

Investigation and scientific explanations of superstitious beliefs held by senior school science students of Oyo State, Nigeria

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ABSTRACT

Studi ini mengidentifikasi kepercayaan takhayul yang dipegang oleh siswa sains sekolah menengah di Afijio, Negara Bagian Oyo, Nigeria. Penjelasan ilmiah dan implikasi pendidikan dari kepercayaan takhayul yang diidentifikasi diselidiki. Teknik purposive random sampling digunakan untuk memilih 300 siswa S.S.2 berdasarkan latar belakang sosial ekonomi. Tanggapan menerima data yang dibentuk untuk analisis. Kuesioner Keyakinan Takhayul terkait Biologi (BSBQ) adalah instrumennya. Empat pertanyaan penelitian diajukan dan dijawab sementara satu hipotesis dirumuskan dan diuji. Data yang terkumpul dilakukan penghitungan frekuensi, persentase, rangking dan uji t. Hasil penelitian menunjukkan bahwa responden (i) memiliki beberapa kepercayaan takhayul tentang kesehatan, kehamilan, makanan dan hewan. (ii) Sejumlah besar kepercayaan takhayul ditemukan memiliki penjelasan ilmiah sementara beberapa tidak. (iii) Keyakinan takhayul mempengaruhi siswa dalam situasi kelas (iv) siswa dari keluarga miskin memiliki lebih banyak kepercayaan takhayul daripada mereka yang berasal dari keluarga kaya tetapi tidak ada perbedaan statistik di antara mereka. Rekomendasi yang dibuat adalah (i) Pendidik sains harus menghubungkan sains lebih dekat dengan peserta didik, (ii) memberikan penjelasan ilmiah tentang kepercayaan takhayul dan (iii) Pemerintah dan organisasi non-pemerintah harus mendukung dalam memberantas kepercayaan takhayul di sekolah kita terlepas dari sosial siswa. -latar belakang ekonomi

This study identified the superstitious beliefs held by the senior school science students of Afijio, Oyo State, Nigeria. Scientific explanations and educational implications of the identified superstitious beliefs were investigated. Purposive random sampling technique was employed to select 300 S.S. 2 students based on socio-economic background. The responses received formed data for the analysis. The Biology-related Superstitious Beliefs Questionnaire (BSBQ) was the instrument. Four research questions were raised and answered while one hypothesis was formulated and tested. The data collected were subjected to frequency count, percentage, ranking and t test. The results indicated that the respondents (i) held some superstitious beliefs about health, pregnancy, food and animals. (ii) A good number of the superstitious beliefs were found to have scientific explanations while some do not have. (iii) Superstitious beliefs affect students in classroom situations (iv) students from poor homes held more superstitious beliefs than those from rich home but there was no statistical difference between them. The recommendation made are that (i) Science educators should relate science more closely to learners, (ii) provide scientific explanations to superstitious beliefs and (iii) Government and non-governmental organizations should support in eradicating superstitious beliefs in our schools irrespective of students socio-economic background.

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INTRODUCTION

Education is the process of providing information to an inexperienced person to help him/her develop physically, mentally, socially, emotionally, spiritually, politically and economically. Igbiniedion and Ojeaga (2012) opined that education is a veritable means of progress for Nation and individuals. Furthermore, Okebukola (2012) opined that education is a process of updating the knowledge and skills of the individual that will be useful to him/her and to the society. Therefore, education is a necessary tool for development.

Abimbola (2013) regarded science as an embodiment of knowledge, a means of investigating, and a way of thinking in pursuit of an understanding of nature. In the same vein, Carl (2008) submitted that science is a way of thinking much more than it is a body of knowledge. Hence, Science is the foundation upon which the bulk of present-day technological breakthrough is built (Omosewo & Onasanya, 2011). Biology is one of the major branches of science.

American Heritage Dictionary (2021) defined Biology as the scientific study of life and of living organisms. Biologists study the structure, function, growth, origin, evolution and distribution of living organism (Robinson, 2016). Biology is a natural science that deals with the living world. Biology as a subject is required for many fields of learning like medicine, pharmacy, nursing, agriculture, forestry, biotechnology, and many other areas that contribute immensely to the technological growth (Ahmed & Abimbola, 2011). Biology is one of the science subjects in Nigerian secondary schools (National Policy on Education, 2013) and it is introduced to students at Senior Secondary School level as an opening ground for human development, where career abilities are groomed, and potentials and talents are discovered and energized. However, it is disheartening to know that despite its key role, it is plagued by persistent low enrolment and under-achievement by students. This has elicited a lot of concern and generated researches to establish the causes of repeated failures. Some of these had been ascribed to poor teaching methods, limited number of professionally trained teachers, lack of instructional facilities, unavailability of suitable practical equipment, inadequate funding among others (Owolabi & Oginni, 2013; Bello, 2012).

Attempts have been made by educational stakeholders to find ways of improving students' performance in the subject some of which have focused on identifying appropriate teaching methodology (Bello, 2011), improving on teachers' mastery of content and provision of instructional materials (Omosewo, 2009; Adeyemo, 2011; Akinfe, Olofinniyi & Fashiku, 2012). Despite all these efforts, the performance of students in Biology is still below expectation; it is therefore pertinent to consider other factors that could be responsible for under-achievement in the subject.

A major cause of underachievement has been traced to the persistent influence of superstitious beliefs which students bring to science classroom especially in Biology classes (Samba, 2003; Iwovi, 2010). Indeed, several investigations have shown that students' explanations of scientific phenomena are dominated by what they perceived from their superstitious beliefs (Okebukola, 2002; Yip, 2001). Okoye and Okeke (2007) reported that, scientific knowledge and explanation have not been an integral part of African life, rather, power of witchcraft and evil spirits are means of providing explanation to natural phenomena. This is a departure from scientific thinking and belief that every event in nature is logically and physically a sequence of cause and effect, but traditionally believed they occurred due to some mystical forces (Etuk, 2002). Consequently, there is conflict between students' everyday life and the world of school science.

Superstitious beliefs have incarcerated the minds of Africans, shackled their intelligence and incarcerated their reasoning faculties. Literature revealed that superstitions have been used as weapons for human right abuses and crimes against humanity. When social custom of any human society forbids certain thoughts or practices from being exercised, such constitute belief in superstition, such beliefs, customs and norms are passed from one generation to another.

Michaela and Paul (2006), examined the circumstances under which top-class sportspersons are specially committed to enacting rituals prior to a game (ritual commitment). Findings revealed that ritual commitment is greater when (a) uncertainty is high rather than low; and (b) importance of the game is high rather than low. Complementary analyses revealed that the state of psychological tension mediated both effect of importance and uncertainty on ritual commitment. Moreover, players with an external locus of control exhibited greater levels of ritual commitment than did players with an internal locus of control.

In the previous and recent researches cited above, there were empirical studies on superstitious beliefs on different areas of life such as academics, sports, medicine, artistic works etc. Limited number of the researchers

found out the superstitious beliefs that are related to biology alone. This study identified biology related superstitious beliefs, scientific explanations were provided to the identified biology related superstitious beliefs. The educational implications of the identified superstitious beliefs, the influence of socio-economic background on superstitious beliefs were discussed.

The main purpose of this study was to identify the superstitious beliefs, and to provide scientific explanations to superstitious beliefs held by the senior school science students of Afijio Local Government Area of Oyo State, Nigeria.

Specifically, the study:

1. Identified various superstitious beliefs held by the senior school science students of Afijio Local Government Area of Oyo State.
2. Provided scientific explanations to each of the superstitious beliefs identified
3. Gave the educational implications for the identified superstitious beliefs held by the senior school science students.
4. Stated the influence of socio-economic background on superstitious beliefs held by the senior school science students.

RESEARCH METHOD

The study was a descriptive study of the survey type. A survey research examines, with intense accuracy, the phenomenon of the study and empirically reports what the researcher observed. For this study therefore, descriptive method of the survey type was considered appropriate because the researchers were interested in finding out the superstitious beliefs held by the students of Afijio in Oyo state, provided scientific explanations to such superstitions, examined their educational implications. The influences of socio-economic background on superstitious beliefs held by the senior school science students of Afijio Local Government Area of Oyo State, Nigeria were also considered.

The population for this research was all the senior secondary school two (S.S.S. 2) students of Afijio Local Government Area of Oyo State, Nigeria that were offering biology. A purposive sampling technique was employed to select 300 S.S.S. 2 students as sample from eight public senior secondary schools out of seventeen public senior secondary schools in Afijio Local Government Area of Oyo State. The students were purposively selected along socio-economic status. The responses received from the sample formed a data for the analysis.

The research instrument used was an adapted Biology-related Superstitious Beliefs Questionnaire (BSBQ). The Biology-related Superstitious Belief Questionnaire, BSBQ, consisted of three sections: Section A contained background information about the respondents such as: age, sex, class, religion and socio- economic background. Section B required the respondents to identify their superstitious beliefs. Section B was made up of a table with ten items. By responding to this section, the students made a list of superstitious beliefs in their localities and gave superstitious meanings to the identified beliefs. Section C expected the respondents to state at least two ways through which the superstitious beliefs which they held on to affect their learning of Biology.

RESULT

Research Question One: What are the superstitious beliefs held by the senior school science students of Afijio Local Government Area of Oyo State?

This research question was answered in four different ways. Frequency count and percentage was used to analyze the responses. The first category is on health, while the last is on Animals. The frequency and percentage of mention are shown on Tables 1 – 4.

Table 1:
Superstitious Beliefs on Health

S/N	Superstitious Beliefs	Total No	Number of respondents	%
1	Dirt in water cannot kill or harm people who drink it.	300	263	87.67
2	A mentally derailed person must not be allowed to enter the market; this may prevent him/her from getting well	300	256	85.33

S/N	Superstitious Beliefs	Total No	Number of respondents	%
3	Collecting rain water with hand while still raining will invite thunderstorm	300	248	82.67
4.	Palm wine rubbed on the body of someone with small pox will cure it.	300	236	78.67
5.	You must not sing while taking your bath, if you do, your mother will die	300	234	78
6.	When you sneeze suddenly it means you are being discussed somewhere.	300	227	75.67
7.	Pounded yam hot water splashing on the body while pounding causes eczema.	300	151	50.33
8.	We should not wash our hand in the plate we used to eat so that those who want to use the plate after may not be irritated.	300	124	41.33
9.	It is a taboo to sit on a mortar, this might make the god (Sango) angry.	300	93	31

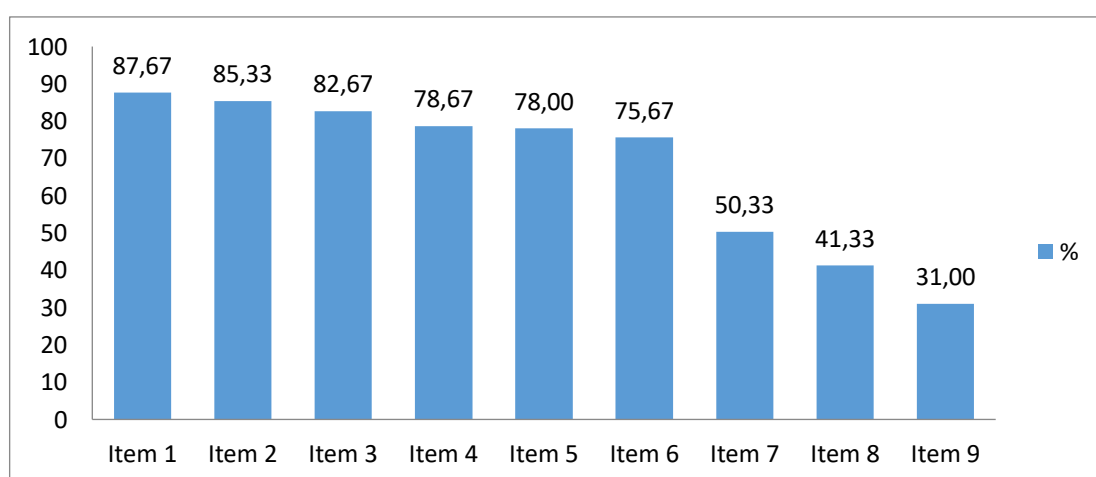


Figure 1: Graphical representation of the superstitious beliefs on health held by the senior school science students of Afijio Local Government Area of Oyo State.

In Table 1, nine superstitious beliefs on Health were mentioned among three hundred (300) respondents. The superstitious belief with the highest number of respondents was the one that says “Dirt in water cannot kill or harm people who drink it”. It was identified by 263 (87.67%) of the respondents. The superstitious belief with the least number of respondents was the one that says “It is a taboo to sit on a mortar, this might make the god (Sango) angry”. It was identified by 93 (31%) of the respondents. The frequency and percentage values were shown in figure 1.

Table 2:
Superstitious Beliefs on Pregnancy

S/N	Superstitious Beliefs	Total No	Number of Respondents	%
1.	A pregnant woman must attach safety pin to her wrapper always to prevent her unborn child from being exchanged with an evil child.	300	248	82.67
2.	A pregnant woman walking under the sun between 1.00pm-5.00pm will give birth to a demonic child.	300	228	76
3.	If a pregnant woman must walk in the middle of the night, she must hold in her hand a knife, nail or axe.	300	157	52.33
4.	If a pregnant woman allows a person to cross over her leg, the unborn child will resemble the person.	300	139	46.33
5.	A pregnant woman must not eat snail if she does, her unborn child will be salivating excessively	300	135	45

S/N	Superstitious Beliefs	Total No	Number of Respondents	%
6.	A pregnant woman must not die with her pregnancy, if she dies, she must not be buried with the unborn child in order to prevent more death from the community.	300	120	40
7.	If a pregnant woman eats grass-cutter her unborn child will steal.	300	118	39.33
8.	A pregnant woman must not sleep with her stomach facing up in order to prevent her unborn child from having eyes problem.	300	114	38
9.	A pregnant woman must not eat snake in order to prevent her child from crawling like a snake.	300	102	34
10.	If a pregnant woman eats egg during her pregnancy, her unborn child will be stealing.	300	96	32

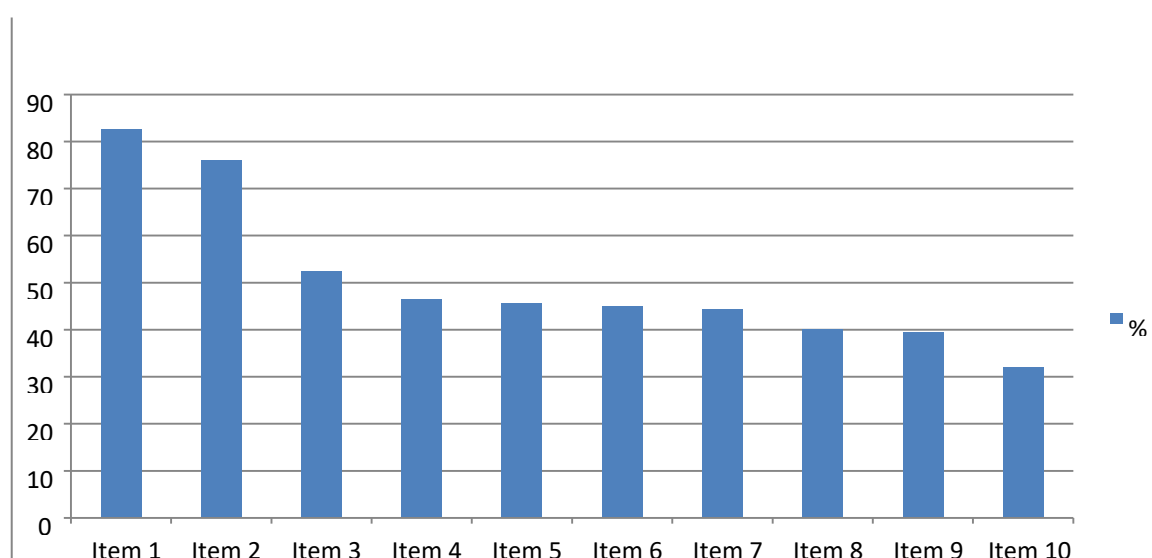


Figure 2: Graphical representation of the superstitious beliefs on Pregnancy held by the senior school science students of Afijio Local Government Area of Oyo State.

In Table 2, ten superstitious beliefs on Pregnancy were identified by the respondents. The superstitious belief with the highest number of respondents was the one that says “A pregnant woman must attach safety pin to her wrapper always to prevent her unborn child from being exchanged with an evil child”. It was identified by 248 (82.67%) of the respondents. The superstitious belief with the least number of respondents was the one that says “If a pregnant woman eats egg during her pregnancy, her unborn child will be stealing”. It was identified by 96 (32%) of the respondents. The frequency and percentage values were shown in figure 2.

Table 3:
Superstitious Beliefs on Food

S/N	Superstitious Beliefs	Total No	Number of respondents	%
1.	It is forbidden to serve soup for a man/boy while the soup is still on the fire	300	262	87.33
2.	If a person eats food while standing, he/she will not be satisfied.	300	255	85
3.	It is forbidden for women from some compounds in Afijio to eat soup prepared with salt, magi and oil for seven days after giving birth.	300	212	70.67
4.	We must not eat while lying down to prevent the food from going into a wrong channel.	300	188	62.67

S/N	Superstitious Beliefs	Total No	Number of respondents	%
5.	It is forbidden for people from Alapa clan to eat snake because their great grandfather became snake.	300	166	55.33
6.	It is a taboo for people from Ikoyi clan to eat grass cutter because it is believed that, their great grandfather became grass cutter.	300	154	51.33
7.	If a pregnant woman eats frog, her baby may have big eyes	300	151	50.33
8.	Twins must not eat monkey's meat, if they do, they are eating their brothers.	300	147	49
9.	Olorisa-oko worshippers must not eat new yam so as not to have mumps.	300	142	47.33
10.	We must not talk while eating.	300	133	44.33

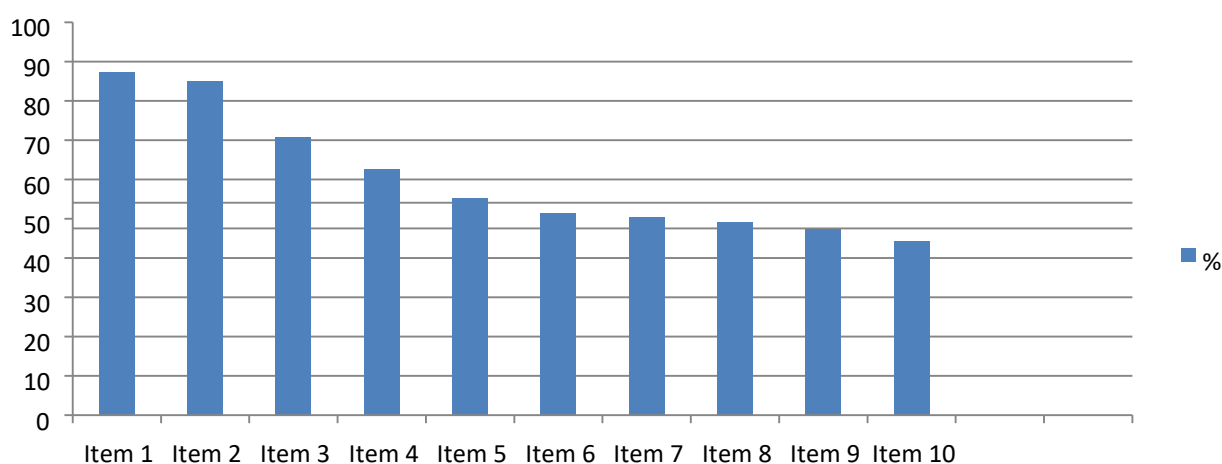


Figure 3: Graphical representation of the superstitious beliefs on Food held by the senior school science students of Afijio Local Government Area of Oyo State.

In Table 3, ten superstitious beliefs on Food were identified by the respondents. The superstitious belief with the highest number of respondents was the one that says “It is forbidden to serve soup for a man/boy while the soup is still on the fire”. It was identified by 262 (87.33%) of the respondents. The superstitious belief with the least number of respondents was the one that says “We must not talk while eating”. It was identified by 133 (44.33%) of the respondents. The frequency and percentage values were shown in figure 3.

Table 4:

Superstitious Beliefs on Animals

S/N	Superstitious Beliefs	Total No	Number of Respondents	%
1.	When a house is swarmed by red ants (Ijalo) it is a sign of misfortune.	300	270	90
2.	Giant rat / chameleon sighted in the day time is a bad omen	300	265	88.33
3.	When a domestic animal dies suddenly, its death is a substitution for the owner's death.	300	256	85.33
4.	If you accidentally kill a duck, you must put a coin in its mouth to avert accident	300	205	68.33
5.	Whoever kills a duck will experience seven years of bad luck	300	167	55.67

S/N	Superstitious Beliefs	Total No	Number of Respondents	%
6.	Never look at a cat closely because when it spits into your eyes, the eyes will go blind.	300	165	55.00
7.	If you kill a wall gecko, you may not have money to build a house.	300	153	51.00
8.	Seeing a spider in the evening is a sign of hope for better tomorrow	300	144	48.00
9.	It is forbidden to separate two fighting cocks, because this can make you weak	300	143	47.67
10.	Black cats symbolize the presence of witches and wizards	300	141	48.00
11.	If a dog is barking repeatedly, it is seeing an evil spirit or ghost.	300	139	46.33
12.	If the saliva of a snake gets into someone’s back, he/she may have hunch back.	300	130	43.33
13.	Hooting of an owl at night is a bad omen.	300	109	36.33
14.	Eating of tortoise and parrot is a taboo	300	102	34.00
15.	If a python opens its mouth, a rainbow will come out of it.	300	89	29.67

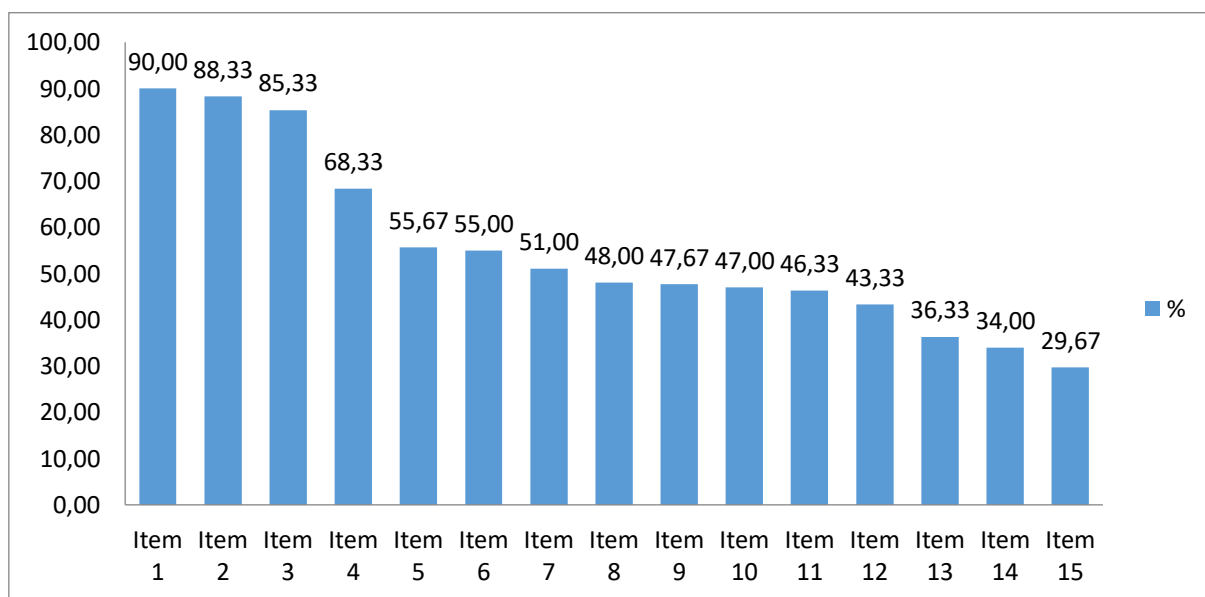


Figure 4: Graphical representation of the superstitious beliefs on Animal held by the senior school science students of Afijio Local Government Area of Oyo State

In Table 4, fifteen superstitious beliefs on Animals were identified by the respondents. The superstitious belief with the highest number of respondents was the one that says “When a house is swarmed by red ants (Ijalo) it is a sign of misfortune”. It was identified by 270 (90%) of the respondents. The superstitious belief with the least number of respondents was the one that says “If a python opens its mouth, a rainbow will come out”. It was identified by 89 (29.67%) of the respondents. The frequency and percentage values were shown in figure 4.

Research Question two: What are the scientific explanations for the superstitious beliefs held by the senior school science students of Afijio Local Government Area of Oyo State.

Table 5
Scientific Explanations of Superstitious Beliefs on Health

S/N	Superstitious Beliefs	Scientific Explanation
1.	Dirt in water cannot kill or harm people who drink it.	Dirty water is harmful to one's health because the tendency of dirty water carrying pathogens is very high.
2.	A mentally derailed person must not be allowed to enter the market; this may prevent him/her from getting well	It can bring about stigmatization, this can aggravate his/her health condition.
3.	Collecting rain water with hand while still raining will invite thunderstorm.	There used to be lightning, which is usually accompanied by thunder that could strike the tallest object around.
4.	Palm wine rubbed in the body of someone with small pox will cure it	Palm wine has healing effect. It contains a lot of vitamins which may be a real cure for skin rashes.
5.	You must not sing while taking your bath, if you do, your mother will die.	Chemical components of soap may be more concentrated, if swallowed in large quantity it can cause health hazard leading to death.
6.	When you sneeze suddenly it means that you are being discussed somewhere.	Sneezing is a reflex action which could be as a result of being allergic to dust, pepper or some other things in the environment. It could also be as a result of common cold.
7.	Pounded yam hot water splashing on the body while pounding causes eczema.	Eczema is a fungal skin disease. When hot water from pounded yam splashes on ones body it will result into scald.
8.	We should not wash our hand in the plate we use to eat so that those who want to use the plate after may not be irritated.	This encourages cleanliness.
9.	It is a taboo to sit on a mortar, this might make the god (Sango) angry	It will prevent people from polluting the mortar and introducing disease causing organisms.

In Table 5, scientific explanations were provided to each of the nine superstitious beliefs on health which were identified by the respondents as shown above.

Table 6:
Scientific Explanations of Superstitious Beliefs on Pregnancy

S/N	Superstitious Beliefs	Scientific Explanation
1.	A pregnant woman must attach safety pin to her wrapper always to prevent her unborn child from being exchanged with an evil child.	It has no scientific explanation.
2.	A pregnant woman walking under the sun between 1.00pm-3.00pm will give birth to a demonic child.	This is to protect the pregnant woman from stress. There is too much heat from the sunshine at such hour of the day.
3.	If a pregnant woman must walk in the middle of night, she must hold in her hand a knife, nail or axe.	This is a way of helping the pregnant woman to be safety conscious. As she may be frightened and can fall.
4.	If a pregnant woman allows a person to cross over her leg the unborn child will resemble the person.	This is to help her to be safety conscious so as to prevent the person from falling on her, and not to cause disturbance to the child in the womb. Resemblance is being controlled by genes which the child inherits from both parents.
5.	A pregnant woman must not eat snail, if she does, her unborn child will be salivating.	Snail is a good source of protein and iron, it has nothing to do with salivating.
6.	A pregnant woman must not die with her pregnancy; if she dies, she must not be buried	This is done to prevent the possibility of burying a living child with the dead mother. It is a lifesaving procedure.

S/N	Superstitious Beliefs	Scientific Explanation
	with the unborn child in order to prevent more deaths in the community	
7.	If a pregnant woman eats grass-cutter her unborn child will steal	Grass -cutter is a good source of protein.
8.	A pregnant woman must not sleep with her stomach facing up in order to prevent her unborn child from having eyes problem.	A pregnant woman can sleep taking any position except facing down so as not to injure the baby in her womb.
9.	A pregnant woman must not eat snake in order to prevent her child from crawling like a snake.	Snakes are good source of protein.
10.	If a pregnant woman eats egg during her pregnancy, her unborn child will be stealing	Egg is a good source of protein

In Table 6, scientific explanations were provided to each of the ten superstitious beliefs on pregnancy which were identified by the respondents as shown above.

Table 7:
Scientific Explanations of Superstitious Beliefs on Food

S/N	Superstition Beliefs	Scientific Explanation
1.	It is forbidden to serve soup for a man/boy while the soup is still on the fire.	Medically, it is not good to eat very hot food. It can injure the tongue. It can cause stomach disorder.
2.	If a person eats food while standing, he/she will not be satisfied.	This is to teach good/correct posture while eating, and that eating must be done in a relaxed mood.
3.	It is forbidden for women from some compounds in Afijio to eat soup prepared with salt, magi and oil for seven days after giving birth.	Food prepared without any artificial additive can easily heal up the womb and bring it back to its normal position. It will reduce the possibility of increase in blood pressure.
4.	We must not eat while lying down to prevent the food from going into a wrong channel.	This teaches good eating posture and table manner.
5.	It is forbidden for people from Alapa clan to eat snake because their great grandfather became snake.	Snakes are good source of protein.
6.	It is a taboo for people from Ikoyi clan to eat grass-cutter because it is believed that their great grandfather became grass cutter.	Grass-cutter is a good source of protein.
7.	If a pregnant woman eats frog , her baby may have big eyes	Frog is a good source of protein
8.	Twins must not eat monkey's meat, if they do, they are eating their brothers.	Monkey's meat is a good source of protein.
9.	Olorisa-oko worshippers must not eat new yam so as not to have mumps.	Yam is a carbohydrate food and has nothing to do with mumps..
10.	We must not talk while eating.	This teaches table manner

In Table 7, scientific explanations were provided to each of the ten superstitious beliefs on food which were identified by the respondents as shown above.

Table 8:
Scientific Explanations of Superstitious Beliefs on Animal

S/N	Superstitious Beliefs	Scientific Explanation
1.	When a house is swarmed by red ants (Ijalo) it is a sign of misfortune.	It is an ecological phenomena which has nothing to do with misfortune.
2.	Giant rat / chameleon sighted in the day time is a bad omen.	It is an ecological phenomena which has nothing to do with bad omen.
3.	When a domestic animal dies suddenly its death is a substitution for the owner's death.	It has no scientific explanation.
4.	If you accidentally kill a duck, you must put a coin in its mouth to avert accident.	Ducks are usually very slow. It is a way of protecting them, this also prevent recklessness and to be conscious of other road users.
5.	Whoever kills a duck will experience seven years of bad luck	Safety precaution measure to protect the duck from attack.
6.	Never look at a cat closely because when it spits into your eyes, the eyes will go blind.	This is to prevent us from cat bite which can result into rabies.
7.	If you kill a wall gecko, you may not have money to build a house.	It is a way of protecting the animal from going into extinction. Wall gecko helps in reducing insect population as a kind of biological control method.
8.	Seeing a spider in the evening is a sign of hope for better tomorrow	Spider is a predator which helps in controlling the population of insects.
9.	It is forbidden to separate two fighting cocks, because this can make you weak	It has no scientific explanation.
10.	Black cats symbolize the presence of witches and wizards	The color of the furs on cats is being controlled by genes.
11.	If a dog is barking repeatedly, it is seeing an evil spirits or ghosts.	It may be a signal of the presence of something strange within the environment. Dogs can see far in the night than ordinary eye, and can perceive sound wave more efficiently than man.
12.	If the saliva of a snake gets into someone's back, he/she may have hunch back.	Snake contains poisonous liquid venom) that can injure or kill. One must always run away from snakes.
13.	Hooting of an owl at night is a bad omen.	Hooting by an owl is just an ordinary sound.
14.	Eating of tortoise and parrot is a taboo	This is a way of protecting the two animals from going into extinction. They are rich in protein.
15.	If a python opens its mouth a rainbow will come out of it.	It is possible that when it open its mouth water vapour is released of which light ray falling on it will result in colour dispersion into different colours usually seven which is rainbow.

In Table 8, scientific explanations were provided to each of the fifteen superstitious beliefs on Animals which were identified by the respondents as shown above.

Research question Three: What educational implication does the identified superstitious beliefs has on learning of biology by the senior school science students of Afijio Local Government Area of Oyo State, Nigeria.

The following are the educational implications of the identified superstitious beliefs on learning of biology by the senior school science students of Afijio Local Government Area of Oyo State, Nigeria.

Lack of interest: The students chose not to show interest in learning the scientific explanations of certain superstitious beliefs. They show lack of interest by making noise as the teaching progresses, drag their legs on the floor to send the teacher away and engage in side-talk with other students. This implies that the students chose to learn what they wish to learn.

Fear: The fear of the consequences of breaking the rules guiding superstitious beliefs make a lot of students not to listen to whatever scientific explanation the teacher gives to certain superstitious beliefs. They have been taught by their parents not to disobey whatever the elders tell them because there is a punishment for every act of disobedience to superstitious beliefs.

Low performance: The superstitious beliefs which the students hold on to affect their performance negatively in biology which is evident in WASSCE and NECO results.

Research question four: What influence does socio-economic background has on superstitious beliefs held by the senior school science students of Afijio Local Government Area of Oyo State? This research question translated to **Hypothesis one** which states that: There is no significant difference between the superstitious belief of Senior school Science students from poor home and rich home of Afijio Local Government Area of Oyo State.

Table 9:

t-test analysis on superstitious belief of Senior school Science students from poor home and rich home.

Group	N	Mean	S.D	Df	t-test	Sig.	Decision
Poor homes	2697	8771	12.21				
				2786	27.89	0.003	H ₀₁ : Not Rejected
Rich homes	91	23.79	5.71				

The result from table 9 shows that the *p*-value of 0.003 is less the alpha level of 0.05 significance. Hence, significant difference did not exist between superstitious beliefs that were identified by students from poor homes and those from rich homes. The hypothesis is therefore not rejected.

DISCUSSION OF FINDINGS

The finding of this study revealed that the superstitious beliefs held by the senior school science students of Afijio Local Government Area of Oyo State were in the following areas; health (9), pregnancy (10), food (10), animals (15), In all 44 superstitious beliefs were gathered from the senior school science students of Afijio Local Government Area of Oyo State as it was applicable to their culture and norms. Various scholars, literature and diverse sources of information (including oral source) attested that people all over the universe hold various beliefs, norms and customs about humanity and the universe. This finding is also supported by Vyse (2014) who discovered that people in disadvantaged situations may have a higher need to use superstitions in order to benefit from its protective function.

CONCLUSIONS

The superstitious beliefs held by the senior school science students of Afijio Local Government Area of Oyo State were found to be in the following areas; health, pregnancy, food and animals. Many of the superstitious beliefs identified were discovered to have scientific explanations while some do not have. The superstitious beliefs held by the students affect them negatively in classroom situations, because they decide to choose what to believe and what to learn from what they are being taught. This was due to the superstitious beliefs held by the students in their early stage of life, some of which were misconceived leading to the misinterpretation of the natural phenomena within their locality. The students that were from poor homes held more superstitious beliefs than those from well to do homes

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