/day) of sulfate ion (SO_4^{-2}), (73.5-84 tons/day) to (4961.25 tons/day) of chloride ion (Cl^-) and hydrogen ion (H^+) is same as chloride ion. These ions transfer with Aluminum poison ion continuously every day to Arab's gulf. Iraq's rivers provided Arab's gulf of three ions one of them is free aluminum poison (Al^{+3}). Arab's gulf transfer above ions to other seas and oceans. However, There are another sources for aluminum and other ions over the world. Therefore overall ions that produce continually each day and reach seas and oceans in addition to Iraqi ions are; (149.5-153 tons/day) of Aluminum ion, (20653.5 – 25541.25 tons/day) of Chloride ion, (7125 tons/day) of Potassium ion, (10530 tons/day) of Sodium ion, (880.76 – 899 tons/day) of Sulfate ion, finally (4573.59 -7859.84 tons/day) of Hydrogen ion (acidity). These ions are throw each day in seas and oceans and they should effect all creatures, one of them is most important organism "algae". In fact, above ions are effected different environments of the world not just water's plants or animals. However, Aluminum ion can ascend with water molecules to form clouds (its amount in clouds = 7-9 mg/L). This means aluminum poison able to spread with air molecules in everywhere in this earth. This means aluminum ion can use water or air for transferring to every place in the world. In addition to above ions effect, aluminum ion is a dangerous poison for human, animals and plants ⁽¹⁻¹⁴⁾. Furthermore, this research predicts how all creatures on this earth may disappear "The End" in the next few years unless all people cooperate each other for saving this earth. This may exactly like what happened for dinosaurs before millions years "the end of dinosaurs". In addition, this research suggested the only solution humans have for saving our planet.

Key words: Iraq water stations, the world water stations, Aluminum, Sulfate, Chloride, Urine, Potassium alum, the end, Dinosaurs, saving the earth.

1. Introduction:

Potassium alum is one of the well known compounds. it is doubled salts compounds, it is one of few likes' compounds which have two positive ions one of them is (+1) while the other is (+3), examples of above salts are ⁽¹⁵⁾:

1. Potassium alum, $K_2SO_4 \cdot Al_2(SO_4)_3 \cdot 24H_2O$.
2. Ferric alum, $K_2SO_4 \cdot Fe_2(SO_4)_3 \cdot 24H_2O$.
3. Soda alum, $Na_2SO_4 \cdot Al_2(SO_4)_3 \cdot 24H_2O$.
4. Chrome alum, $K_2SO_4 \cdot Cr_2(SO_4)_3 \cdot 24 H_2O$.
5. Ammonium alum, $NH_4Al(SO_4)_2 \cdot 12H_2O$.

For unknown reasons Iraq use aluminum sulfate ($Al_2(SO_4)_3 \cdot 16H_2O$) instead of doubled salt potassium alum ($KAl(SO_4)_2 \cdot 12H_2O$) in water purification process. Aluminum salt is differ than doubled salt, it is neutral salt gives its components ($2Al^{+3}$ and $3SO_4^{-2}$) when it is hydrolyze in water as same as NaCl salt. Aluminum ion is a poison highly effecting ion for all living systems; human, animals and plants ⁽¹⁻¹⁴⁾.

2. Materials and Methods:

As mentioned before, Iraq use Aluminum salt ($Al_2(SO_4)_3 \cdot 16H_2O$) in water purification process in addition to chlorine gas (Cl_2). These molecules give four products when they hydrolyzing in water molecules. Many samples were collected from many Iraqi cities for calculating concentration of aluminum ion which was calculated by using atomic absorption apparatus. However, concentration of sulfate ion was calculated depending on equation of aluminum salt hydrolyzing reaction in addition to my colleagues calculations which they calculated sulfate ion and chloride ion for them research ⁽¹⁶⁾.

The last product "hydrogen ion" was calculated depending on chloride ion concentration and depending on water stations employees.

All Iraqi water stations are using same materials for water purification process, aluminum salt ($Al_2(SO_4)_3 \cdot 16H_2O$) and chlorine gas (Cl_2) and also they use same techniques. Therefore, these stations should be produced same products of above four ions (Al^{+3} , SO_4^{-2} , Cl^- , H^+). However, according to atomic absorption techniques of some rain samples, Iraq rains contain about (7-9 mg/L) of aluminum ion.

3. Results and Discussion:

According to atomic absorption technique, Iraqi tap water contain about (1.89-2.1 mg/L) of aluminum ion and also depending on my colleagues research it is contain about (360-396 mg/L) of chloride ion. According to aluminum salt reaction and chlorine gas reaction, sulfate ion and hydrogen ion was calculated. However, all above concentrations are not constant for 12 months (year) because that employees of water stations are not add equal amounts of aluminum salt or chlorine gas during each year from 1996 until now. However, according to my colleagues total dissolve salts is about (553 mg/L) which lead that each Iraqi person produce salts about (6774.25-7742 tons/day) ⁽¹⁶⁾.

However, depending on specialists colleagues, many species were disappeared from Iraqi rivers furthermore ratios of some species are decreasing in Iraqi rivers. Amounts of fishes are decreasing in Iraqi rivers in last ten years. However, Some Arabic reports indicated that amounts of fishes in Arab gulf are decreasing too as same as fishes in Iraqi rivers.

Before discussing water stations and how they producing aluminum ion with other three ions, should be clarify two facts:

1. There are known amounts of aluminum ion (Al^{+3}) in seawater and oceans. Amounts of aluminum in seawater vary between approximately 0.013 and 5 ppb. The Atlantic Ocean is known to contain more aluminum than the Pacific Ocean. River water generally contains about 400 ppb of aluminum⁽¹⁴⁾.
2. Above ion (Al^{+3}) differs than Aluminum oxide (Al_2O_3) in many points one of them is solubility. Aluminum ion dissolves in water while aluminum oxide does not.

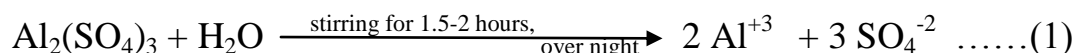
Above points indicated that there are known concentrations of aluminum ion in oceans, seas and rivers. However, according to densities differences and other facts these concentrations should come from a source producing aluminum ion continually because of:

1. Aluminum ion can be detected by oxygen as hydroxide ion (OH^-). This because it has a good affinity toward oxygen. However, because this fact, most aluminum compounds contain oxygen such as Aluminum oxide (Al_2O_3). This compound have strong bond between aluminum-oxygen because in industries, aluminum natural sources need strong conditions for breaking strong aluminum-oxygen bond such as high temperate degree or acidic condition of sulfuric acid. Therefore, it is difficult for acidic rains ($PH > 4$) or other factors to break strong aluminum-oxygen bond of earth's compounds. As a result, known concentrations of aluminum ion in oceans, seas and rivers do not come from effecting of acidic rain on the earth. Or acidic rains does not produce high concentration of aluminum ion as it is in seas or oceans.
2. Relating to above point, as it is known, earth have large areas of water about 70% and little areas of lands about 30%. This indicates that most rains are fall on water surface and small amounts of them are fall on the lands. Furthermore, most rains are absorbed by the earth and some of them reach the rivers or seas leading to oceans. Therefore, acid rains are unlikely to be a source of known concentration of aluminum ion in rivers, seas and oceans.
3. Above reference⁽¹⁴⁾ showed that huge amounts of water (rivers, seas and oceans) which are about 70% of the earth, have known concentrations of aluminum ion. These concentrations can not be produced from acidic rain or any other environmental factors because they can produce very small amount of aluminum ion, it is not enough for huge amounts of water (rivers, seas and oceans). This means it is so difficult for acidic rain or other factors to be sources of aluminum ion for huge amounts of water (oceans, seas and rivers). Therefore, it should be there are continues source of aluminum ion for rivers, seas and oceans!
4. Finally, aluminum ion is more density than water molecules. Therefore, it should be fall down in oceans and seas which mean it will be in down levels on the lands under the water of oceans, seas and rivers. This indicates that water surfaces or highest levels of oceans, seas and rivers should be clear from aluminum ion! This is not true because there is known concentrations of aluminum ion for the water of oceans, seas and rivers. This means that known concentrations of aluminum ion in oceans, seas and rivers must be come from a continues source which producing aluminum ion continually for long time ago sixteen years since 1996!

In fact, Aluminum continues source can be clarified as follow:

Iraq use Aluminum sulfate ($Al_2(SO_4)_3$) alone in water treatment process without any other compounds such as calcium carbonate ($CaCO_3$) for the last sixteen years since 1996. Employees of water purification stations indicate that there is not constant amounts of above salt to be added for water purification process. However, they showed that they adding about 10-15 kg of above salt to specific container of 1000 L or they adding more than 15 for 1500 L container. However, Aluminum

sulfate ($\text{Al}_2(\text{SO}_4)_3$) is not soluble in water in contrast with potassium alum. Therefore, Iraq use electric motors for stirring aluminum salt inside above containers for one and half to two hours. After stirring, employees of Iraqi stations indicated that they leave the solution (aluminum salt inside the container) over night just for dissolving aluminum salt ($\text{Al}_2(\text{SO}_4)_3$). Aluminum salt dissolves in water by dissociation to its contents inside the water molecules. This because that aluminum sulfate is a neutral salt producing from strong acid (H_2SO_4) and strong base ($\text{Al}(\text{OH})_3$) such as sodium chloride salt (NaCl), when it hydrolyze in water it will dissociate to produce its contents ions as illustrated in the following equation:



As indicated above there is not a constant amount of above salt that be added in water purification process. Therefore, amounts of aluminum ion were calculated for different samples by atomic absorption technique and it ranged between 1.89 to 2.1 mg/L, it is 2 mg/L in average.

In fact, all Iraqi water stations are use aluminum sulfate ($\text{Al}_2(\text{SO}_4)_3$) instead of potassium alum ($\text{K}_2\text{SO}_4 \cdot \text{Al}_2(\text{SO}_4)_3 \cdot 24\text{H}_2\text{O}$) and all these stations use chlorine gas in two stages. Furthermore, they use same techniques in water purification process. Therefore, all Iraqi station should produce same products (ions). This fact should be noticed for this research.

In addition, it should be noticed that above products (ions) values may be increased or decreased depending on employees of water purification stations. However, if aluminum ion concentration is 2 mg/L then number of moles of (Al^{+3}) = 0.074 mmole then number of moles of (SO_4^{-2}) = 0.1112 mmole.

$$\begin{aligned} \text{Then, weight of ion product } (\text{SO}_4^{-2}) &= 0.1112 \text{ mmole} * 96 \text{ mg/mmole} \\ &= 10.675 \text{ mg/liter} \end{aligned}$$

However, Iraq water stations take the water from the two rivers and put above amounts in it. This means water will take 2 mg/L of Aluminum ion and 10.675 mg/L of sulfate ion for Iraqi houses or Iraqi people. Each Iraqi person use about 350 - 400 liters of water and return them again to Iraqi rivers. These amounts return to the two rivers without any treatment. This means they will return to Iraqi rivers without any changes. This indicate that each person produce about 700-800 mg of aluminum ion per day and produce about 3736.25-4270 mg of sulfate ion per day. In another word, above amounts will be: 0.7-0.8 g/day of aluminum ion and 3.736-4.27 g/day of sulfate ion.

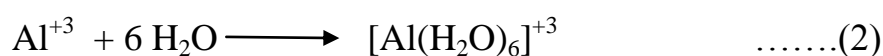
Iraqi population is about 35 millions so Iraqi people produce about: 24500-28000 kg/day of aluminum ion and 130760-149450 kg/day of sulfate ion. These amounts will add to Iraqi two rivers step by step during them flux from the north to the south passing thorough different Iraqi cities. After that, Iraqi two rivers meet each other in the south of Al-Basra city forming one river called shat Al-Arab. Therefore, shat Al-Arab will take above amounts of ions to transfer them to the Arab Gulf then to all of the world.

Iraq produces about (24.5-28 tons) of Aluminum poison ion each day and also it produce about (130.76-149.45 tons) of sulfate ion each day. It is producing above amounts since 1996 or before that in long time! However, this means from 16 years until now Iraq continually produces above amounts each day and transfers them to Arab gulf leading to all the world.

It is important to notice that the main job of Iraqi water purification stations is to convert the soil which is contain insoluble aluminum as aluminum oxide (Al_2O_3) to soluble aluminum ion (Al^{+3}) and distributing this ion to all the world. In fact, this happened by producing aluminum sulfate from soil, this happening in different chemical companies as industry methods over the world. Iraq will buy producing compound then it will use it for water purification process to produce two ions, one of

them is aluminum ion. Then overall steps as it is mentioned before, Iraq converts soil to aluminum ion and distributing it over the world.

Aluminum metal have 13 electrons, the last three electrons two of them are in (S) orbital while the rest one is in (P) orbital. When this atom lose the last three electrons to be aluminum ion (Al^{+3}), it will have three empty orbitals (S), (P) and (d). These orbitals can formed different bonding with other atoms and molecules but the main reaction is with Hydroxide ion to form aluminum hydroxide ($Al(OH)_3$). This reaction occur only in basic media which means $PH > 7.5$, while in acidic media aluminum ion will be stable ion with three empty different orbitals. According to specific reports Iraq rivers were more than $PH = 7.5-8$ until 1990. After this date, PH of Iraqi rivers now is less than $7.5-6.8$. Therefore, aluminum ion can be stand alone as (Al^{+3}) in these rivers. Most suitable form for aluminum ion in water in acidic media is as following equation:



Aluminum complex is more suitable for aluminum ion to be at the surface of rivers, seas and oceans and also to be in the clouds because water molecules of aluminum complex are represent as balloons for aluminum ion. In another words, water molecules of aluminum complex able to make aluminum ion at the surface of oceans, seas and rivers and they able to ascend it to form clouds. This means aluminum ion can spreading by water molecules through air molecules. However, according to atomic absorption technique, amount of aluminum in Iraqi rains is about (7-9 mg/L). This indicated that aluminum ion can reach the sky to form clouds and it can transfer by air molecules to everywhere in this earth.

However, Main water molecules cycles in the earth is that sun's heat evaporate them from oceans, seas and rivers to form two aspects; clouds in winter and moisture in summer. For all the earth both aspects are formed because earth have two halves when one of them is in the winter the other will be in the summer. In fact, clouds or moisture are forming the ice around the earth which is the source of rivers of the world. Finally these rivers return water molecules again to oceans and seas. Oceans, seas and rivers (70% of all earth) produce continually two forms; clouds and moisture. However, this research indicated that aluminum ion can ascend with water molecules to form clouds (7-9 mg/L) then it can ascend with water molecules to form moisture too because clouds is higher than moisture in atmosphere. Therefore, aluminum ion can ascend to form clouds then it can ascend to form moisture. This may happened in different percentage around the world. As mentioned before, there are known concentration for aluminum ion (Al^{+3}) in rivers, seas and oceans⁽¹⁴⁾.

All above indications indicate that Iraq water stations converted soil to be free aluminum ion and spread it over the world. Aluminum ion is a poison for all living systems in the earth⁽¹⁻¹⁴⁾. Our believe that human made from soil while in another hand depending on the science, soil have aluminum as the third element but the fact is our bodies does not contain aluminum either as ion or as element of soil elements. This means that soil was filtered from aluminum then human was made. Furthermore, this indicates that aluminum is very danger poison. It is ion with free orbitals (S, P and d orbitals) easy to bond with other high electron density elements such as O, N, S, ..etc. human body is formed from high electron density elements! This means aluminum ion can change all the body functions when it enter there, following table will illustrate what aluminum ion can do inside human body. Even that aluminum is very danger poison, it produce continually and it can reach every place in this world. May be 16 years is not enough for all the world to be filled by aluminum ion but it is enough for the next few years for aluminum ion to be increased in the oceans, seas and rivers. Aluminum is poison for most creatures⁽¹⁻¹⁴⁾ therefore it should kill many species and destroyed most food chains in water environments. It effected human in many countries in two ways; directly such as Iraq, Arab gulf countries. Or indirectly such as other countries of the world. Moreover, aluminum

ion has very small diameter = 0.51 Å, Aluminum metal with three electrons has 1.3 Å it lose about 0.8 Å when losing three electrons. This indicates that there is not filter can stop aluminum ion. In fact, aluminum ion can pass through everything in this earth but in different percentages.

Countries of Arab gulf does not have rivers for drinking water so they take them drinking water from Arab gulf. Iraqi two rivers transfer aluminum ion to shat al-Arab whose take it continually to Arab gulf then to Arab sea to all water areas. This indicated that people of Iraq and Arab gulf drinking water with aluminum ion. Aluminum ion caused many diseases ⁽¹⁻¹⁴⁾ as in the following table:

No.	Disease type	Notices
	Tumors	
	Hypocalcaemia	
	Delirium	
	Delirium Tremens	
	Depression	
	Eastern Equine Encephalitis	
	Osteomalacia disease	
	Encephalopathy, Hypertensive	
	Increased risk of infections	
	Very high levels sudden death	
	Renal insufficiency	
	Anemia	
	Bone disease	
	Deteroxamine therapy	
	Abnormalities in Vitamine (D) production	
	Increase bone turnover	
	Aluminum causes an oxidative stress within brain tissue leading to formation of alzheimerlike neurofibrillary tangles	
	Effecting human memory	
	Mechanisms of aluminum toxicity include inhibition of enzyme activity and protein synthesis, alteration in nucleic acid function, and changes in cell membrane permeability	
	Decreased heme synthesis, decreased globulin synthesis, and increased hemolysis	
	Bone pain	
	Aluminum deposited in various tissues including: bone, liver, spleen, brain, heart and muscle.	
	renal failure	
	Osteoid mineralization	
	Uremic pruritus	
	Hypoglycemia	
	Hypothermia	
	Hypothyroidism	
	Encephalopathy stuttering	
	Encephalopathy Uremic	
	Ependymoma	
	Glioblastoma Multiform	
	Head Trauma	
	Hemolytic-Uremic Syndrome	

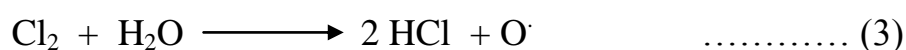
	Hepatorenal Syndrome	
	Hyperosmolar coma	
	Hyperparathyroidism	
	Hyperphosphatemia	
	Brain Abscess	
	Cryptococcosis	
	Cysticercosis	
	Encephalopathy , Dialysis	
	Encephalopathy, Hepatic	
	In children bony deformity is more commonly due to the increased rate of growth and remodeling	
	Children may also express varying degrees of growth retardation	
	The areas of deformity in children usually involve the epiphyseal plates (i.e. femur, wrist)	
	In adults, thoracic cage abnormalities lumbar scoliosis and kyphosis can be present	
	Anisocytosis	
	Poikilocytosis	
	Chromophilic cell	
	Basophilic stippling	
	Aluminum in humans is documented to inhibit learning	

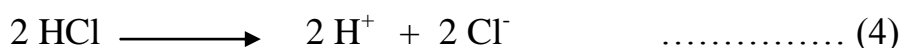
In Iraq, Arab gulf countries, and others nearby countries, there are many people suffering from Hypertension and Diabetes diseases. This may because of aluminum ion which they take it with them drinking water and air. Over the world (over seven billions), WHO indicated that from each three persons there is one of them has Hypertension and from each ten adults there is one of them has Diabetes. It should be noticed that these diseases are not caused by viruses or microbes, so how they are spread over the world?!

In fact, over the world all people are participating in two things; air and water. As it is mentioned before, aluminum ion able to spread by air and water therefore aluminum poison may cause above diseases. In fact, this research believe that there is not another factor causing above diseases except aluminum poison. In fact, there are another sources for aluminum ion over the world! Global water purification stations are another sources for aluminum ion but These stations will discuss later in another subject of this research.

However, Iraqi water purification stations does not provide only aluminum ion, they producing another three ions, One of them is sulfate ion which was illustrated with aluminum ion while the rest two will be illustrated as fallow:

The other two products that producing from Iraqi water purification process are come from adding of chlorine gas (Cl₂) in purification process. However, Iraqi two rivers are basic rivers over pH=7 (pH equal or less than 7.5) which means that aluminum ion will precipitate due this pH does not affected by this pH. Iraqi stations add chlorine gas in two stages of water purification stages. This for making pH of drinking water is equal or less than 7 safety for aluminum ion. In fact, this the only scientific reason for adding chlorine gas in two stages because Iraqi two rivers are so pure do not need chlorine gas in two stages. Then, addition of chlorine gas will produce another two products as following equations:





According to my colleagues⁽¹⁶⁾ Iraqi drinking water contain about (360-396 mg/L) of chloride ion (Cl⁻). Then according to above equations concentration of hydrogen ion is have same as chloride ion = (360-396 mg/L). An average of above values = (378 mg/L).

In fact, Iraqi rivers were above than pH 8 until 1990 but they are decreasing to be 7.5 or less than 7.5, and for drinking water equal or less than pH 7 for the last 16 years. As mentioned before, Iraqi person use about 350 to 400 liters of water, in average it use about 375 liters. Therefore, each Iraqi person produce about (141750 mg/day) of chloride ion and also hydrogen ion. Iraq produces about (4961.25 tons/day) of chloride ion (Cl⁻) and also is for hydrogen ion.

However, employees of Iraqi water stations indicated that they add about (3 mg/L) of chlorine gas for each water station. Depending on above equations (3 and 4) the number of moles of chlorine gas (3 mg/L) is multiply by (2) to be (6 mg/L) for each

concentrations of chloride ion and hydrogen ions. Therefore, each Iraqi water stations are producing chloride ion is about (73.5-84 tons/day).

Overall Iraqi water stations are producing chloride ion and hydrogen ion in wide range = (73.5-84 tons/day) to (4961.25 tons/day). This wide range is just for Missan city may be its increased for al-Basra city in higher ratio than above number. It should be noticed that above concentrations are not a constant, they changing for each day and for each city but the constant value will not be less than (73.5 tons/day).

In addition to above ions, Iraqi people use additional materials that producing above ions (Cl⁻) and (H⁺)! This means that Iraqi stations are not the only source for above ions. All Iraqi people use different reagents (detergents) for washing them bodies, hands, clothes...etc. In fact, main compounds that producing from above reagents when hydrolyzing in water are; Sodium ion (Na⁺) and Potassium ion (K⁺) that producing from different soaps types and hypochloric acid (HOCl) that producing from cloths washing materials. These producing atoms should give:



Overall reaction:



Above products with Na⁺ or K⁺ ions will produce hydrogen ion with salts as; H⁺, NaCl and KCl. Therefore, chlorine gas with washing materials increase salinity of Iraqi two rivers in very wide range because salinity=1.8*[Cl⁻]. It is so difficult to calculate chloride ion that producing from each of the two compounds alone (Cl₂ and HOCl) because there is not constant amounts of washing materials that using for each Iraqi person. However, as illustrated before chlorine gas produce hydrogen ion and above equations indicated that washing materials produce hydrogen ion too therefore in Iraq, there are two sources for hydrogen ion. Hydrogen ion (H⁺) is indicator for pH values and it increase acidity of Iraqi two rivers and relating water areas.

In fact, all the world use different reagents as washing materials (soaps and cloths detergents) such as Iran and Arab Gulf countries...etc. These reagents should produce as same as above equations (H⁺, NaCl and KCl). World producing salts are additional salts adding to rivers, seas and oceans. However, People in southern cities of Iraq are suffering from increasing salinity of two

rivers and Shat Al-Arab River. This because of increasing of chloride ion which it has most salinity taste than other ions. It represent indicator for salinity for oceans, seas, rivers and other water's areas.

However, In addition to chloride ion, sulfate ion is producing from Iraqi stations by huge amount (130.76-149.45 tons) and it will increase salinity such as chloride ion. Increasing salinity of shat Al-Arab will increase salinity of Arab gulf which leading to

increase salinity of connecting oceans and seas because salinity= $1.8 * [Cl^-]$. However, increasing salinity of oceans and seas will destroyed many food chains leading to destroyed many species.

On the other hand, hydrogen ion (H^+) is producing from Iraqi stations too as same as chloride ion as indicating above, this ion decreasing pH and also Aluminum sulfate compound when dissolve in water will increase acidity of the solution. Therefore, there are two factors increase acidity of Iraqi rivers. These factors change pH from basic value more than $pH=7.5-8$ to acidic value equal or less than $pH=7$. Increasing acidity of Iraqi rivers will increase it in Arab gulf, oceans, seas and relating water's areas. Iraq continuously produce (130.76-149.45 tons/day) of sulfate ion and (73.5-84 tons/day) to (4961.25 tons/day) of hydrogen ion for the last sixteen years. These two ions are transfer to Arab gulf leading to another seas and oceans. These two ions are change pH and these changing will continue until destroyed many species because pH value is so important for living systems in oceans and seas. Any changing in pH values will destroyed many environments.

Above ions are not like aluminum ion which is a poison for human, animals and plants⁽¹⁻¹⁴⁾. It produce continually (24.5-28 tons/day) for last sixteen years and it can transfer through air molecules to everywhere in this earth. This means that aluminum poison ion will be in everywhere in this earth and will be increased for next years. This ion is so small 0.51 A can pass through any barrier.

However, a lot of global references⁽¹⁷⁻¹⁹⁾ about climate change phenomenon indicated that there are many species disappeared from oceans and seas or they will disappear after specific number of years furthermore scientists said this because climate change or global warming. In fact, they said that "after 30-35 years most species will gone from seas and oceans"!

The question will be, are seas and oceans have this time "30-35" years! Or is all earth have this time or not? This will illustrate as follow:

Seas and oceans salinity is one of most interested problem in the last years. There are a lot of images maps about salinity of the world which come from scientific studies. However, unfortunately most of them are focusing on north America and relating areas, there are few images showed middle east countries and relating areas. However, following image will illustrate salinity of the world, seas and oceans of middle east countries and relating areas⁽²⁰⁾:

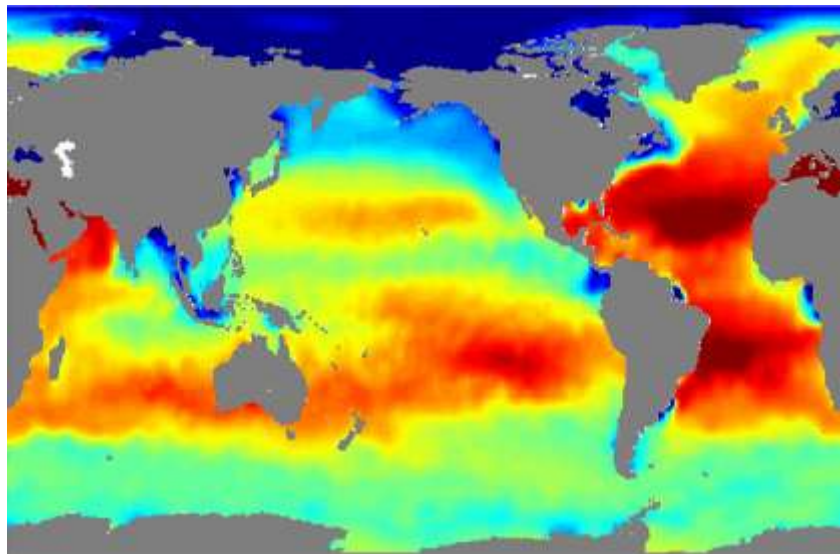


Figure (1): salinity of the oceans (most salinity have dark red color).

Above image map indicated salinity of the three seas; Arab sea, red sea and Mediterranean sea. It should be noticed that Iraq is not the only country which use chlorine gas in water purification process, there are many countries use it such as Iran, Arab Gulf countries. This indicates that there is additional salts will come from these countries as same as Iraq did. However, according to above map, salinity of Iraq and other countries moving with water molecules from Iraqi rivers to Arab Gulf. This gulf transfer salinity to Uman gulf which transfer it to Arab sea. Arab sea should transfer salinity of Iraq and other countries to Indian ocean. these two water areas are connected each other in wide range more than thousand kilometers. However, it is so obvious from above map that salinity does not move toward Indian ocean, it move toward Adan gulf to red sea. This because that there is a barrier between Arab sea and Indian ocean such as the barrier between Mediterranean and Atlantic ocean. References indicated that there is barriers between seas and oceans⁽²¹⁻²³⁾. The two barriers (Arab sea-Indian ocean barrier and Mediterranean sea-Atlantic ocean barrier) are obvious in above salinity map and also in the references⁽²¹⁻²³⁾. They restrict the water and the products of Iraqi water stations and other products in limiting water's area which is; Arab gulf – Amman gulf – Arab sea – Adan gulf – red sea – sways channel – Mediterranean sea. For the last sixteen years Iraq provide above limiting area by four products in addition to other product that they mentioned in above pages.

According to above image map, Mediterranean sea has higher salinity than other seas (except died sea). Scientists explain this phenomena by explaining that Mediterranean sea has higher evaporating ratio than other seas. This research have two questions; Is sun on Mediterranean sea differ than our sun? Or there is a volcano or volcanoes under Mediterranean sea?!

These factors should make water of Mediterranean be more evaporate than other seas otherwise why it more evaporate sea than other seas?

As a facts, more salinity water is more density than less salinity water and aluminum ion is more density than water density. Therefore, because of higher salinity value of above area (Arab gulf – Amman gulf – Arab sea – Adan gulf – red sea – sways channel – Mediterranean sea), aluminum ion should be at the surface of this water's area easy to evaporate in high concentration with water molecules to form clouds. In addition to these facts, aluminum ion direction is depending on the direction of the main winds of relating countries near above area.

However, aluminum ion in Mediterranean sea is bonding with six water molecules forming a complex of $[Al(H_2O)_6]^{+3}$, this situation is look like a six balloons ascend with one so small passenger (Aluminum ion, 0.51 A). In fact, these balloons will take aluminum ion for each direction in the

world but this is depending on the wind direction. As example for Lebanon, Syria and relating countries most wind direction is north-west wind comes from Europe through Mediterranean sea. This means that this wind should carry aluminum ion continually from Mediterranean sea to above countries for the last sixteen years. This research is highly recommend for all environmental offices of above countries and relating countries to measure aluminum concentration in them drinking water and them rivers because Mediterranean sea is the source of water molecules in the clouds which are main sources for above countries rivers. This research believe that this is an explanation of "sky's justice".

However, above limited area (Arab gulf – Amman gulf – Arab sea – Adan gulf – red sea – sways channel – Mediterranean sea) is a huge amount of water molecules should need huge amount of the products of Iraqi water stations and other products which illustrated before. This is a fact that above area is not normal area it is huge amounts of water molecules but it should be noticed that this research talk about long time (sixteen years) with huge amounts "tons of atoms each day" should be more than enough for all above area and for additional areas!

According to above map salts of above area (Arab gulf – Amman gulf – Arab sea – Adan gulf – red sea – Sways channel – Mediterranean sea) are passed through (Mediterranean sea-Atlantic ocean) barrier does not through (Arab sea-Indian ocean) barrier!?

This fact because that flow direction of water molecules is from Iraqi rivers and other rivers (Iran rivers) to Arab gulf then to Amman gulf, to Arab sea, to Adan sea, to red sea, to Sways Channel, finally to Mediterranean sea. Mediterranean sea represent the last storage area for Iraqi salts and other salts or it is represent the last huge container for above salts. Therefore, salts of above area passed through Mediterranean sea-Atlantic ocean barrier do not through Arab sea-Indian ocean barrier. It should be noticed that the important fact is that salts of above area (Arab gulf – Amman gulf – Arab sea – Adan gulf – red sea – Sways channel – Mediterranean sea) do not passed through Mediterranean sea – Atlantic ocean barrier unless them concentrations were too high more than enough, more difficulty for Mediterranean sea to endure them. In another word, high salts concentrations in Mediterranean sea forced salts to pass through above barrier. This indication is so obvious in above image map, dark red of above map is for more salinity area and it is exactly same of above indication.

However, This research does not know when and why salts of Mediterranean sea passed through above barrier and spread in Atlantic ocean but according to reference ⁽¹⁴⁾ Atlantic Ocean is known to contain more aluminum than Pacific Ocean. This means that salts of Mediterranean sea passed before five to three years only! Because if they passed before long time more than five years then pacific ocean should contain practically same concentration of aluminum ion as Atlantic ocean, or if they passed before short time less than three years then salinity does not spread as what above image map indicated of dark red area.

However, salts of Iraq and other countries are moving with oceans currents by Great Ocean Conveyor Belt (Salinity) such as following image map ⁽²⁴⁾:

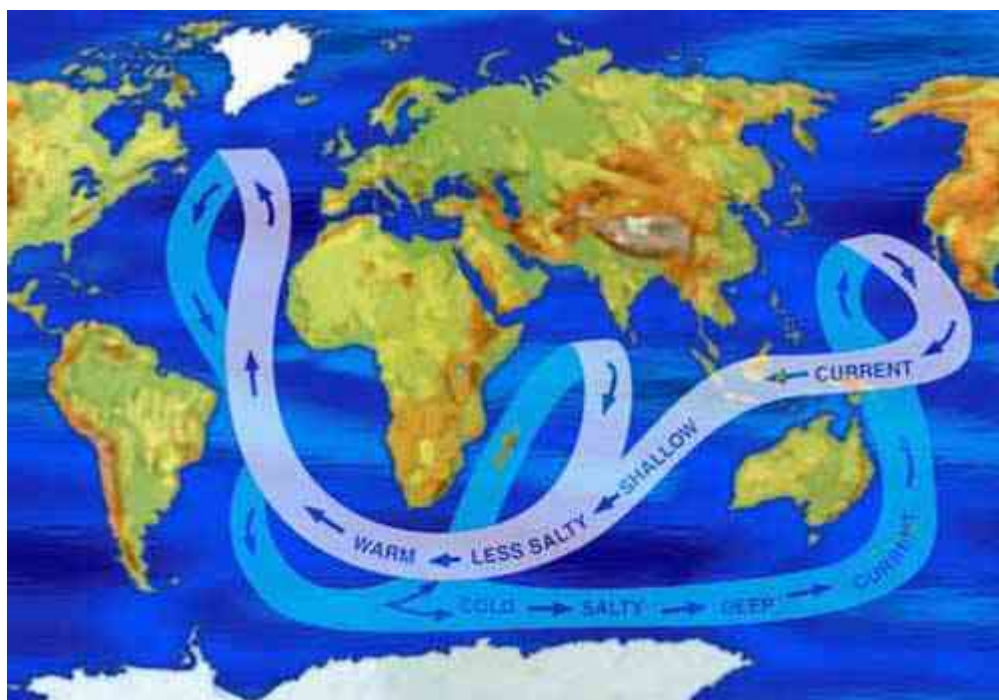
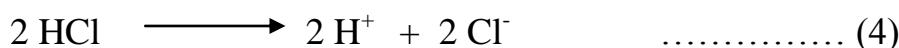
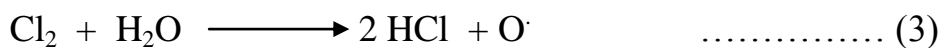


Figure (2): Great Ocean Conveyor Belt.

Iraq salts and other salts transfer and spread to other oceans by above currents and it should be understood that above salts are producing continually for last fifty years and they transfer by above currents to all the world. Oceans Currents transfer salts of; SO_4^{-2} , KCl , NaCl and Cl^- .

It should be noticed that aluminum ion transfer with salinity as indicated before but there is not an image map for aluminum concentration in oceans. However, reference ⁽¹⁴⁾ indicated that Atlantic Ocean is known to contain more aluminum than Pacific Ocean. This was explained before, more salty water should be more density than less salty water. Salty water carry aluminum ion or aluminum ion will be in higher levels of oceans. This because that aluminum ion is more density than water, then it should precipitate in seabed of above area (Arab gulf – Amman gulf – Arab sea – Adan gulf – red sea – Sways channel – Mediterranean sea). This does not happened because above area is more salty seas so aluminum ion will be at higher levels of above area which means salts will ascend it to be at the higher levels of above seas as same as oceans. In fact, because of the salts of above seas and oceans, aluminum spread in everywhere depending on the winds direction. As indicated before, aluminum ion of seas and oceans in less or equal to $\text{pH}=7$. This pH is more safety for aluminum therefore at this pH, aluminum prefers to combine with six water molecules forming of an complex $[\text{Al}(\text{H}_2\text{O})_6]^{+3}$. Water molecules of the complex will ascend aluminum ion to higher levels of atmosphere to form clouds. They look like balloons for aluminum ion carrying it to everywhere in this world. Aluminum ion is danger poison for most creatures ⁽¹⁻¹⁴⁾.

However, there are another facts about salinity of oceans which is come from human activity! WHO drinking water standards state that 2-3 mg/L chlorine should be added to water in order to gain a satisfactory disinfection and concentration ⁽²⁵⁾. In fact, about five billions persons in this world use water treated by chlorine gas in above concentration. However, chlorine gas produce chloride ion as illustrated before in equations (3 and 4) and they will repeat as follow to explain effecting of chlorine gas:



According to WHO five billions persons use 2-3 mg/L, an average of this values is 2.5 mg/L of chlorine gas. According to above equations (2.5 mg/L) should multiply by 2 the number of moles to be 5 mg/L. however, an average amount of using water for each person for five billions persons should be 150 liters therefore each person will produce about 750 mg/L of chloride ion and hydrogen ion. Then for the five billions it will be (3750 tons/day) of above ions. In fact, most rivers of this world are throw what they have from ions to known oceans. This means that above tons of chloride ion and hydrogen ion are continually produce from five billions persons in this world each day and moving toward oceans.

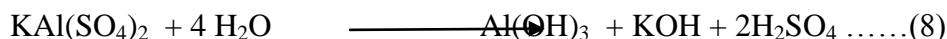
In addition to above indication, five billions persons use different types of detergents such as soaps, shampoos regents, cloths washing reagents and ...etc. This leads that five billions persons produce huge amounts of different salts and hydrogen ion per day, these salts are; KCl, NaCl, Cl⁻, H⁺ and ...etc.

Another salts come from human activity is sulfate ion as illustrated before for Iraq situation. However, for water treatment process for all world stations use two products one of them is chlorine gas as explained before, and the other is alum either as aluminum salt as same as Iraq use or as potassium alum. Both products give following ions as follow equations:

Equation (1) clarify ions of aluminum salt as mentioned before:



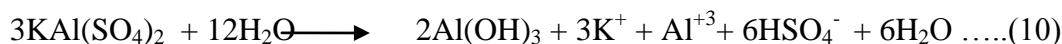
While following equations for Potassium alum as follow:



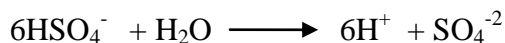
Equation (9) indicated that for three molecules of potassium alum there is an aluminum ion should be produced as free ion as follow, equations (8) and (9) will repeat as:



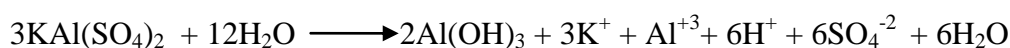
Overall equation will be:



(HSO₄⁻) ion in huge amounts of water molecules as rivers, seas or oceans will give:



Then equation (10) will be:



At least five billions use potassium alum in their water treatment process and they use an average about 150 liters of water each day so they producing different ions as above equations. Each day five billions persons use treated water by chlorine gas and potassium alum and return it again to rivers for carrying them to oceans as the final step. Therefore, humans (five billions) provide oceans by above ions continually each day, these ions are; $2\text{Al}(\text{OH})_3$ which is precipitate as white precipitation, (3K^+) potassium ion will collect with detergent reagents ions to form (KCl) salt. Potassium ion concentration is depending on amounts of potassium alum that use in water purification process. However, at least the average of potassium alum that use in water treatment process is (0.5 mg /L or 0.5 ppm). therefore, potassium ion will be 0.5 mg/L resulting it is 75 mg/L for one person of five billions. At least five billions persons produce (375 tons/day) of potassium ion collected with other amounts of potassium ions per day that illustrated before to be salts with (Cl⁻).

Other product is aluminum ion which is 1/3 of potassium ion which means is about (125 tons/day) produce from five billions persons of the world. This amount of aluminum ion reach the oceans continually for the last 100 years since they use alum before about 100 years ago. However, (6H^+) hydrogen ion is 2:1 to one molecule of potassium alum therefore amount of (H^+) is (750 tons/day) produced continually and they reached seas and oceans. The last product of potassium alum is (6SO_4^-) which its concentration is like hydrogen ion (750 tons/day). This ion is continually produce and reach the seas and oceans.

There is another source for oceans salts which is come from different wastes. In fact, humans and animals are producing different wastes each day. Their bodies eliminate different ions such potassium, sodium, chloride, etc each day. It is so difficult to determine amounts of all ions that produce from humans or animals or other creatures bodies so this research will take one example of above wastes ions which is humans urine and what it contain!

In fact, human urine contain many different ions, it is contain about ⁽²⁶⁻²⁷⁾; (1.17 g/L) of sodium ion, (0.75 g/L) of potassium ion and (1.87 g/L) of chloride ion. Furthermore, each person produce about 1.5 liter of urine each day. This means each human produce about = (1.755 g/L) of Na⁺, (1.125 g/L) of K⁺ and (2.805 g/L) of Cl⁻. Therefore, for all the world there are at least six billion persons use healthy systems for their wastes (bathroom- sewages- rivers- oceans). Six billions persons produce each day about; (10530 tons/day) of Na⁺, (6750 tons/day) of K⁺ and (16830 tons/day) of Cl⁻. These amounts will add to above ions (Iraq and world ions) to be huge amounts of different ions that adding to oceans each day.

It should be noticed that humans urine does not treat by any treatment methods in all the world even in U.K. or U.S.A. or other countries because it is a liquid dissolved in water molecules resulting solution with different ions as illustrated before, it moving easily to reach seas and oceans.

This for three ions only of human urine, there are another different ions additional to above ions such as what humans stools contain of different ions. Moreover, there are additional ions are come from animals urine or stool. However, above values are example of known ions that humans urine contain. In addition, as it is mentioned before, humans stool producing additional ions add to above values to be huge amounts of ions but they are not constant amounts for calculating them. In fact, plants absorb soil ions to form human foods, human eat these foods and his body eliminate soil ions outside it to rivers, seas and oceans. A conclusion of this, human take ions from plants (the earth) and spread them in rivers, seas, oceans. Therefore, humans are machines for converting tons of different ions continually each day from soil to oceans.

There are another sources for producing salts in the world but they are not like above sources therefore this research does not mention them. However, the world produce salts from two ways; firstly from water purification stations. Secondly from human activity (wastes as urine and as stool).

Therefore, There three different ions that produce continually each day in huge amounts; they are different salts ions, H^+ ions and aluminum ion. According to them effect, they are collected in three groups as follow:

- First group is about different salts. Iraq and world salts (water stations and human activity or urine) are; Firstly for chloride ion (Cl^-); The world (stations and urine) = (16830 tons/day) + (3750 tons/day) + for Iraq = (73.5-84 tons/day) to (4961.25 tons/day) = overall (20653.5-20664 tons/day) to (25541.25 tons/day) or its = (20653.5-25541.25 tons/day). These amounts are as overall chloride ion that produce continually each day for the last thirty years from water purification stations and human urine only. However, there are another sources for chloride ion such as chloride ion that produce from the earth, different industries, pharmaceutical companies and ...etc but them amounts are not a constant so they do not mention in this research. The second ion is sulfate ion (SO_4^{-2}); the world = (750 tons/day) + for Iraq = (130.76-149 tons/day) = (880.76-899 tons/day). For potassium ion (K^+) which is for the world stations and urine = (6750 tons/day) + (375 tons/day) = (7125 tons/day). The last ion is Sodium ion which is for human urine only = (10530 tons/day). As indicated before, detergents and other washing materials increase salinity by adding more salts ions but it is so difficult to calculate them amounts per day.
- The second group is hydrogen ion (H^+) that produce continually from human activity (drinking water and urine). Amounts of hydrogen ion is; Fro Iraq = (73.5-84 tons/day) to (4961.25 tons/day) + For the world (using of chlorine gas = 3750 tons/day and using of potassium alum = 750 tons/day)= overall (4573.5-4584 tons/day) to (9461.25 tons/day). This value is a wide range of an average (4573.5-9461.25 tons/day). There is another source of hydrogen ion which is come from human urine. pH of human urine is about 4.6-8 so an average of this range is about pH=6. Amount of hydrogen ion that coming from urine is about 0.09 tons/day. Therefore overall amounts is (4573.59-7859.84 tons/day). There are another sources for hydrogen ion or acidity such as what is coming from detergents reagents (shampoo) but this research does not calculate them because they do not have a constant value each day so it is difficult to calculate them. However, there are another important sources for hydrogen ion comes from carbon dioxide it will discuss later.
- Last group is aluminum ion group that producing continually from Iraq stations and from using of potassium alum of world's stations. Amounts of aluminum ion is; For Iraq = (24.5-28 tons/day) + For the world = (125 tons/day) = overall (149.5-153 tons/day). There are some evidences indicated that some countries such as Iran, Sodia Arabia, Egypt ..etc. are using of aluminum salt ($Al_2(SO_4)_3 \cdot 16 H_2O$) instead of potassium alum ($KAl(SO_4)_2 \cdot 12H_2O$) like Iraqi water stations. This means additional

amounts (hundreds or thousands tons) of aluminum ion will produce continually each day.

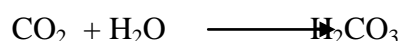
A conclusion of above explanation, above three groups are producing continually each day and reaching rivers, seas and oceans. About (20653.5-25541.25 tons/day) of chloride ion, (880.76-899 tons/day) of sulfate ion, (7125 tons/day) of potassium ion, (10530 tons/day) of sodium ion, (4573.59-7859.84 tons/day) of hydrogen ion and (149.5-153 tons/day) of aluminum ion, are producing continually each day and throwing in rivers, seas and oceans. It is true that water areas is about 71% of the earth but above values are huge amounts (tons) of ions that produce each day. In fact, amounts of above ions can be calculated from 1982 to be 30 years ago only. So ions amounts are:

1. For Chloride ion is about = $365 * (20653.5-25541.25 \text{ tons/day}) = (7538527.5-9322556.2 \text{ tons/30years})$.
2. For sulfate ion is about = $365 * (880.76-899 \text{ tons/day}) = (321477.4-328135 \text{ tons/30years})$.
3. For potassium ion is about = $365 * (7125 \text{ tons/day}) = (2600625 \text{ tons/30years})$.
4. For sodium ion is about = $365 * (10530) = (3843450 \text{ tons/30 years})$.
5. For hydrogen ion is about = $365 * (4573.59-7859.84 \text{ tons/day}) = (1669360.3-2868841.6 \text{ tons/30 years})$.
6. For aluminum ion is about = $365 * (149.5-153) = (54567.5-55845 \text{ tons/30 years})$.

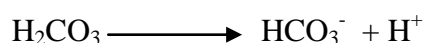
Above values are for 30 years only and for just continues concentrations of ions, they are not for changing ions each day. Also above ions values are throwing in seas and oceans before 30 years until now. However, each ion of above ions groups has different effects on human, animals and plants. These effects will discuss after explain additional concentrations of another sources of above ions.

However, according to facts, climate change phenomenon means two aspects; increasing of carbon dioxide gas (CO₂) and increasing of temperature degree. In fact, each person produce 10-20 moles/day of (CO₂), it means that it is produce about (440-880 g/day). The fact is that human is a machine for producing CO₂ in 24 hours per day, it is a machine work all the time does not stop from producing CO₂. There are seven billions persons on this earth continually produce CO₂ everyday for 24 hours per 24 hours. Then amounts of CO₂ that produce each day = (3080000-6160000 tons/day). These amounts are increasing continually while plants (of water or of lands) are decreasing continually. This indicate that concentration of CO₂ are increasing in the atmosphere. This is a fact and evidence of global warming phenomenon.

According to its chemical properties, Carbon dioxide gas is heavier than oxygen and nitrogen therefore most of it will be under above gases which means most of it (most of 3080000-6160000 tons/day) should dissolve in (71%) water surface (rivers, seas and oceans). As indicated above, humans produce carbon dioxide in huge amounts each day and most of these amounts dissolve in rivers, seas and oceans so by continue this situation humans will gone because carbon dioxide gas has two effects; one of them is increase acidity of above water areas, while the other is increase acidity of rains. Just increasing of pH means the end for most creatures in rivers, seas and oceans. When carbon dioxide dissolve in water it should produce following products:



Carbonic acid is unstable compound but in huge amounts of water such as rivers, seas and oceans, it will dissociate as:



It is difficult to calculate amounts of (H^+) that producing from carbon dioxide each day because this gas absorb by two kingdoms; plants of lands kingdom and plants of water kingdom which means that amounts of carbon dioxide that absorbing by above kingdoms are unknown resulting that amounts of carbon dioxide does not absorbing by above kingdoms are also unknown. However, increasing of carbon dioxide in atmosphere is indicate that the rate of producing of oxygen gas is less than the rate of producing carbon dioxide gas. However, (3080000-6160000 tons/day) of carbon dioxide are producing continually each day and acidity of water areas are increasing continually each day. This cycle will continue until all creatures in water areas will gone because pH values, when it is become less than 5 will destroy most food's chains in water areas. In fact, this cycle started before many years but its effect is so clear now.

On other hand, carbon dioxide gas will increase acidity of the rains leading to increase solubility of most earth's ions, one of these ions is aluminum ion. Therefore, increasing of carbon dioxide will increasing amounts of aluminum ion that producing from lands. In fact, there is another source for aluminum ion which is the heat. Climate change means that temperature degrees is increasing which means water evaporating process is increasing leading to increase of aluminum ion. This because that aluminum evaporate with water molecules so increasing water evaporating process will increase aluminum ion in atmosphere (as clouds or as moisture). Therefore, Aluminum poison will spread in water and lands more faster than low temperature degrees. This means that there are additional amounts of aluminum ion will reach seas and oceans.

Aluminum ion effected most precious process in the earth ⁽⁴⁾! The fact is that aluminum ion effect photosynthesis process⁽⁴⁾. This process produce oxygen gas so it is most precious process in the world. Aluminum ion effect both plants; water plants and land plants ⁽¹⁻¹⁴⁾. As a result, aluminum ion decreasing oxygen gas from atmosphere. Moreover, Toxicity of aluminum increase with increasing of acidity ($pH < 7$) and this effect algae ⁽²⁸⁻³²⁾. This means (149.5-153 tons/day) of aluminum ion (Al^{+3}) in addition to above additional tons with (4573.59-7859.84 tons/day) of hydrogen ion (H^+) in addition to (H^+) ion of carbon dioxide = end of water creatures leading to destroyed human life!

This because that it is estimated that marine plants produce between 70 and 80 percent of oxygen gas in atmosphere. Nearly all marine plants are single celled photosynthetic algae⁽³³⁾. Therefore, decreasing of algae lead to decrease oxygen gas in atmosphere. In fact, Scientists believe that algae absorb more carbon dioxide (CO_2) and release more oxygen (O_2) than plants do⁽³³⁻³⁸⁾.

This indicate that algae is most important creatures rather than humans ⁽³³⁻³⁸⁾. Therefore, as indicated before, aluminum ion with hydrogen ion will destroy the algae which means that they destroy oxygen sources leading to destroyed all animals kingdoms from mankind to smaller creatures that depending on oxygen in them lives. It should be noticed that this effect is for aluminum toxicity with (H^+) only without other effecting ions and factors.

However, there are another factors effect algae and other creatures which are huge amounts of salts that throwing continually each day in seas and oceans. They are about; (20653.5-25541.25 tons/day) of chloride ion, (880.76-899 tons/day) of sulfate ion, (7125 tons/day) of potassium ion, (10530 tons/day) of sodium ion and other amounts that explained before, are throwing each day in seas and oceans. as it is known These salts are effecting algae, other water creatures, most land creatures by osmotic pressure. Salts are perfect drugs against many organisms such as fungi or Bacteria because of osmotic pressure. This is a simple fact when salts concentration outside the cells is more than inside them, cell membrane will destroy leading to destroy all cells. This what happened for last thirty years because humans urine and water purification stations.

It should be noticed that this research does not calculate about 50% of aluminum ion, (H^+) ions and salts that throwing each day in rivers, seas and oceans. As it is mentioned before, sources of these ions are not constant so it is difficult to calculate them each day. However, there are additional

sources does not mentioned before such as petroleum wastes which is contain huge amounts of different ions. Humans produce what this research indicate, thousands of tons each day of effecting ions are throwing each day in seas and oceans. these ions have different degrees of toxicity.

According to above facts and explanation humans produce what will destroy him. In fact, there are another facts about humans acts should be explained as follow:

Every person in this earth feel about climate change phenomenon, it is one of the most serious problem faced this earth. Many scientists introduced them theories about climate change phenomenon. These theories focusing on two aspects, one of them is increasing of carbon dioxide gas in atmosphere and relating subject "Greenhouse effect" and the other is they are focusing on effecting of the sun on the earth. However, above theories are explaining only the warming weather so question is what about the cold weather?!

This year many people have died because of so cold weather, in Ukraina temperature is so cold reach -30°C or may be more. Scientists does not find an explanation for this weather "so cold weather"!

However, this research believe that these theories are depend on just a part of all problem, are not depend on all problem! Or scientists should understand full picture not part of it!

This fact was mentioned before⁽³⁹⁾, up than atmosphere earth has two faces; sun face and shadow face. According to earth faces there are two temperature degrees up than atmosphere (the space) in case of sun face the temperature degree is 121°C when in case of shadow face temperate degree is -156°C ⁽⁴⁰⁻⁴¹⁾. These temperatures are outside atmosphere which is responsible for converting them to non harmful temperatures about $0-20^{\circ}\text{C}$ in average. By another words, between above temperature degrees and the earth, there are three gases only! According to these gases properties, Ozone layer is responsible for converting temperature from 121°C to 20 in average and from -156°C to 0°C ⁽³⁹⁾.

Ozone is responsible for lives of all creatures in this earth therefore it is the most precious gas in the universe. There are another additional facts which are temperature degrees in Missan city reach $55 - 60^{\circ}\text{C}$ and in Ukraina it is reach -30°C . These degrees are closer to above degrees of outside atmosphere and will be more closer in next few years!

All above facts indicate that Ozone layer is decreasing⁽³⁹⁾. Ozone layer formed from oxygen gas. Therefore, Ozone layer decreasing because of oxygen decreasing. According to basic information, percentage of oxygen gas is 21% but it is decreasing to be 9% in big cities⁽³⁹⁾ or less as this research found. This percentage is at 2010, Nowadays Our evidences indicated that the oxygen percentage is less than 9%, the fact is oxygen gas is not enough for humans, animals and others creatures that live on this earth.

In addition, there is another fact, it was mentioned before that 70-80% of oxygen in the atmosphere come from marine plants⁽³³⁾. This research believe that there are two sources for oxygen in the earth!

Humans, animals and other creatures that depend on oxygen in them lives, they have all kinds of plants and others creatures that depend on carbon dioxide in them lives and release oxygen. This is the first source for oxygen, plants and others creatures are the first source of oxygen for humans, animals and others creatures. The second source is water plants and other creatures like algae, this source is just for water creatures. These creatures are more than lands creatures therefore they need more oxygen rather than humans and other creatures. Algae produce oxygen for water plants, they release oxygen as dissolving oxygen humans does not use it.

According to above explanation, there are two sources for oxygen in this earth. At 2011⁽³³⁾ that 70-80% of oxygen in atmosphere is come from marine plants, this means land plants produce about 20-30% of atmospheric oxygen. These are acceptable results of humans activity in this earth!

Humans are increase to be seven billion now while plants decrease to produce about 20-30% of atmospheric oxygen. This research believe that before hundred years, plants produce 100% of atmospheric oxygen while marine plants produce water oxygen for water creatures. Above situation is depend on facts which indicate that earth is under threat.

Moreover, it should be noticed that Iraq water stations, world water stations and humans wastes are effect marine plants. This means humans destroy them oxygen sources (plants) and now they keep continue for destroying water sources (marine plants). At 2011 weather temperature reached 60°C and -30°C and it is continues until it is become 121 °C in the day and -156 in the night. In fact, temperature in the day is closer to above degree (60°C to 121°C).

Nowadays, in Missan city⁽³⁹⁾ at may, temperate degree in the day is reach about 50°C - 52°C and it is expected to be 65°C - 70°C at July. This because many reasons that mentioned before at 2010⁽³⁹⁾. However, people in Missan are feeling by above weather temperature therefore they; firstly, at midday and its after they put something on them heads because of the sun heat, secondly, sun is so strong affected human skin or human head, at midday and its after any person can feel about strongest of the sun, in fact, weather in Missan is look like it is in another planet such as mercury or any other planet. Finally, there are another evidences but most important one is that before twenty days the weather in Missan is cloudy, there were clouds in the sky of Missan at may. This weather is unfamiliar in Missan clouds at may but because of heat of the sun these clouds are formed. This evidence indicate what it is mentioned before that the sun is so strong mean more heat, more water evaporating process leading to form clouds in the sky of Missan in summer. According to many facts, clouds can not protect humans when temperature reach 70!

This research mentioned many facts and there are another facts, one of these fact is that humans and all creatures in this earth can not stand with temperate close to 70°C – 80°C or -40°C – -50°C. People died in temperature -30°C last winter so all creatures can not wait temperature to be 121°C! They will die before this temperature, may it reach 80°C. in addition, temperature degrees in these days are affect plants and marine plants leading to decrease oxygen levels in atmosphere which means decreasing of Ozone layer more faster than it is expected. All plants kinds can not stand with high temperature degree such as 65°C or more because they will lose water as vapor more than what they gat from the land. This means plants will dry and die. This fact was noticed in Missan at this time (may 2012) leafs of trees are dry and fall down more than last year. Increasing of temperature will decrease of oxygen in atmosphere, keeping continue of this fact will lead to terminate all creatures on this earth. As conclusion, this research mention many factors each one act alone but the fact is they act together which means all factors work together for ending all creatures lives on this earth and this because of humans and its activities.

Algae:

As it is mentioned before marine plants are produce about 70-80% of atmospheric oxygen. In fact, algae is the most important creature for producing oxygen gas for humans lives. However, algae and marine plants are exist in few areas in seas and oceans, they are not full all water areas (seas and oceans). Following image showed marine plants and algae areas in 71% of the earth.

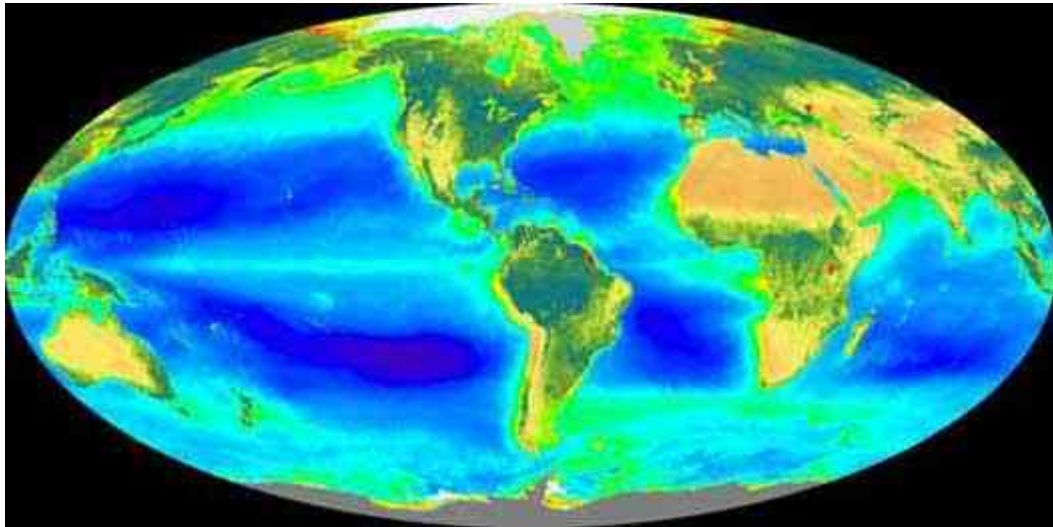


Figure (3): marine plants of the earth.

Above image is a good evidence for explanation of this research; about waterway of (Arab gulf – Amman gulf – Arab sea – Adan gulf – red sea – Sways channel to the last water area, Mediterranean sea), about the two barriers, and finally about aluminum ion, hydrogen ion and salts ions that are produce continually each day to Arab Gulf. As it is indicated before about Mediterranean sea which is the last area of above current so it is more salinity means there is not water plants as above image indicated. Other oceans and seas are showed algae and water plants which are depend on effect of above ions. However, red sea is showed another half empty from water plants while (Arab gulf – Amman gulf – Arab sea – Adan gulf) are filled by water plants even that there are a lot of effecting ions such as aluminum ion which is a poison for most creatures!?! This because of Iraqi people wastes!?

Iraq does not treat its people wastes (stool) so it drop huge amounts of nitrate and phosphate ions in Iraqi rivers each day, then these rivers carry above ions to throw them for algae in waterway (Arab gulf – Amman gulf – Arab sea – Adan gulf – red sea). In fact, is not just Iraqi people drop them wastes in them rivers, there are many countries do this too. To be more specific there are about six billions persons drop nitrate and phosphate in seas and oceans! In fact, human's urine contain nitrate and phosphate in known concentration and each day about six billions persons drop about 90000000000 liters contain nitrate and phosphate ions in seas and oceans. Because of human's urine is a liquid, there is not a country treating its people urine before dropping it in seas and oceans.

It should be noticed that above ions (nitrate and phosphate) of people urine are additional amounts of ions to people wastes (stool) ions. There are two sources for nitrate and phosphate ions urine and stool.

Therefore, this research believe that algae does not exist before humans or before thousand years! they existed in seas and oceans because of human urine and stool in known densities as above image indicate. Human feed algae giving them what they want and they produce oxygen for him. This situation is like a backup plan because humans help for growing and increasing of algae and when earth plants are decreasing, algae gratitude this for humans and give him about 70-80% of atmospheric oxygen. Most creatures are faithful for whose feed them such as dog, cat, ...etc. Most creatures do this except humans.

This research thought that following phenomenon does not happened before! Following image show that algae give a blue glowing waves near the beach. Scientists believe that algae do this for two reasons; Algae do this for frightening its enemies or they do this for attracting other predator to protect the area they presence. Algae species whose do following glowing called Plankton

Viatoblancton. However, this phenomena occur in two areas only; Maldives beach and south Florida beach⁽⁴²⁾.

This research believe that above scientists explanations are not correct because if algae want to frighten its enemies or to attract other predator, then why they do this in two areas only?! It should see following glowing waves in most beaches are not in two beaches only! Or in fact, this glowing should spread in all seas or oceans is not in small areas (beaches)! There are many question about following phenomenon but this research is focusing on right explanation for it.

However, following image is strange phenomenon therefore scientists should study blue waves and how Plankton produce them. There are few elements that give blue waves in different situations so if focusing on following image it will find that following waves is same as Oxyacetylene flame. Algae blue glowing waves are oxygenation-reeducation reaction of oxygen with reducing agents. In fact, algae burn oxygen for two reasons as this research think; they do this for warning humans that earth is in danger or they do this because they anger from humans therefore they burn oxygen do not release it better than give it to humans. In fact, either algae do this for warning humans or because they anger from him the result will be "algae warning humans". They do this because they are faithful for humans who feed them. Algae understand that its survive depending on humans lives so they warning them by following phenomenon but it is unusual behavior from human when its look at algae and say; oh beautiful picture! Algae should be angry from this behavior. This research thought that Algae should say; oh humans, I warning him and he smile when look at me. Truly, algae are gratitude for human and they do what they can therefore humans should understand this message very well that them lives are in danger.



Figure (4): Algae show glowing blue waves.

Above picture is happened ⁽⁴²⁾ and algae showed them loyalty for humans by do this.

These research facts:

Until this moment, This research referred to facts in its explanation and it will refer to additional two axioms are not just facts as follow:

1. Between outside atmosphere and the land there are three gases only; Oxygen, Nitrogen and Ozone. However, at outside the atmosphere temperature degrees are 121°C and -156°C. Therefore, above gases should be responsible for reducing temperature from 121°C to be 15 in average and from -156°C to be 0°C in average. Above gases are well known gases and the only one who can reduce temperature from 121°C to 15°C in average is Ozone. It reduce temperature with nitrogen gas because nitrogen is 78% of atmosphere so it is an assistant agent to reduce temperature from 121°C to be 15°C in average and also it help with moisture to convert temperature from 156°C to 0°C. However, Ozone has major activity for keeping weather temperature between 0-15°C in average. Therefore, changes in weather temperatures has one meaning, Ozone layer are decreasing. This result means that oxygen decreasing too because oxygen is responsible for producing of Ozone. These are axioms and so clear facts. This was mentioned at 2010 is that Ozone layer is in danger⁽³⁹⁾.
2. Second axiom is that humans are machines for taking oxygen and giving carbon dioxide. In addition, there are another creatures do this even smaller one "Bactria". All these creature need oxygen in them lives for 24 hours per 24 hours which mean all the time. Huge amounts of creatures want oxygen while there are some creatures called plants give oxygen and take carbon dioxide in opposite of humans and other creatures work. It should be noticed that there is important fact which is that plants does not give oxygen all the time! Photosynthesis of plants depends on sun light so it happened in 12 hours per 24 hours. Moreover, Plants in the night become machines for taking oxygen and releasing carbon dioxide such as humans and other creatures, they breathing like humans. This indicates that in the night all creatures on the earth, human, animals and plants and every creature are taking oxygen and release of carbon dioxide. As evidence of nowadays, there is increasing in carbon dioxide percentage in atmosphere which indicate that there is decreasing in oxygen gas percentage. All creatures in the earth are live in amazing equilibrium, in 12 hours (in the night) they take oxygen for them lives while in the day one of them (plants) change it is activity to start photosynthesis process, they do this with starting of sunrise. Humans destroyed above equilibrium by killing the plants and built cities instead of them. In addition, each day there are additional hundred or thousand machines (babies) are coming to this life, machine does not stop, them lungs are working all the time taking oxygen and releasing of carbon dioxide while plants are decreasing. On another hands, plants are decreasing because of humans activity and other factors. Therefore, the weather nowadays is inevitable results of humans existence on this earth. These facts are mentioned before⁽³⁹⁾.

Above axioms are fundamentals of our sciences even that scientists over world are not do anything for stopping earth destiny. This earth is going to its end and no one tried to do something to stop this fact. This is unbelievable behavior such as what showed before of humans behavior with algae! This research believe that there are two reasons for above behavior, either scientists accept them destiny (it is the end) or they give up from finding solutions for weather problems. In fact, this research believe that second reason is the right one, scientist give up from finding solutions for weather problems. This because that they have wrong basics. However, references⁽³⁹⁾ indicated that at 2010 there are solutions for weather problems as same as this research solutions but these

solutions did not use for saving this earth. This research believe that all advantages of this life is not equal to one spirit gone because of the weather problems.

Facts of earth at this time:

Recent study at 2010 indicated that south of Iraq is a typical area for knowing what will happened for the earth because of weather's problems⁽³⁹⁾. In fact, Missan city is best area for detecting the effect of the weather on this earth⁽³⁹⁾. In the last winter of 2011-2012, Missan's weather temperature reached -4°C for the first time since very long time and also it reached 52°C at these days for the first time too for long time ago.

Furthermore, As it is mentioned before, since 30 days now, there are clouds in the sky of Missan. This phenomenon does not happened before, temperature reach more than 50°C and there are clouds in the sky!?

In addition, Although there are clouds in the sky of Missan city for last thirty days as mention before, many people in Missan noticed that leaf of trees were dry and number of falling leaf are more than before. This because of hot weather which effected the leaf and forced them to fall down. This happened at $51-52^{\circ}\text{C}$ temperature degree, may in July temperature reach 70°C and all leaf of trees are fall down. Either temperature is more than 50°C or it is more than 70°C , it is effect leaf of trees result decreasing in oxygen level in atmosphere which have one result "decreasing of ozone layer". Therefore, temperature degree effect ozone layer and more temperature such as $50-60^{\circ}\text{C}$ should accelerate losing process of ozone layer so increasing of temperature degrees accelerate terminate of humans on this earth. This is another factor effecting humans lives.

This situation happened for many cities around south of Iraq such as Al-Basra city and other cities in Arab gulf. Temperature over 50°C with clouds in the sky which means one aspect; above cities are in danger!

Experimental results of this research indicate that oxygen percent of atmosphere in the night is equal to oxygen percent in cloudy days. The fact is that Photosynthesis process depend on sunlight so absence of this light either in the night or in cloudy days will stop above process. Therefore, situation of above cities indicate that in higher temperature over 60°C water molecules of rivers, seas and oceans will evaporate to form clouds which prevent photosynthesis mean decreasing of oxygen in atmosphere leading to decrease of ozone layer. In addition, machines (humans and other creatures) are not stop from taking oxygen in cloudy days or in the night so in cloudy days of over 60°C temperature will accelerate losing of ozone layer mean accelerate the end of this earth.

As a evidence of above fact, even that British country is green country which means it have many green lands, amazon river forests are producing more oxygen than British country. This because that clouds!

The fact is that British country suffering from cloudy days⁽³⁹⁾ therefore its production of oxygen gas is less than amazon green lands. This fact is evidence of above fact that clouds prevent Photosynthesis process.

Above facts indicate that humans and other creatures are gone in about $70^{\circ}\text{C}-80^{\circ}\text{C}$ relatively low temperature comparing with 121°C which means it does not need to reach 121°C , humans and other creatures will disappear in about $70-80^{\circ}\text{C}$. Therefore, continuous of above situation the Ozone layer will gone and all creatures will gone too. This will happen in the next few years or this year unless all human cooperating each other for helping this earth.

According to chemical properties of atmospheric gases (N_2 , O_2 and O_3), Ozone heavier than other gases so it restricting them in limiting space (The atmosphere). Moreover, Nitrogen is non-polar gas while oxygen is semipolar gas depending on them solubility in water molecules. Therefore, they do not mix each other and because of molecular weights Nitrogen under ozone up than oxygen in atmosphere⁽³⁹⁾.

In addition, Ozone concentrated in Canada⁽³⁸⁾ in the north of the earth, this why it does not pass through the hole in the south of the earth. If Ozone gone in the north of the earth, other gases (nitrogen and oxygen) will gone too. This means all creatures will gone if any hole happen in Ozone layer in the north of earth. This may because that gases of atmosphere (N₂ and O₂) are leaking through above hole leading to destroy all creatures on this earth. This another way for oxygen gases to disappear from atmosphere by leaking to the space and leave all creatures without it leading to finish all creatures that depend on oxygen in them lives.

There is a predicting man in Iraq predicted that temperature will reach 75°C in this summer. This true because temperature now at may is 52°C as it is mentioned before, what will be this temperature in July or August!?

People in Missan know that at July or August temperature is increasing to reach high values but they do not know that may have this temperature. Therefore, temperature may reach 75°C as predicting man has predict. However, In Missan and all other Iraqi cities there is a rumor that children of Iraq should put (Hanna) on them heads. This may because that they tried to save them children from sun heat. in fact, it is so hot and harmful in the noon if there are not clouds in the sky.

Dinosaurs disappearing theory:

There are many theories about how dinosaurs disappeared from this earth before thousands years. According to this research results dinosaurs may disappear due to same factors of this research!

There are some basic differences between humans and dinosaurs which are:

- As same as humans, dinosaurs may reach high population ratio caused them disappearing.
- In general dinosaurs are bigger than humans so they should consume more oxygen rather than humans.
- Some dinosaurs were eat plants (trees or other plants) so they may consume green lands leading to decrease photosynthesis process resulting decrease of oxygen in atmosphere comparing with population of dinosaurs. This means dinosaurs are increasing while plants are decreasing as same as earth situation
- Dinosaurs does not have special techniques for stopping fires so may be one fire will destroy many huge amounts of green lands until its stop may it is stop if there are not plants to take it. This means two or three fires may destroy all green lands of Africa in summer season.
- Relating to above point, the fact is fires need oxygen so more fires need more oxygen. This should lead to decrease atmospheric oxygen.
- There are many causes for starting fires at dinosaurs age, one of them are meteors that fall down on the earth.
- At dinosaurs age, big fires produce huge amounts of smokes which contain carbon dioxide and water's vapor. In fact, huge smokes should produce huge amounts of clouds covering the sky, prevent photosynthesis process as indicated before and decreasing of oxygen and ozone as resulting effect.

- As indicated before, humans are dropping algae's food (Nitrate and phosphate) in seas and oceans therefore they are exist in above water areas. However, in dinosaurs age dinosaurs did not have healthy systems (bathrooms) for them wastes so may there are not algae in seas and oceans as they are now. This means in dinosaurs age there is one source for oxygen which is plants and other creatures. Decreasing of plants lead to decrease of oxygen and ozone in atmosphere.
- May be at dinosaurs age, plants density are lower than their density before two hundred years now.

There are another possibilities may effect dinosaurs age. However, increasing of dinosaurs population, huge fires, number of meteors and others factors may caused together to disappear of dinosaurs kinds before thousands years. According to scientific reports, scientists found dinosaurs as they are without big changes in them bodies so this indicate that at dinosaurs age oxygen are decreasing to dangers levels less than 5% leading to temperatures are increasing above than normal values such as 70-80 °C resulting death for all creatures that live at that age before thousands years.

The end:

NASA indicated that there are 4700 asteroids should be "potentially dangerous" to earth. In fact, this research believe that three of them (3 of 4700) are enough for ending all creatures that live on this earth. In fact, when three asteroids fall on three locations in same time; amazon forests, British forests and other forests it will be enough for destroy these forests and ending all creatures that are live on this earth. Ozone layer density may not enough for stop above asteroids. It is exactly what happened to dinosaurs before thousands years. Humans may face same dinosaurs destiny by few years now or this year. In another words, factors that this research was explained in above pages and above 4700 asteroids are waiting for one moment that they shall attach together for ending life of this earth. This will happen unless all humans cooperate each other for saving them lives.

The Solution:

According to our believing and because of our conscience and also for the history, there is one solution for saving our earth! In fact, following solution is supporting solution for the solution of a study that was mentioned at 2010⁽³⁹⁾. 2010 solution indicated that each person on this earth should farm at least two plants, them sizes are depend on the person size and also governments should farm thousands of plants as more as they can⁽³⁹⁾. This solution is not appropriate now because plants need time for grow up and as it is indicated before earth may not have this time which plants need for growing up. Therefore, this research was searched for supporting solution which is as follow:

According to the differences between algae and plants an experimental test was done! Algae are grow up more faster than plants so this research test was put 3 liters of sewage's water on appropriate land. Sewage's water stay at its blackish color solution for 24-36 hours after that which means after 36-48 hours it is color was converted to be green color solution. Algae was grew because Sewage's water contain high concentration of nitrate and phosphate which are best foods for algae. In fact, Sewage's water is the richest food solution for algae so they grew in it.

This earth needs huge amounts of oxygen gas as faster as humans can to fix weather problems so each county of earth's countries should take huge amounts of Sewage's water everyday or every two days and put them in very far areas from cities and humans such as deserts or others areas. Algae will grow in these areas and governments should control algae growing and control these areas from other species such as infection "Microbes". These areas are the cheapest algae farms, humans wastes are useful for saving this earth too. There are some techniques should be

noticed such as malodor of sewage's water so workers should put something on them nose, and they should care about others techniques.

If all countries do this during three to five days huge amounts of oxygen will release to atmosphere and weather's problems will be solved. It should be noticed that above algae farms are for three years only, this time is enough for plants to grow up which means Governments are responsible for algae farms and about seven billions person are responsible for farming at least two plants them size is depend on their size.

This indicate that governments has two jobs for saving this earth; one of them is algae farms and the other is farming thousands plants as more as they can. By this solution earth will be saved.

However, this research believe that there is not another solution for saving earth therefore it is hope that responsible persons are understand that earth is under threat and they have to save it. Depending on facts, this research produce the solution which no one can do it alone or a country do it alone, all earth's countries should participate each other for saving our planet. This is united nations job and this research hope that this organization work to save this earth.

4. Conclusion:

As a conclusion, earth is under threat.

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Retirees' Readiness and Socio-Economic Factors as Determinants of Adjustment Strategies among Civil Servants Retirees in Lagos, Nigeria.

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Abstract

Retirement is supposed to be a time of rest after many years of service. The age at which a person retires differs from country to country and male to female as the case may be in some developed countries but it is generally between 55 and 70 years. Retirement is a stage in one's life, it can be enjoyed or endured depending on the level of preparation for it. It is against this background that the study examined preparation and readiness as determinants of retirees adjustment strategies. It also aims at finding, suggesting and recommending strategies that will improve what is presently obtained. Retired civil servants in Lagos state formed the samples of the study. Questionnaire was used to elicit information from about 300 samples of 6 strata through multi stage and simple random sampling procedure. Collected data were coded and analyzed using descriptive statistics involving the use of frequency, percentages and mean while the hypotheses were tested using inferential statistics- Pearson Moment Correlation.

Key words: retirees, readiness, determinants, adjustment, strategies, socio-economic.

Introduction

Background of the Study

There is no better time to relax and enjoy oneself after many years of activity, either privately or publicly than the period of retirement (Apena, 2012). Retirement is an important stage in the occupational life cycle of every worker. It is a point where a person ceases to be in active service of an organisation or in paid employment. According to (Amaike, 2009), it is a period often characterised by simultaneous reduction in income and opportunity to engage in income generating activities especially for active retirees. Atchley (1996) defines retirement as the final phase of the occupational life cycle. He referred to it as a period, following a career of employment, in which occupational responsibilities and opportunities are at a minimum and in which economic wherewithal comes at least in part by virtue of past occupational efforts. Similarly, Akinade (2006) noted that retirement is a major dramatic life change that hauls individual out of their life career. In the opinion of Olusakin (1999), retirement involves a lot of change in values; monetary involvements and social aspects of life. She further noted that for some retirees, it leads to termination of pattern of life and a transition to a new one. The concept of retirement is actually a recent phenomenon. In the early 19th century, people worked until they were no longer able to, but by the mid-century, there were too many older workers and a high unemployment among younger people. This led to the introduction of retirement. The idea of retirement came into being during the 20th centuries with Germany as the first country to introduce retirement in the 1880s (Adeyemo, 2008). A person may voluntarily retire at whatever age he pleases but pension law states a certain age that is thought to be a standard retirement age by each country. Studies have shown that the quantum and quality of retiree's life after retirement and adjustments are often determined by key factors such as retiree's readiness and other socio-economic variables that is, educational attainment, income, occupational status and so on (Akinade, 2006).

In recent times, countries all over the world are trying to find a way to improve the retirement conditions by making it more attractive and rewarding so that employees will be better at retirement. Fundamental to any policy or package by any organization or state is the individual retirement readiness. Retiree's readiness according to Obasoro (2007) is the extent to which retiree's prepares himself ahead of retirement. Jegede, (2003) defined retirement readiness as a state in which an individual is well prepared for retirement, should it happen as planned or unexpectedly and can continue generating adequate income to cover living expenses throughout his or her lifetime through retirement savings and investment, employer pension benefits, government benefits and, or continuing to work in some manner while allowing for leisure time to enjoy life. Retirees' readiness is very vital for adjustment and quality of life after retirement. Today, process of retirement seems to be very dreadful and people do not want to look forward to it, part of the reasons for this is inadequate preparation (unreadiness) and other socio-economic factors-most importantly reduction in income. Retirement life demands great preparation for adjustments. It has been observed that the retiree in order to experience a pleasant post-retirement life style would have to device effective means of managing some challenges inherent in retirement. It has been posited by Adeyemo (2008); that the typical retiree in Nigeria setting is confronted with the challenge of managing the following: (i) insufficient financial resources; (ii) problem of securing residential accommodation; (iii) the challenge of a new and low social status; (iv) difficult health and (v) challenges of declining health thus the need to device effective adjustment strategies.

Statement of the Problem

It is unfortunate that after spending the whole of their productive years in service, most retirees suffer all manner of challenges resulting from poor readiness for retirement. A worker is said to retire when he/she discontinues, withdraws or ceases doing a particular work for which he/she has been known for a long period of time. It is a phase of an individual's life which must be planned for

and anticipated with a great sense of fulfilment. However, anticipating and planning (readiness) for retirement is not easy, especially among the civil servants where majority find it difficult to make ends meet even while still in services. Many studies has been carried out to look at some of the problem with little or no serious study in this part of the world on the retiree's readiness and socio-economic variables such as education, income as well as occupational status to the adjustment strategies of average retirees in Nigeria. Those carried out centred on challenges of retirees after retirement. Thus, it became imperative to examine the influence of retiree readiness as well as some other socio-economic variables on adjustment strategies of civil retired servants in Lagos.

Purpose of the Study

Retirement, in the past, was an achievement worth celebrating which every prospective retiree looked up to with nostalgia. However, as earlier stated above, many things have changed for the worse and retirement is being considered more as a nightmare due to some of the challenges that comes with, thus the purpose of this study is to examine the influence of retiree's readiness and some socio-economic factors on adjustment strategies of retired civil servants in Lagos. Specifically the study examined

- the influence of Retires readiness on adjustment strategies of retired civil servants in Lagos State
- the influence of educational attainment of retirees on adjustment strategies of civil servants in Lagos State
- the influence of income level of the retiree on adjustment strategies of retired civil servants in Lagos state
- the influence of occupational status on the adjustment strategies of retired civil servants in Lagos state.

Research questions

The following research questions will guide the study;

1. To what extent does retirees' readiness before retirement influence the adjustment strategies of retired civil servants in Lagos State?
2. Does the educational level of retiree influence the adjustment strategies of retired civil servants in Lagos State
3. Does the type of occupation influence adjustment strategies of retired civil servants in Lagos State?
4. To what extent does income level of retiree influence adjustment strategies of retired civil servants in Lagos State?

Research hypotheses

The following null hypotheses were formulated to guide the study:

1. There will be no significant effect of retirees' readiness on adjustment strategies of retired civil servants in Lagos State.
2. There will be no significant effect of level of education on adjustment strategies of retired civil servants in Lagos State.
3. There will be no significant effect of occupational status on adjustment strategies of retired civil servants in Lagos State.

4. There will be no significant effect income level on adjustment strategies of retired civil servants in Lagos State.

Methodology

Research design

The study adopted a descriptive survey research design. Nworgu (2006) defines a survey research as one in which a group of people or items are being studied by collecting and analyzing data from only a few people or items considered to be representative of the entire group. This method was deemed the most appropriate design for this study because it involves selecting chosen samples from a large population of retired civil servants in Lagos State to discover the relative incidence distribution and interrelations of some important variables.

Population

The population comprised all the Lagos State Civil Servants. The choice of civil servants was based on the fact that there are over 12000 retired civil servants in Lagos State with each and every one of them facing similar challenges of adjustment after retirement.

Sample size and Sampling Technique

For the purpose of this study, 300 respondents formed the sample size. In selecting the respondents, a multi-stage simple random sampling procedure was employed in the study. A sampling frame of all the Lagos retirees was drawn and stratified into 6. Using simple random sampling, 2 parastatals, 2 ministries and 2 local government areas were selected randomly. 50 retirees were selected using the simple random sample technique from each of them. In all, a total of 300 respondents formed the sample size.

Research instrument

Questionnaire designed by the researchers was the major instrument used for data collection. The questionnaire has two sections: A and B. Section A contains the demographic information of the respondents such as age, years of experience, gender and so on while section B is a close ended questionnaire with few open ended questions designed in line with the research questions in mind. The responses were analyzed using likert scale of preferences in descending order, rated strongly agree attracting a score of four; agree; a score of three, disagree; a score of two, and strongly disagree a score of one.

Validity and Reliability of the Instrument

The content and face validity of the instrument was carried out by colleagues in the department of Adult Education and experts in the field of statistics, measurement and evaluation from the University of Lagos. They made necessary corrections and constructive criticisms which were useful for the preparation of the final draft of the questionnaire. A pilot study was later conducted with 20 retirees from two ministries that are not part of the sampled used but of the same population. In measuring the internal consistency of the instrument, Crombach's alpha coefficient test of reliability was applied at alpha level of 0.05 using Statistical Package for Social Sciences (SPSS) software. The result yielded an alpha co-efficient of 0.808 high enough to justify the adoption of the instrument for data collection.

Procedure

In collecting the data, the researchers visited the Lagos Pension Board officer the purpose of familiarization with the school authority and getting the necessary approval before the real commencement of data collection. Having secured the necessary approval from the school authorities, trained research assistants were used to administer the instrument to the subjects in their

various schools and stations. In order to avoid much attrition of the questionnaire, copies of the distributed questionnaire were collected on the spot after its completion. The administration of the instruments lasted for two weeks.

Data analysis

Collected data were coded and analyzed using descriptive statistics involving the use of frequency, percentages and mean while the hypotheses were tested using inferential statistics- Pearson Moment Correlation.

Result

Hypothesis 1: In the null form, the hypothesis states that there is no significant relationship between retiree readiness to retirement and adjustment strategies. In order to test for the relationship between the two variables Pearson Product Moment correlation statistical tool was used and the result is presented in table 1 below

Table 1: A table of Pearson Moment Correlation Coefficient showing relationship between retiree readiness and adjustment strategies

Variables	N	Mean	SD	df	r-cal	r-crit
Retiree's Readiness	280	21.9	9.7	278	0.67	0.195
Adjustment Strategies	280	25.67	7.5			

$P < 0.05$; $df = 278$; $r\text{-crit} = 0.67$

Based on the table presented above, the mean value of retiree's readiness ($M=21.9$, $SD=9.2$) was less than the mean of retiree's adjustment strategies ($M=25.67$, $SD=7.5$) among retired civil servants. Since, r -calculated ($r\text{-cal} = 0.67$) is significantly greater than the r -critical ($r\text{-crit}=0.195$) given 278 degree of freedom at 0.05 level of significance. Thus, the null hypothesis which states that there was no significant relationship between retirees' readiness and adjustment strategies of retired civil servants in Lagos was rejected while the alternate hypothesis was accepted.

Hypothesis 2: In the null form, the hypothesis states that there is no significant influence of educational status on adjustment strategies of retired civil servants in Lagos. In order to test for the association between the two variables PPMS statistical tool was used and the result is presented in table 2 below

Table 2: A table of Pearson Moment Correlation Coefficient showing relationship between educational status and adjustment strategies

Variables	N	Mean	SD	df	r-cal	r-crit
Educational status	280	22.9	10.3	278	0.57	0.195
Adjustment Strategies						

$P < 0.05$; $df = 278$; $r\text{-crit} = 0.57$

Based on the table presented above, the mean value of educational status ($M=22.9$, $SD=10.3$) was higher than the mean of adjustment strategies ($M=21.18$, $SD=7.1$) among retired civil servants in Lagos. Since, r -calculated ($r\text{-cal} = 0.57$) is significantly greater than the r -critical ($r\text{-crit}=0.195$) given 278 degree of freedom at 0.05 level of significance. Thus, the null hypothesis which states that there was no significant influence of educational status on adjustment strategies of retired civil servants in Lagos was rejected while the alternate hypothesis was accepted.

Hypothesis 3: In the null form, the hypothesis states that there is no significant relationship between occupational status and adjustments strategies. In order to test for the association between the two variables PPMC statistical tool was used and the result is presented in table 3 below.

Table 3: A table of Pearson Moment Correlation Coefficient showing relationship between occupational status and adjustment strategies

Variables	N	Mean	SD	df	r-cal	r-crit
Occupational Status	280	23.3	12.3	278	0.87	0.195
Adjustment Strategies	280	21.18	7.1			

$P < 0.05$; $df = 278$; $r\text{-crit} = 0.87$

Based on the table presented above, the mean value of occupational status ($M=23.3$, $SD=10.3$) was higher than the mean of adjustment strategies ($M=21.18$, $SD=7.1$) among the retired civil servants. Since, r -calculated ($r\text{-cal} = 0.87$) is significantly greater than the r -critical ($r\text{-crit}=0.195$) given 278 degree of freedom at 0.05 level of significance. Thus, the null hypothesis which states that there was no significant positive between occupational status and adjustment strategies was rejected while the alternate hypothesis was accepted. In order word there is a positive influence of occupational status to adjustment strategies of retired civil servants in Lagos

Hypothesis 4: In the null form, the hypothesis states that there is no significant positive relationship between the level of public awareness and wildlife conservation in Oban hills. In order to test for the relationship between the two variables PPMC statistical tool was used and the result is presented in table 4 below

Table 4: A table of Pearson Moment Correlation Coefficient showing relationship between the level of public awareness and wildlife conservation

Variables	N	Mean	SD	df	r-cal	r-crit
Income level	280	23.3	12.12	278	0.62	0.195
Adjustment strategies	280	25.67	7.5			

$P < 0.05$; $df = 298$; $r\text{-crit} = 0.62$

From the table presented above, the mean value of income level ($M=23.3$, $SD=12.12$) was higher than the mean of adjustment strategies ($M=25.67$, $SD=7.5$) among civil servants in Lagos State. Since, r -calculated ($r\text{-cal} = 0.62$) is significantly greater than the r -critical ($r\text{-crit}=0.195$) given 278 degree of freedom at 0.05 level of significance. Thus, the null hypothesis which states that there was no significant positive relationship between level of income level and adjustment strategies was rejected while the alternate hypothesis was accepted. In order word there is a positive influence income status on adjustment strategies of civil servants in Lagos.

Discussion of Findings

The study examined the effect of retiree's readiness and other socio-economic variables as predictors of adjustment strategies of retired civil servants in Lagos. However, the findings revealed a significant influence of retiree's readiness on adjustment strategies of retired civil servants in Lagos. This finding is supported by Dada & Idowu, (2013) who blamed the poor adjustment strategies of retiree on their inability to prepare ahead of retirement period. This finding is in line with Onyiye (2001) who also attributed the challenges faced by retiree in Nigeria to lack of adequate preparation. Idowu (2001) commenting on the same issue posited that the link between adequate

preparation (readiness) in turn predicts changes in psychological well being and adjustment. Adjustment to retirement or psychological well being in post retirement is influenced by the level of readiness of retiree and the circumstances in which the retirement takes place.

Similarly, the study also revealed a significant effect of educational level and adjustment strategies of retired civil servants. This result implies educational attainment before retirement plays a significant role in the adjustment process of retiree in Lagos. This finding could be because of the difference in occupational base status of the retiree, why some retiree with higher educational attainment may still have some useful marketable skills after retirement; the same cannot be said with retirees of low educational status. This finding is consistent with Idowu (2001) who reported that socio-economic status such as educational attainment plays a significant role in the adjustment process of retirees.

Also, the findings revealed a significant influence of occupational status of retirees before retirement and their adjustment strategies. In order word, there is relationship between occupation status of retiree and their adjustment process. Poorer adjustments translated into lower socio-economic background such as occupational status. This finding is supported by Saure and Zoabi (2012) who also posited that there is a significant influence of retiree's occupational status on their adjustment ability after retirement.

Finally, the findings also revealed that there is a significant influence of income status of retirees and their adjustment strategies after retirement. The link between financial status and adjustment Kolawole and Mallum (2004) posited that the typical retiree in Nigeria setting is confronted with the challenges of managing the following: (i) insufficient financial resources; (ii) problem of securing residential accommodation; (iii) the challenge of a new and low social status; (iv) difficult health and (v) challenges of declining health thus the need high income preparation to be able to overcome these challenges.

Recommendation

Based on the finding of the studies, the following recommendations are put forward for effective adjustment strategies;

1. Policymakers should consider the following to help employers and their employees to increase retirement readiness
 - a. Pursue legislative and regulatory initiatives to expand retirement plan coverage for all workers including part-time/causal workers and those private sectors
 - b. Pursue a legislative stand establish retirement institute as well as advancing retirement education at all secondary schools and to allow Nigerian to have adequate education on retirement.
1. Since Educational attainment plays a significant role in adjustment strategies of retired civil servant, it is therefore recommended that for workers to learn more about retirement and savings for retirement, educational offerings "easier to understand" the retirement industry and media have an opportunity to further engage a much wider audience and increase public awareness on the preparing for retirement through traditional media as well as new channels (social media) to bridge the gap.
2. Since Occupational status plays a significant role in adjustment strategies, it is therefore recommended that both pre-retirement and post retirement training should be conducted for all workers before and after retirement. In doing so specifications in type of occupation should be considered to obtain a maximum result.

3. Post retirement counselling programme that will involve leisure time activities participation in community planned around income level of retiree will go a long way in helping the retirees as adjustment strategy.

Conclusion

It can be concluded from the findings of this study that retiree's readiness and some socio-economic variables such as income, education and occupational status influence retiree's adjustment strategies in Lagos State. Thus there is a need for all workers and retirees to avail themselves of the total package of retirement strategies advocated by Marceau (1998). According to the author, retirement planning (readiness) should reflect an individual's dreams, hopes, and aspirations in addition to meeting day-today obligations. It is essential that all prospective retirees to begin with a personal goal setting exercise that reflects how the individual wants to spend his or her life after retirement. The question should not just be "can I afford it? It should also be "how do I want to spend the last time I have left", leading to adequate planning while taking into consideration their present socio-economic status such as income, occupational status and type as well as educational level.

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“Teacher...Could You Please Allow Us to Play Outside...” Landscape Design for Children Outdoor Educational Center

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Abstract

Playing in the outdoor kindergarten environment provides unique opportunities for children in the critical period of early childhood. However; such experiences became less in compare to children's indoor educational activities, as the conventional “equipment based” playground does not fulfill the requirements of being outdoors. At the same time, preschool children's participation in design is poorly noticed as they are considered inadequate to recognize their own needs. The research hypothesizes that an understanding of children's perception of their kindergarten play yard can ensure their emotional satisfaction and increases their physical behavior. This study investigated preschooler's preferred outdoor learning elements and activities in UPM kindergarten (FACE). This study adopted photo elicitation method including children and teachers interview. The findings suggested that children have shown their own desire towards outdoor activities and play elements. Majority of the children prefer free play in natural play environment that incorporated sustainable elements with natural composition. Natural play environment was found to able to help in increasing their desire for outdoor activities and at the same time, addressed the health and learning issues. Having more time spent with free creative and cognitive activities in natural play area will then, promote awareness of natural environment, better health and learning condition of the children.

key words: kindergarten yards design, kindergarten outdoor environments, Photo elicitation, children's interview, visual research method.

Introduction

Physical activities, playing and the relation between them play the key role in lives of preschoolers (Azlina, 2012). These are initial factors which affect children's quality of life. Play allows children to apply their imagination and it is during this process that they learn to lead their behavior based on their thoughts. Physical play has been identified as a direct reason for many cognitive and physical developments (Joe L Frost, Wortham, & Reifel, 2001). Learning in Children occurs through cognitive, affection and evaluation learning from the elements in the outdoor environments, either natural or manmade (Kellert, 2002).

Relatively, the numbers of researches regarding outdoor play have significantly risen in recent years due to both "need and right of the children" (Aziz & Said, 2012). In this regard, factors influencing fewer opportunities for children's physical activities in outdoor environments have been listed as; the high speed of urbanization, increase in street traffic, badly planned urban environments, pollution, pressures of study, busy schedules of parents, indoor play equipment, the homogenous atmosphere of most play yards and a "lack of awareness about the importance of play for children's development and well-being" (Kernan, 2010).

These issues have resulted in problems like obesity, as nowadays children spend their time in indoor programs like being thought rather than being active in their surrounding (Azlina, 2012). It's not surprising to mention that the number of overweight children in Malaysia rose from 4% to 8.7% among preschool-aged, in last two decades (Kasmini et al., 1997; Moy, Gan, & Zaleha, 2004). Moreover, increasing in range of working mothers in Malaysia has caused young children to spend the average of 35-55 hours a week in kindergartens.

Unfortunately the current design of the playgrounds is mainly consist of pieces of equipment in a grass covered area and this "equipment base design" does not fulfill the requirements of being out door (Herrington & Studtmann, 1998). Therefore increasing the landscape qualities of the kindergarten yards and play grounds is an important factor to increase awareness of natural environment and more important, increase the health of children. Additionally a new look to landscape design of kindergartens based on children's perception seems to be necessary as it is their perception that is tightly related to their satisfaction, and obviously their satisfaction can lead to the more active behavior (Fjørtoft & Sageie, 2000).

Understanding Preschooler's Outdoor Learning Environment

The outdoor kindergarten areas are the initial setting for young children to be physically active as our highly dense urban environment affected children's contact with nature and reduced the chances of being active in places rather than kindergarten playgrounds (Herrington & Studtmann, 1998; Ozdemir & Yilmaz, 2008)

These outdoor environments are the primary place for their exercise and physical activity through their "free-play" in outdoor environment (Burdette, Whitaker, & Daniels, 2004). The lack of landscaped outdoor spaces can be compensated through play in outdoor kindergarten spaces associated with natural elements. This provides an opportunity for children to experience natural environments (Hart, 1993).

This study intends to investigate the preschoolers aging from 3 to 6, preferences towards outdoor educational elements and activities in the kindergarten yard.

The outdoor kindergarten space is an ecological system which benefits children through physical factors. Children coherent the landscape through its functional meaning which is a set of affordances and many cognitive skills form in outdoor environments with rich affordance (Kyttä, 2003; Olds, 1989; Wohlwill, 1987). A natural playground is a diverse and variable playground that encourages creativity in children. Learning could broadly happen by the help of natural features (J.L. Frost, 1992). Playing with landscape elements (natural and man-made) stimulate children's senses

and leading to a cognitive development. According to the ideas and concepts developed from these stimulations landscape elements cognitive development is a result of using natural or manmade landscape elements (Olds, 1989). However, the current design of the playgrounds is mainly consist of pieces of equipment in a grass covered area and this “equipment base design” does not fulfill the requirements of being out door (Herrington & Studtmann, 1998).

Increasing the landscape qualities of the kindergarten yards and play grounds seems to be a vital factor to increase awareness of natural environment and more important, increase the health of children. Based on person-environment fit theory, characteristics of the environment are highly interconnected to the characteristics that individual bring to their environment. Providing a kindergarten’s landscape design which fits Children’s psychological needs and their perception of that area can insure their satisfaction and increases their active behavior (Fjørtoft & Sageie, 2000).

In this regard, many of the studies covered surrounding environment of children in urban context in relation with safety, urban design and health issues. Despite extensive research, the factors influencing increase in outdoor physical activities are not completely determined (Dishman & Sallis, 1994; Sallis, 1997; Vita & Owen, 1995). And not many studies have been conducted in regards of outdoor play in kindergartens. According to Aziz and Said (2012) in a review study, 20 from the 30 studies were focused on middle childhood, ranging between 6 and 11 years old. Clearly not much has been done on preschoolers aging between 3 to 6 years who are the focus of this study.

Research shows that children’s perception toward a situation does not fit adult understanding of that situation based on observation (Cook & Hess, 2003; Scott, 2000). Children understand place based on sense of symmetry and centricity, paths based on a sense of continuity and intersections based on surfaces (Memarian, 2005). For example when a child sees a tree in a yard his understanding is based on local position of the tree in their surrounding environment not its proportions (Oloumi, Mahdavejad, & Namvarrad, 2012). Some of the qualities of outdoor environment which are recognizable by children are: uniformity, complexity, mysteriousness, readability, familiarity, being crowded or quiet (Soltani, 2005). As the result adult’s understanding based on observation of a situation is varied from children understanding and its quiet difficult to experience the world from children perspective. However, the need to comprehend young children’s perception has forced researcher to put this understanding into practice. Understanding the ways in which environment is constructed and experienced by children through environmental components which leads to creation of the spaces that increase more active behavior (Wendel-Vos et al., 2004)

Methodology

Procedure and Data Collection Instrument

The goal of this study is to investigate the types of landscape design which can promote the healthy active behavior of children ranging from 3 to 6; namely the preschooler. More specifically children’s preferred landscape elements (natural or manmade structures) and activities in kindergarten yard has been investigated.

This study is conducted at the University Putra Malaysia Kindergarten, also known as FACE (Family and Adolescent and Child Research Centre) located in Serdang, Selangor of Malaysia. A quantitative design is used to elicit children’s perspectives on and responses to landscape design elements and activities related to the playground. The selection of the kindergarten was based on importance of the kindergarten as a research base kindergarten, availability and easy access.

Data is collected in group, structured interviews using photo elicitation interview with around 15 kindergarten’s children in 3 different age groups (Group one: 3, 4 _Group two: 5 _Group Three: 6). Interviews lasts between 30 to 60 minutes. It’s anticipated that the format of the questions should be simple and coherent enough for young children to be able to response. Later on Interviews is administered to two teachers from each grade to clarify the findings from the first step. The questions

are based on two constructs of design, manmade and natural with consideration of landscape elements and activities within those playgrounds.

In research with young children, there are concerns about the interpretation of their responses as the result analysis by adults and also children’s verbal skills are not developed enough to explain their actions. To overcome these problems, in some researches the method of behavioral studies have been applied. Using behavioral mapping tools with the help of GPS system or by observing children in their context of the study for a long period of time.

First procedure: Choosing photographs as instrument

“Children are considered less experienced, less rational, more dependent, and less competent than adults” therefore until recent years; alternative research was the main way to obtain information about children (Epstein, Stevens, McKeever, & Baruchel, 2008). However the new trend of social studies emphasize on activating children as the center of the study (James, Jenks, & Prout, 1998). There have been attempts to interviews with children “to hear” children’s thoughts. In traditional verbal interviews words do not reach the deepest parts of consciousness (Epstein et al., 2008) thus in researches like Taylor, Kuo, and Sullivan (2002) photo elicitation have been used. In this way participants are more engaged and interested in the interviews, as photos trigger deeper emotions in children.

Factors influencing the use of outdoor environment

Different designs with different elements in playgrounds introduce various kinds of play (Barbour, 1999). Some physical factors which influence children’s use of outdoor environment have been extracted from sources. These physical factors assist to find preferred design elements which are one of the main concerns of this research. This information plays an important role in the process of choosing the most efficient photograph for the purpose of photo elicitation.

TABLE 1-1: Physical Factors influencing children’s use of outdoor environments in kindergarten (Auteur)

NO.	Physical Factors influencing children’s use of outdoor environments	Related Journal	Applicable in kindergarten outdoor environment Yes / No
1	Challenging play	Hart &Sheehan, 1986 Veitch et al., 2008 Veitch et al., 2006	Y
2	Diversity of elements	Heusser et al.,1986 Dyment et al.,2009	Y
3	Complexity	Heusser et al.,1986 Castonguay & Jutras, 2010	Y
4	Diversity in affordances	Moore and Wong ,1997 Weaver, 2000	
5	Multisensory Stimulation	Fowler, 1993 Play For All Guidelines, 1992	Y
6	Use of natural environment	Fjørtoft & Sageie, 2000 Ozdemir & Yilmaz (2008) Wilson, Kilmer & Knauerhase, 1996	Y

		Blakely 1994; Prezza, 2007 Veitch et al, 2008	
7	Safety concerns	Castonguay & Jutras, 2010 Valentine & McKendrick, 1997	Y
8	Increasing degree of urbanization	Kytta, 2004	N
9	Grid-style street	Holt et al., 2008	N
10	Living in low-walkable neighborhood	Castonguay & Jutras, 2010	N

3.4 Pretesting the Photos

To investigate whether the selected photos are capable of engaging the participant and to ensure that they are clear and encouraging enough for children, a pilot study is conducted. Diamond and Hestenes (1996) also pre-tested their photographs in a research related to the preschoolers' perception of disability, they showed the photos to college students, and asked them to describe the child with disability in the photograph. It was an attempt to check the credibility of the photos and narrowing down the number of the photographs.

Among different terms of Photo-interviewing in qualitative research such as, Photo-elicitation, Auto driving, Reflexive photographs, Photo novella and Photovoice, photo elicitation is chosen to be the most relevant method for this research (Hurworth, Clark, Martin, & Thomsen, 2005). This understanding is supported by (Burke, 2000). He requested children to take photos from their favorable landscape elements by the help of disposable cameras. In other research, he adopted photo-elicitation method on children with cancer in a specialized summer camp. The overall purpose of the study was to explore the extent in which children describe the landscape of the camp ground.

However there are concerns regarding to apply photo elicitation for instance; there is a chance that the chosen photos are "Visually arresting images". This means that photos are selected based on researcher perspective and not children's (Harper, 2002). The other concerns are related to what is called "breaking the frame" as there might not be a deep evoke of emotion among children. In other word, there is a possibility that they do not even response to the photos (Sluis-Thiescheffer, Bekker, Eggen, Vermeeren, & De Ridder, 2011).

Second procedure: Interview

In research, the photographs themselves are tools that alone may not be sufficient for addressing research questions. When combined with other data sources, image-based research can improve qualitative research. The informal interviews with teachers provide better understanding of children's behavior and preferences or even their responses in photo elicitation sessions. Teachers' perceptions of the playground and their insight into their students' view of the landscape are another point which should be taken into consideration (Oware, Capobianco, & Diefes-Dux, 2007).

During these interviews, it's also predictable to discover suggestion regarding improvement of the physical qualities of outdoor kindergarten environments. The open ended questions and discussions are used to obtain personal stories of how teachers perceive the outdoor school environment. Other questions mainly cover children's activities during recess and their satisfaction with the playground.

Finally, a qualitative research that includes interviewing with teachers alongside the photo elicitation with children has helped the researcher to understand children's' perception towards playground in this kindergarten. These methods are important to reduce the imbalance implication between adults and children which may result in an intimidation and inaccurate results. The photo-elicitation method is suitable for research that requires engagement With children rather than On children and ensures the children-centered study. This method reflects upon special consideration on the groups being studied, ensuring children's participation in research by identifying children's needs

and factors that influence their decisions to play outdoors. At the same time interview with teachers makes the whole study credible as there are concern relating the mental development of children and their process of decision making. Combination of both approaches offset the weakness of each method and is more comprehensive evidence for studding a qualitative research problem than either the tools alone.

Results and Discussions

Children are naturally energetic and passionate with what they are doing. They can spend up to a quarter of their day in kindergarten and engaged with play-related activities in the playgrounds. However, this time often, undervalued and identified as “filling in time “and “informal curriculum,” which is not seen as essential time to promote learning at different stages of child development (Malone & Tranter, 2003). This study suggests that children learned a lot during this time and play is among fundamental components of learning program.

Study on children’s preferences towards outdoor play activities and elements in FACE kindergarten provides interesting findings when the results show that currently, there was no relationship between the indoor and outdoor learning environment. That is to say outside spaces have not been designed to facilitate children’s need for learning and health. Typically, kindergarten outdoor areas have been seen as area for play and sport, and not for education and the serious stuff of learning. However teachers had visions for developing the elements in this outdoor area. Elements and management of them in playgrounds were the other focus of the study and it’s largely determined what children do in the playground. This study provides them with better understanding of dealing with outdoor environmental and experiential learning. There are two main factors that need to be considered namely:

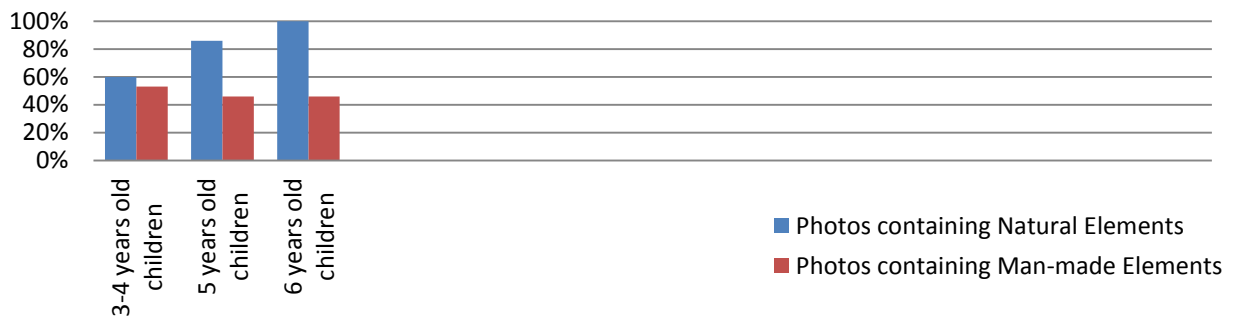
a) Elements

According to the teachers, interesting and diverse elements escalate the children’s interest for play. These have been mainly observed in case of different range of play behaviors with natural elements. All at once, opportunities for social, environmental and ecological experiences decrease in a plain or crowded manmade play areas.

Playgrounds with natural elements provide unique affordance for play which supports the teachers’ intention. By children growth their psychological along with physical characteristics develop. Eventually the resources offered by natural environment change for example, an environment that contains natural features like sand or water, is perceived, used and transformed in different ways at different stages of the child’s development. It means that natural environment contains a developmental dimension which provides the opportunity for children to engage in creative and sensorial play.

For instance, findings of this research indicated that 5 and 6 years old children have almost clear understanding about natural elements. Approximately half of the class in 5 years old children picked the photos containing natural elements when 6 years old, have advanced understanding of natural areas. The results shows, they relate free and creative plays with natural elements and when they were shown pictures with natural elements they described their attraction toward these photos by the terms describing free-play. Although were not able to differentiate between natural or man-made elements. The important factors evoking emotions in 3-4 years old children were basically related to the color of the photos and the figures in them.

Response of children in three age groups to the Element related photographs that evoked their emotions (Auteur)



a) Activities

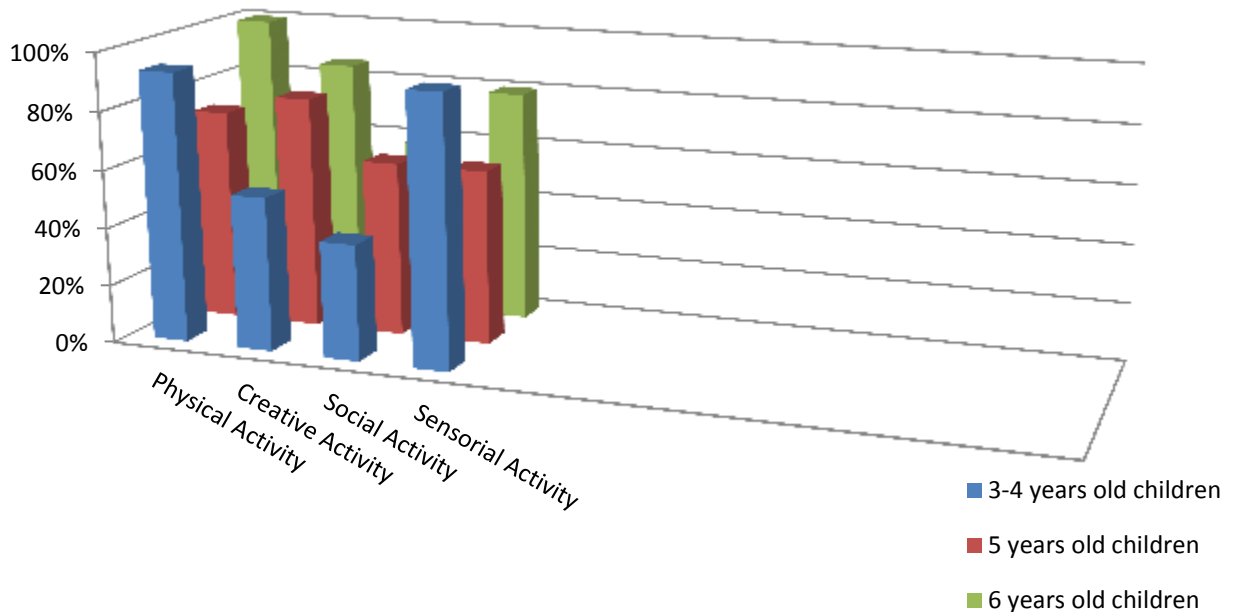
To obtain children's perception toward activities in their outdoor playground area during the process of photo elicitation, photos with four major activities displayed to children. These major activities are; Creative, Physical, Sensorial and Social Activities. Children showed the great interest in physical plays. Creative, sensorial and finally social plays were relatively in second, third and fourth position. On the other hand, free physical activities and structured play had the same value for teachers. They repeatedly talked about sensorial and creative plays though; it seems that children respond to some of their restriction by choosing the physical activities as their favorite play. Teachers also emphasized on the existence of places which encourage this kind of play and mentioned that children's reaction to strict rules are playing un-allowed plays, stealthy.

Diversity of spaces introduces greater opportunities for social and environmental interactions. Teachers' observations have been proofed by the outcomes from photo elicitation when Teachers believed that largely asphalt, gloomy and sterile spaces reduce the chances of being sociable and imaginative even for the most creative children. Respectively, there was not much of interest toward social play during photo elicitation sessions with children. This kind of activity was at the end of children's favorite list, contradicted with a study by LaFreniere and Dumas (1996) who believed that outdoor social play is the main interest (requirements) of 3-6 years old children.

Structured and traditional plays are the other important part in children play that teach them discipline and cultural values. In this regard, teachers suggested to have alternative plays; free play, traditional or structured in Alternative days. In addition, teachers believed that physical activities should be increased to address the problems of obesity, and increase children's level of intelligence.

At the same time, the outcome from photo elicitation have supported the interviews and clearly indicated that behavioral and cognitive measurements increase alongside child's age and their exploitation and understanding of the outdoor environment. The environment should be designed to facilitate, support and encourage this developmental growth for different age groups.

Response of children in three age groups to the Activity related photographs that evoke their emotions (Auteur)



Conclusion

In conclusion, findings of this research suggest that children have their own preferences towards outdoor activities and play elements. Natural play environment that incorporated sustainable elements with natural composition and free play helped to increase their desire for outdoor activities. Having more time spend with cognitive and psychomotor activities in natural play area will then, promoted better health and learning condition of the children. This study also reveals that photo-elicitation method is one of the best tools to be used for types of research that requires data collection and engagement with children in kindergarten.

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Appendices




Table 1_ Response of three different age groups to the activity related photograph presented to children during Photo Elicitation

Photoes' No.	Photoes	The Photos Which Evoked Emotion In 3-4 Years Old	The Photos Which Evoked Emotion In 5 Years Old	The Photos Which Evoked Emotion In 6 Years Old	Kind Of Play
1		●	●	●	Kind Of Play
2		●	●	●	Physical Activity
	<p>Parque De La Ribera-Spain</p>				

3	 <p data-bbox="387 629 678 660">Senses Valley- Spain</p>	 <p data-bbox="1300 376 1396 436">Physical Activity</p>
4	 <p data-bbox="387 831 678 907">Discovery Frontier Playground-USA</p>	 <p data-bbox="1300 694 1396 750">Creative Activity</p>
5	 <p data-bbox="387 1234 678 1310">Snug Kit- Various Locations</p>	 <p data-bbox="1300 996 1396 1052">Social Activity</p>
6	 <p data-bbox="387 1491 678 1568">Central Park Play Ground- USA</p>	 <p data-bbox="1300 1344 1420 1467">Social Activity + Physical Activity</p>
7	 <p data-bbox="387 1574 678 1998"></p>	 <p data-bbox="1300 1635 1420 1758">Sensorial Activity + Physical Activity</p>

8		
9		Sensorial Activity + Physical Activity
9		Sensorial Activity
10		 Sensorial Activity + Creative Activity

Table 2_ Response of three different age groups to the Element related photograph presented to children during Photo Elicitation

PHOTOES' NO.	PHOTOES	THE PHOTOS WHICH EVOKED EMOTION IN 3-4 YEARS OLD	THE PHOTOS WHICH EVOKED EMOTION IN 5 YEARS OLD	THE PHOTOS WHICH EVOKED EMOTION IN 6 YEARS OLD	KIND OF ELEMENTS
11	 <p data-bbox="331 983 595 1019">Stone's throw-USA</p>	●	●	●	NATURAL ELEMENTS
12	 <p data-bbox="331 1509 619 1545">Green Shift- Canada</p>	●	●	●	MAN-MADE ELEMENTS
13	 <p data-bbox="331 1711 584 1780">Arganzuela Park_ Spain</p>	●	●	●	MAN-MADE ELEMENTS

14



**Garden City Park-
Canada**



NATURAL
ELEMENTS

15



MAN-MADE
ELEMENTS

16



**Valbyparken-
Denmark**



NATURAL
ELEMENTS

17



**Discover Frontier
Playground-USA**



NATURAL
ELEMENTS

18







Wooden Plaything-



NATURAL
ELEMENTS

19	 <p>Japan</p>		NATURAL ELEMENTS
20	 <p>Hemmings Park- Australia1</p>		MAN-MADE ELEMENTS
21	 <p>Playground Zoo Wuppertal Tiger Ticket-Germany</p>		MAN-MADE ELEMENTS
22	 <p>Takino Suzuran Hills Park-Japan</p>		BOTH
23	 <p>Forum Playground- Spain</p>		BOTH

24	<p>Denmark</p> 	MAN-MADE ELEMENTS
25	<p>Play Structure- Japan</p> 	MAN-MADE ELEMENTS
26	<p>Spy Tree Of Giraffe Area Zoo Dresden- Germany</p> 	NATURAL ELEMENTS
27	<p>Garden City Park- Canada</p> 	BOTH

28



arganzuela park_
spain1



NATURAL
ELEMENTS

29



Monster's Footprint -
China



BOTH
Man-made in natural
context

30



MAN-MADE
ELEMENTS

31



MAN-MADE
ELEMENTS