



## PERCEIVED IMPACT OF EXTERNAL AND MATERNAL FACTORS ON THE HEALTH OF UNBORN HUMAN BEINGS

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### ABSTRACT

*The study investigated perceived impact of external and maternal factors on the health of unborn human beings. Using snowball method, a total of one hundred and eighty-four working mothers, comprising 140 University of Nigeria lecturers (age = 32 -58 years with a mean age of 45 years); 44 nurses, drawn from University teaching hospital Enugu (age 28-56years with a mean age of 42 years), freely participated in the study. External and maternal factor instrument developed and validated by the researcher was used for the study. Result showed that there was significant impact of external factors on the unborn human beings  $F(1, 181) = 203.7, p < .0001$ . Maternal factors had significant impact on the unborn human beings  $(1, 181) = 53.6 p < .0001$ . The interaction effect of external and maternal factors on child health was significant  $F(1, 181) = 8.65 p < .001$ . It was discovered that the strength or quality of the father's sperm can affect the health of the unborn. The implications of the findings were discussed and suggestions were made for further study.*

**Key word:** *External, maternal, factors, health, human beings.*

### INTRODUCTION

In recent times there has been a glaring concern about children who are born with some abnormalities. People have sought for the source and cause of such physiological abnormalities, some people have suggested that certain factors from the mother or outside may be responsible for the abnormalities. It may be that certain external and maternal factors in the prenatal life of the unborn human beings impacted on the unborn and it may extend to the postnatal life of the individual. In the embryonic period from the third through the eighth week, a recognizable human being emerges. The nervous system develops rapidly with the formation of many other different organ systems. As a very sensitive period, any substance that affected any part of the organ system can have long-lasting impact on the developing human beings. Dacey & Travers (2002) observed that, the rate of brain growth and development are immense and the brain has control over such critical functions like breathing. It was estimated that at least 100 or 200 billion of brain cells are formed during brain maturation and nerve cells proliferate rapidly in the neural tube, and from there commence in long journey to the region of the brain, where they will become functional (Fraser & Cooper 2009).

With regard to developmental risk, (Santrock 2006) observed that there are external and maternal factors that exercise their impact on developing human beings during the prenatal period with increased sensitivity. There are millions of external and internal influences that can have serious and debilitating impacts on the life of the unborn human beings. External factors are any agents that can cause abnormalities on the life of human beings and which demand research attention (Moore & Persaud, 1998). The agents that can cause birth defects include: drugs, chemicals, infections and pollutants. Studies (e.g. Dacey & Travers, 2002, Fraser & Cooper, 2009) have shown that maternal factors such as age, nutrition, health, Rhesus factor (Rh factor) and attitude to alcoholic drinks and drugs can drastically affect the unborn human being.

Baklinski (2008, Weiss, 2001), observed that thousands of babies born deformed or mentally retarded every year are the results of events that occur in the mothers' life and such events are classified as teratogens. Teratogens fall into two categories: infectious diseases and different types of chemicals. Studies on the effects of agents that cause abnormalities on the unborn baby during the prenatal life are many and diverse and can be very disastrous to the developing human being; and the risk incorporate a continuum of biological and



environmental conditions, which range from a very serious genetic defects to mild oxygen deprivation at birth (Santrock, 2006, Fraser & Cooper 2009, Leman, Bremner, Parke & Gauvain 2012).

### **REVIEW OF RELATED LITERATURE ON EXTERNAL AND MATERNAL FACTORS:**

Leman, Bremner, Parke and Gauvain(2012), observed that substances that are in the environment like radiation (x- rays), lead, mercury, herbicides, pesticides, household cleaner and even food addictive and cosmetics can be harmful to both prenatal and postnatal children. Leman et, al (2012) indicated that lead is a devastating toxin to the developing foetus. Evan (2004) observed that exposure to lead during pregnancy has been associated with prematurity, low birth weight, brain damage, other physical defects; long-term problem in cognitive and intellectual functioning. Merewood (2004) observed that father's exposure to environmental toxin can have harmful effect on the unborn or developing foetus. For example men whose occupation expose them to toxic substances such as radiation, amnesties gases, mercury, or lead develop chromosomal abnormalities that may affect their fertility or increase the risk that their partners will miscarry their babies or bear infants with birth defects. It is therefore necessary that men and women planning to have children should monitor their exposure to environmental toxins. Sagiv, Tolbert, Altshul and Korrick (2007), indicated that polychlorinated bispheuls(PCBs) are significantly documented environmental hazard to prenatal development and pregnant women who ate contaminated fish gave birth to abnormal babies

Ashamed, (2003), observed that some dangerous substances and maternal factors can be present in the woman's body before conception takes place and it can affect the unborn baby at birth, during delivery or manifest later in the life of the individual child. Some diseases that are potentially harmful to the developing fetus are acquired either before or during birth and such are grouped together as the 'STORCH' diseases. Blackman (1997) categorized these as Syphilis, Toxoplasmosis, and other infections, Rubella, Cytomegalovirus and Herpes.

#### **Maternal Factor**

Over the years psychologists have devoted keen interests in studying the effects of maternal physical health condition on the unborn human being. For instance, (Dacey & Travers, 2002; Moore & Persaud 1998; Blackman 1997; Santrock, 2006;) discovered that maternal infectious diseases such as rubella (German measles) Syphilis, Genital herpes, and toxoplasmosis can be easily transferred into the unborn baby's blood stream through the connecting device, the placenta. Statistics show that the outbreak of rubella in 1964-1965 which affected many pregnant women recorded 30,000 prenatal and neonatal deaths; and more than 20,000 infants born to the affected women developed malformations, including mental retardation, cataracts, or blindness, deafness and serious congenital heart disorder and many unclassified health problems(Blackman 1997, Fraser & Cooper, 2009). Baklinski, (2008) observed that the infectious risk of maternal disease is high, if the disease appears early in the pregnancy as the third and fourth weeks and the second month; and may result in spontaneous abortion; and rubella causes prenatal or neonatal defects or deaths.

Research shows that one third of babies delivered through birth canal of a woman affected by genital herpes die at birth and one fourth of such babies manifest serious brain damage later in life (Blackman 1997, Fraser & Cooper, 2003; 2009). Blackman (1997, Arthur, 2006) observed that syphilis disease can damage already formed organs of the unborn human beings. Another disease that is harmful to the unborn beings is toxoplasmosis, which is transmitted by many animals especially cats. Olds, London & Ladewig (1996) observed that, this infection may be harmless to adults, but can cause serious problems to unborn human beings, such as spontaneous abortion, premature deliveries and neurological problems like mental retardation, blindness, cerebral palsy, low birth weight, a large liver and spleen as well as anemia.



The HIV/AIDS disease can have dangerous impact on the unborn human being. Statistics (U.S Census Bureau 2000) estimated that since 1980, more than 12 million adults and children died of AIDS and as many as 33 million adults and children are living with HIV/AIDS. U.S Census Bureau (2000) observed that about 1000 are affected every day and about 350,000 children die every year with HIV/AIDS. It was further observed that in the United States, 7,000 to 8,000 women infected with HIV virus give birth to babies. Statistics (U.S Census Bureau 2000) also showed that only one out of four babies born to mothers infected with HIV develops AIDS.

A study by Caldwell and Rogers (1991) revealed three major sources through which mother with AIDS can infect her offspring. These include: First during gestation across the placenta, secondly during delivery, through contact with maternal blood or fluids, and thirdly during postpartum, through breast feeding. Caldwell and Rogers (1991) observed that babies born to AIDS infected mothers can show symptoms of HIV/AIDS or may not, but later in life develop HIV/AIDS. To be on the safe side, so as not to infect the unborn human babies, women of marriageable ages should check their body status before contracting marriage. In addition some studies (e.g. Leman, Bremner, Parke &Gauvain,2012), observed that there are some paternal ( father's) factors that can impact negatively on the health of the unborn human beings. For example, as they age, men tend to conceive more infants with birth defects due to the deteriorating quality of sperm in old age. Moreover the sperm quality is influenced, by many dietary factors including coffee and smoking which has been linked with negative impacts. Zinc in the diet is considered to be an important benefit to sperm quality, if this is lacking in the diet of the man the sperm may not be effective (Leman et al. 2012). But other behavioural pattern or lifestyle of the father or man partner may render the sperm quality and quantity useless, thereby impacting negatively on the health of the unborn human being.

Studies by (Oladele, 1989, Santrock, 2006) have shown that the age of the mother may also affect the unborn baby. There can be high rate infant mortality with mother below twenty years and above 35 years. Mothers approaching the menopause may have endocrine disorder which may slow down the development of the embryo and the fetus, thereby causing developmental irregularities like cretinism, mongolism and heart malformation and may also involve physical and mental defects. The relationship between an expectant mother and the unborn child is tight that what happens to one affects the other. For example, mother's emotional state as well as mother's nutrition can affect the unborn in profound manner.(Dacey & Travers, 2002, Baklinski, 2008, Fraser & Cooper 2009). Evaluating the impact of maternal factor on prenatal and postnatal life of human beings, ( Kumar, 1982,Oladele, 1989, Weiss; 2001, Fraser & Cooper, 2003, 2009) observed that the incompatibility of the mother's and fetus' blood types can be very disastrous during prenatal development. It was observed that in addition to ABO system, many other blood groups are recognized. These include the Rhesus System. Narang and Jain (2001) observed that many people especially the white possess red blood cells containing antigen called Rhesus factor and there can be Rhesus positive or Rhesus negative. Studies (e.g. Narang &Jain 2001, Santrock, 2006, Fraser& Cooper 2009) showed that when a Rhesus-negative mother bears a Rhesus-positive child, particularly in the last month of pregnancy, fragments of the fetus red blood cells containing Rhesus antigen pass the placenta into the mother's bloodstream. The mother's system responds by producing Rhesus antibodies (toxic substances) which pass back across the placenta into the foetal circulatory system destroying the child's red cells both before and immediately after birth and preventing them from distributing oxygen normally; and the tragic consequences of this include; miscarriage, stillbirth, or death after birth. If the child survived, he/she may be mentally deficient as a result of brain damage from inadequate supply of oxygen. In addition the child may develop jaundice, heart defects, hearing problem, speech defects, anemia, in-born dropsy (edema) of fetus or other health problems.



It was also observed that maternal nutrition can enhance or retard the growth of developing human beings. The nutritional status of the fetus is determined by the mother's total caloric intake, as well as the appropriate level of proteins, vitamins and minerals. Children born to malnourished mothers are likely to be malformed. Kumari, (2001) observed that overweight before and during pregnancy can be a risk factor for the fetus. For example (Kumari 2001) observed that obese women had a significant risk of late fetal death.

Emotional state of a pregnant mother affects the fetus in the womb. For example (Anawana, 2001) observed that unpleasant emotion like anger, fear or frightening experience, such as severe thunderstorm and sorrow such as the death of a family member may have negative impact on the unborn child and his/her later behavioural pattern. Also pregnant women under severe emotional stress, can deliver babies prematurely. This is because maternal stress may increase the level of corticotrophin-releasing hormone (CHR) early in pregnancy, which enhances premature delivery. Leman, Bremner and Gauvain (2012) observed that mother's emotional state during pregnancy can influence the birth process too. For instance, an emotionally distraught mother may have irregular contractions and a more difficult labour. Santrock, (2006, Fraser & Cooper, 2009) observed that emotional state of the woman could cause irregularities in the supply of oxygen to the fetus or other problems after birth and that some babies born after extended labour may adjust more slowly to the external environment and they may be more irritable. Fraser and Cooper (2009) observed that severe emotional stress during pregnancy can put the unborn babies at a wide variety of risks and also intense anxiety is associated with a higher rate of miscarriage, prematurity, low birth weight, infant respiratory illness and digestive disturbances.

Carmichael and Shaw (2002) discovered that some physical defects like cleft lip and palate and pyloric stenosis (tightening of the infant's stomach outlet, which must be treated surgically) are related to heightened maternal emotional stress during pregnancy.

In a study by Monk and others (2000), it was discovered that stress hormones (Cortisol) crossed the placenta barrier, causing a dramatic rise in fetal heart rate. Maternal stress can also alter fetal neurological functioning, as well as heightening stress reactivity later in life. Maternal emotional stress during pregnancy predicts anxiety, anger, aggression and over activity among school age children. Although pregnancy is not illness, pregnant mothers should be careful with themselves to safeguard the mental and physical health of their children.

### **External factors**

The impact of any kind of external substance on the life of unborn human beings depends on the types, the dosage and the developmental stage of the fetus. The effect of drug may be positive or negative; Arthur (2006) observed that pregnant women take both prescribed and non prescribed drugs without considering the consequences on the unborn human beings. Addis, Magrini and Mastroiacovo (2001, Zanden, 1993) observed that sometimes, deformed babies are born, showing the damage drugs can have on a developing fetus. Pastorino and Portillo (2006), indicated that women who use any type of drug during pregnancy can potentially affect their unborn babies. For instance women who smoke during pregnancy reduce the flow of oxygen to the fetus, and their babies tend to be irritable, have respiratory problems and have lower birth weight.

Many definitions have been given to drugs. Miller, (1992, Aguwa & Ogbuokua, 1998) see drugs as any medical substance and chemical used in the diagnosis, preventing, treatment or cure of diseases. Broadly speaking, a drug is any chemical substance that when taken and when absorbed into the body stream of a living organism alters normal bodily functioning. Standwood and Levitt (2004) see drug as a chemical substance administered to a person or animal to prevent or cure disease or otherwise enhance physical or mental welfare. Lanchester (1988, Arthur, 2006) stated that drugs are those chemical substances that can cause permanent alterations of the fetus in form or in function during prenatal





development. Fraser and Cooper, (2003,2009) observed that the period of pregnancy is nine months which is divided into three (first, second and third) trimesters. Each trimester is a period of approximately 13 weeks (3 months) and different developmental milestones are specific in each phase and drugs may negatively impact on the unborn baby during these critical periods.

There are many different kinds of drugs, some are legal and some are illegal. Legal drugs are those types that are not prohibited by law/government of any particular country, such drugs include: paracetamol, tobacco (smoking) and alcohol, while illegal drugs are the type prohibited by law/government and such include: cocaine, heroin, marijuana, inhalants (Dacey & Travers, 2002). It is important to note that drugs, whether legal or illegal can be detrimental to unborn human beings, and pregnant mothers should meticulously guide against them. Zanden,(1993, Addis,Magrini&Mastroiacovo,2001,Arthur, 2006, Nwoke,2013) observed that some drugs can have negative impact on the unborn human beings, for example the thalidomide tragedy in the early 1960s, the incidence awakened the medical profession and the public alike to the potential dangers of drugs for pregnant women. It was stated that pregnant women took the popular tranquilizer thalidomide as a sleeping pill and an anti-nausea measure that produce no adverse reactions in the woman, but physicians discovered a sizable increase in children born with either partial or no limbs. In some cases, feet and hands were directly attached to the body. At other times the outcomes were dumbness, deafness, blindness and mental retardation and these conditions are devastating. Zanden (1993) observed that some prescription drugs can also function as teratogens on the unborn, such drugs include; antibiotics, streptomycin and tetracycline; as well as some diet pills, aspirin and caffeine can be very harmful to the unborn babies.

A further review of studies on caffeine consumption during pregnancy concluded that a small increase in the risks for spontaneous abortion and low birth weight occurs for pregnant women consuming more than 300 milligrams of caffeine per day (Canttingius and others, 2000). A study by Eskenazi and others (1999), revealed that pregnant women who drank caffeinated coffee were more likely to have preterm deliveries and unborn babies with a lower birth weight than their counterparts who did not drink caffeinated coffee. Also taking some malaria drugs like quinine can cause congenital deafness, while barbiturates as a depressant may affect the oxygen supply to the fetus and result in brain damage. Zanden (1993, Santrock, 2006), observed that oral contraceptive can be harmful to the unborn human beings and the birth defects involve the heart, limbs, anus, esophagus, vertebral column, or central nervous system. Obot (1993) observed that alcohol is consumed in different forms by pregnant women ranging from traditional beverages (e.g. Burukutu, pito, and palm wine, ogogoro) without knowing the negative impact on their unborn babies.

O'Leary (2004) observed that heavy alcohol consumption by pregnant women can be devastating to unborn. Mothers who drink alcohol regularly and in large quantity are likely to give birth to offspring suffering from fetal alcohol syndrome (FAS). Fetal alcohol syndrome (FAS) is a cluster of abnormalities that appear in the offspring. The abnormalities include: facial deformities and defective limbs, malformation of the heart. Most (FAS) children are below average in intelligence, and some are mentally retarded. In addition to these abnormalities, Young (1977) observed that (FAS) children have small heads, low birth weight and brain abnormalities. Dacey and Travers (2002) observed that in the United States, many women of childbearing age use one or more of the following substances; alcohol, cocaine, marijuana or nicotine. About 15% of these women use these drugs with sufficient frequency as cause damage to a fetus during pregnancy. Further statistic showed that 30 to 40% of pregnant women smoke, 60 to 90% use analgesic during pregnancy, 20 to 30% use sedative and an undetermined number continue to use illicit drugs. All these drugs have drastic negative impacts on the lives of the unborn. At times a number of women continue to use drugs before they realize that they were pregnant and before the realization a lot of harm has taken toll on the unborn babies.

The most consistent finding in literature is that cocaine exposure during prenatal development is associated with reduced birth weight, reduced length and head circumference (Lewis & others 2004). Addis and others, (2001), established that prenatal cocaine exposure was associated with impaired motor development at 2 years of age. Crandal and others (2004) established in their study that children born to women who used cocaine during pregnancy are likely to have neurological and cognitive deficits. Like cocaine, cigarette smoking (Nicotine) by pregnant women can adversely affect both prenatal, birth and postnatal developments. Studies by Mathews, Manacher and Maccorman (2003, Fried &Watkinson, 1990) showed that fetal and neonatal deaths are higher among smoking mothers, and that exposure to cigarette smoking was related to poorer language and cognitive skills at 4 years of age. Ashmead (2003) in a study linked between maternal smoking during pregnancy and increased incidence of attention deficit, hyperactivity disorder in almost 3,000 children of 5 to 16 years of age. National Drug Enforcement Agency (2003, Fried, 2002) review of marijuana concluded that babies born to mothers who used this drug during pregnancy, are smaller in size and develop neurological problems than babies born to mothers who did not use marijuana. Baklinski (2008) observed that exposure of mother to different kinds of drugs during pregnancy are very dangerous to prenatal and postnatal developments, problems such as learning and memory difficulties at the age of 11 years and several behavioural problems such as tremors, irritability, disturbed sleep and impaired motor control.

**Table 1:** This table shows some substances, their effects and the time of risk on the unborn human beings.

Substances	Possible effects	Time of risk
Alcohol	Fetal Alcohol syndrome (FAS), growth retardation, cognitive deficits.	Through-out pregnancy
Aspirin	Bleeding problems.	Last months and at birth
Cigarettes	Prematurity, lung problems	After 20 weeks.
Diethylstilbestrol (DES)	Cancer of female reproductive system	From 3 to 20 weeks.
LSD	Isolated abnormalities	Before conception.
Lead	Anemia, mental retardation, Death.	Through out pregnancy
Marijuana	Unknown long-term effects, early neurological problems.	Throughout pregnancy.
Thalidomide	Physical and mental abnormalities, fetal death.	First month.
Cocaine	Spontaneous abortion, neurological problems.	Throughout pregnancy
AIDS	Low birth weight, growth failure, developmental delay, death from infection.	Throughout pregnancy, during delivery, breast feeding.
Rubella	Mental retardation, physical problem, possible death.	First 3 months, may have effects at later months.
Syphilis	Congenital-syphilis, prematurity and deaths	From 5 months.
Cytomega Lovirus (CMV)	Retardation, deafness, blindness	Uncertain, perhaps 4 to 24 weeks.
Herpes Simplex	Central nervous system (CNS) damage and prematurity.	Potential risks throughout pregnancy and at birth.

Source: Dacey J.S. & Travers J. F. (2002) Human development across the life span. (Teratogenic Agents and Effects)

Kumar, (1982) observed and supported by literature that the listed substances are capable of causing certain and unknown types of damages in the life of the individual both during the prenatal and postnatal periods.

The purpose of this study was to investigate the external and maternal factors that affect the health of unborn human beings. It was hypothesized that external factors will have significant harmful impact on the health of unborn human beings and that maternal factors will have significant harmful impact on the health of unborn human beings.

**METHOD**



### **Participants**

Participants were 184 working mothers, 140 of them were university lecturers, their job status ranged from Assistant lecturers to Professors and their age range 32-58 years with a mean age of 45 years, and 44 nurses, midwives and senior staff-nurses, age range 28-56 years with a mean age of 42 years. Participants were selected from the University of Nigeria, Nsukka and the University teaching hospital in Enugu, using a snowballing technique. Participants freely participated.

### **Instrument**

External and maternal factors scale (EMFS), a 32-item instrument developed and validated by the researcher, was used to assess the impact of external and maternal factors on the health of unborn human beings.

The instrument was given to six experts in the field of Psychology and medical sciences. These were 3 psychologists, and 3 medical personnel to judge for face and content validities. Six (100%) of them endorsed the instrument as having face and content validities. Items presented statements to which participants responded on 5 points Likert format strongly agree=5 points, agree=4 points. Undecided=3 disagree=2, strongly disagree=1. The score range from 32-160 points, with a mean score of 80. A score of 80 points and above indicates the respondents see the harmful impact of external and maternal factors on the health of unborn human beings.

A pilot study was conducted using 50 participants, 40 lecturers from some Universities who gathered for a conference at Enugu and 10 nurses from General Hospital Nsukka. Their responses were subjected to item analysis and an Alpha coefficient of .85 was obtained.

The instrument which originally had 32 items, was reduced to 20 items. The dropped items did not meet the required total item correlation of .30 established by Aiken (1996). Further analyses using split half method yielded coefficients ranging from .31 to .73. The Cronbach Alpha was .81, which indicates that (EMFS) is a reliable instrument for measuring the impact of external and maternal factors on the health of unborn human beings.

### **Procedure**

The researcher with the help of two research assistants distributed 150 copies of questionnaire to women lecturers in the University of Nigeria Nsukka, as they gathered in a hall for women forum exercise. Using snowballing method, 150 questionnaires were distributed to the participants. The questionnaires were collected after ten minutes. Out of the 150 copies, 8 copies were not properly scored and were discarded. For the nurses, the researcher visited the teaching hospital and with the help of two research assistants 53 copies of the questionnaires was distributed to the participants through snowballing method. The questionnaires were collected after ten minutes and out of the 53 copies, 11 were not properly scored. In all 203 copies of questionnaires were distributed, 19 copies were improperly scored while 184 were properly scored. The responses from the properly filled copies were used for data analysis.

**Design/Statistic.** The study was a four-group cross-sectional survey, and a two-way analysis of variance (ANOVA), F-statistic was employed to analyze the data.

**RESULTS****Table.2 Mean (M) and standard deviation (SD) of external and maternal factors on the health of unborn human-beings.**

Variable	Mean	SD	N
External Factor	89 .88	14.61	184
Maternal factor	86.75	14.01	184
Lecturers	84.83	13.03	142
Nurses	81. 91	10. 45	42

The result in table 2 showed slight differences in the mean scores of the participants. In the responses of all the participants, mean score for external factors was slightly higher than maternal factors. External factors (M= 89.88, SD= 14.61), while the mean for maternal factor (M=86.75, SD=14.01).The slight difference made by external factors may be due to environmental pollution and degradation which could affect the unborn through the mother. For example the woman could eat toxins contained in the food items like fish polluted with hydrocarbons such as mercury and lead. Furthermore, the strength or the quality of the father's sperm introduced into the woman could affect the health of the unborn.

**Table. 3: ANOVA summary of external and maternal factor on the health of unborn human -beings.**

Sources	Sum of squares	df	mean squares	F	p-value
Exter. factors	9654.3	1	9654.3	203.7	.0001**
Mater factors	3225. 5	1	3225.5	53.6	.0001**
Exter, x mater	388.54	1	388.54	8.65	.001*
Error	4615.79	181	67.95		
Total	937095.86	184			

\*Significant

Results in table 3 showed that there is evidence of highly significant impact of external factor on the health of the unborn.  $F(1,181)=203.7$   $p<.0001$ , leading to the acceptance of the first hypothesis that there would be significant harmful impact of external factor on the health of unborn human -beings. Also the results in table 2 showed statistical significant harmful impact of maternal factor on the health of unborn human –beings  $F(1, 181)= 53.6$   $p<.0001$ , leading to the acceptance of the second hypothesis that there would be significant harmful impact of maternal factor on the health of unborn human –beings. The results seem to suggest that both external and maternal factors have harmful impacts on the health of unborn human-beings, as testified by the respondents.

The interaction between external and maternal factors, was significant  $F(1,181)=8.65$   $p<.001$ . However, the results in table 1 , showed slight difference in mean scores of external and maternal factors, (external M=89.88,SD=14.61) ( maternal factor= 86.75,SD =





14.01).The probable reason for the difference in Mean scores could be attributed to the fact that the harmful impact of external factors are easily seen than the maternal factors.

## **DISCUSSION**

The findings of this present study confirmed the powerful harmful impact of external agents like maternal exposure to substances to the unborn babies. This finding buttressed Zanden,(1993) who revealed the tragedy of the tranquilizer thalidomide in the early 1960s when some pregnant women took the drug, it had bizarre impact, like babies born with feet and hands directly attached to the body. The findings of this current study also supported Baklinski (2008) who discovered that mothers' exposure to several drugs during pregnancy caused several problems such as learning and memory problems at age of 11 years as well as neurological problems. Ofovwe (2011) categorized the substances that can harm the developing human beings such as: thalidomide, cocaine, marijuana, rubella, herpes, toxoplasmosis, alcohol, narcotics, nicotine and many others. Maternal factors like age, health and life style can have negative impact on the unborn babies. The findings of this current study buttresses (Ofovwe, 2011) who revealed that maternal factors like health condition, age, emotional state and life style is possible to impact on the embryo, fetus, new born or young child.

It is then necessary for women of marriageable age to take cautious precautions, in connection with their lifestyle, what they eat or drink. Any woman who wants to have children should marry at the age brackets (20-35) in order to beget healthy human beings. Women with new born babies should know how to protect their children from any environment that will have disastrous impact to their lives.

## **Conclusion and recommendation**

Substances like drugs, chemicals and /or radiation( X- ray) can have negative impact on the unborn human beings, maternal factors such as age, health and life style can also constitute a problem to the unborn baby. The strength or quality of the father's sperm due to age or drugs intake can also constitute a problem to the health of the unborn human-being. Because of the dangers associated with external substances and maternal factors in the prenatal and postnatal lives, pregnant women should guide against the consumption of certain drugs and shun the contacts of certain dangerous elements in their environment. Among other things, women in general should consider their health condition and age before becoming pregnant.

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