Hausa people's perception of eclipses: A natural phenomena or superstition?

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Abstract

Even with the advent of scientific revolution, a process which facilitates scientific knowledge across the globe, superstition still holds sway in many communities and has a great influence on people's belief in this modern era of civilization. Hence many communities in the world today still believe in the superstitious nature of eclipses rather than it being a natural phenomenon. This study therefore, is aimed at investigating the literacy level of Hausa people on eclipses. A total of 100 Hausa people in Bakin Kura, Gwallaga, Baram and Bayara settlements in Bauchi LGA of Bauchi State were involved in the study. Simple random sampling technique was used in selecting the settlements while convenience sampling technique was adopted for selecting the sample size. Instrument used for data collection was questionnaire method. A structured questionnaire titled "Hausa People's Literacy Level on Eclipses Questionnaire" (HPLLEQ) was developed by the researchers which consisted of 22 items comprising of two sections. Data collected was analyzed using descriptive statistic. Major findings of the study indicated that Hausa people's perception of eclipses as natural phenomena was not significant. Furthermore, Hausa people's perception of eclipses as superstition was significant. It was concluded that Hausa people of Bauchi State believe that eclipses are not natural phenomenon. Amongst others, it was recommended that, citizens should be properly educated on issues concerning eclipses in order to discard the misconceptions associated with it.

Keywords: Perception, Eclipses, Natural Phenomena and Superstition

1. Introduction

An eclipse situation occurs when there is a sudden darkness across the earth due to inability of either the moon or sun rays to the earth surface (National reach Aeronautics and Space Administration NASA, 2014). However, all over the world cultural beliefs cutting across nations perceive the term "eclipses" differently from what science consider it to be. For instance, the Hindu culture in India according to Swamy (2020) prohibits the consumption of food during eclipse. This implies that cooking, eating and drinking are all prohibited during this period because the food is believed to be automatically spoiled from bacterial infection during the period. Similarly, the India culture believes

that if one mistakenly inflicts a cut on himself during an eclipse such a person bleeds for a long period and the situation can leave a permanent scar on the person throughout his/her life time. Similarly, in the United States it is believed that an eclipse is a warning signal of the anticipated coming of an apocalypse. This belief was found by scholars in the Bible, according to Joel 2: 31. The verse claimed that "the sun will turn to darkness, and the moon to blood before the great and dreadful day of the Lord comes". The Hausa people of Northern Nigeria also share in the superstation that all is usually not well whenever an eclipse occurs, they usually move round the streets or converge in groups to pray for Allah's (God's) intervention-(This practice is contrary to teachings of Islam, the religion mainly held by the Hausa people).

In the 21st century which is an era of science and technological advancements, many communities still attach themselves to old stories and myths concerning eclipse. Hence, many people associate misfortunes or calamities in their lives with occurrence of eclipses. In different parts of the world today, there exist different interpretations of eclipses according to their cultural and religious beliefs. In certain cultures, it is considered to be a dragon consuming the sun, while some believe that during eclipse poisonous substances drops from the sky (Ifra, Summiya and Mawish, undated). Also, different societies and indeed different communities associate different diseases and ill-luck with the concept. In Chinese society for instance, lunar eclipse is interpreted to mean a dragon consuming the sun, "lunar eclipse happens because of a dragon" (Warburton, 2014).

with increasing However. scientific knowledge across the world and with increasingly accurate predictions scientists have helped to explain some of the mysteries surrounding the superstitious nature of "eclipses". For instance, when the forecast of an eclipse was made in France in 1764, village priests were encouraged, by an article in the Gazette de France, to "educate their church members on the fact that eclipses are neither harmful nor calamitous to humans in any way, but are just the necessary consequences of the movements of heavenly bodies, as natural as the rising and setting of the sun or moon." This could mean that science has obviously cleared the air that occurrence of eclipse is a natural phenomenon and not a superstition as was erroneously believed in the past.

It is to be noted that, even with the explosion of scientific knowledge in the world, some cultures and people still believe in the superstitious nature of the

occurrence of eclipses, including the Hausa people of Northern Nigeria in Bauchi State, who always organize prayers for God's intervention to avert an impending danger upon the people. It is against this background that this study seeks to investigate the scientific literacy level of the Hausa people in Bauchi LGA of Bauchi State as regard this natural phenomenon (eclipses). This is with a view establishing the impact of science on society and the attainment of the scientific literacy objective in the curriculum. Hence, this study investigates Hausa people's perception of eclipses on the backdrop of it natural being phenomenon superstition?

Despite several scientific proofs and explanations which show that "eclipses" are natural phenomena which occur when light from a moon or sun gets blocked from reaching the earth surface (NASA, 2014), many people in the society still believe in superstitious nature phenomenon. In fact, in the Indian cultures, according to Swamy, (2020) pregnant women are advised to remain indoors as it is believed that the dark moon will negatively affect the unborn child. Furthermore, this group of women is also prohibited from using knives or sharp metal objects fearing that it would leave a birth mark on the body of the unborn child. Similarly, Krupp in his book "beyond the blue horizon" cited by Cofield (2017) explained that the Toba people of South America believed that red skies during eclipse is as a result of attack by the spirits of the dead, hence when this situation occurs, they command their dogs to bark at the sky in order to avert any possible unforeseen danger. In Nigeria also, these feelings that eclipses are superstition abounds in many cultures and religions, for instance in Northern Nigeria on sighting an eclipse, the Muslims will quickly organize prayers for Allah to avert any evil that may befall the people, hence the believe that

eclipse is usually associated with calamity or misfortune.

Research Questions

The following research questions were posed to guide this study:

- 1. What is the level of Hausa people's perception of eclipses as natural phenomena?
- 2. What is the level of Hausa people's perception of eclipses as superstition?

2. Literature Review Understanding the Concept Eclipses

In the olden days and even in most recent times most people had spiritual or cultural attachment for eclipses when they happen, in fact these spiritual or cultural affiliations at that time made a lot of sense to them as far as they were concerned. The feelings that eclipses were serious calamities expected to befall the society was also another view held by ancient people. To buttress this fact, Cofield (2017) stated that a Roman Emperor who came face to face with an eclipse in AD 840 was so unmoved by the sight of it to the extent that he stopped eating, a situation which eventually led to his death. Furthermore, the mystery of eclipse as a superstition was brought to the fore in the 6th century BC when a serious battle between the Medes and the Lydians of Asia came to an abrupt end when an eclipse was sighted by the troops. The troops believed that the manifestation of the eclipse signified peace; hence peace was eventually restored in the troubled area (Cofield, 2017). However, the advent of science illuminated the concept for better understanding in line with scientific knowledge. Eclipse is derived from the Greek word "ekleipsis" interpreted to mean "omission" or "abandonment" according to Cofield (2017). However, NASA (2017) explained that eclipse occurs when one heavenly body such as a moon or planet moves into the shadow of another heavenly body. Similarly, Kamisa cited in Izzudin, Imroni, Imroni and Mahsun (2022) opined that eclipses refers to the shading of the

moon or planets caused as a result of blockage of sunlight by the earth, they noted that the blockage could be total or partial darkness of the sun or the moon. Eclipses are among those few astronomic phenomena that cannot be ignored. The disturbance in regular, movements of moon and sun caused by eclipses arose feeling of astonishment as noted by Castro cited in Ifra, Summiya & Mahwish, undated). There are two types of eclipses which include lunar eclipse and solar eclipse.

Lunar Eclipses: According to Battros (2014) and Kasim (2018) lunar eclipse manifest when the three heavenly bodies (moon, sun, earth) come together in a straight line of alignment and the earth placed in the centre. Kasim further noted that while the sun is in the state of eclipse, the moon lies in the middle of the distance between the earth and the sun, when this happens, the moon's shadow falls on the surface of the earth. Meanwhile, Izzudin, Imroni and Mahsun described lunar eclipse as the part or total darkness of the earth's satellite (moon) and the sun when viewed from the surface of the earth. A lunar eclipse occurs only at night. There are two types of lunar eclipses, total lunar eclipse and partial lunar eclipse. A total lunar eclipse happens when the moon and the sun are lined up exactly in a straight line of alignment. This means that earth is placed right between the two bodies (Kasim, 2018). While on the other hand, partial lunar eclipse occurs when only a portion of the moon is covered by the earth's shadow which is characteristically very dark (Kasim, 2018). NASA (2014) observed that a lunar eclipse potentially lasts for a few hours while two or more partial lunar eclipses happen every year as against total lunar eclipses which rarely happens.

Solar Eclipse: Solar eclipse happen when the moon is between the earth and the sun, when this situation happens, the moon stops sunlight from reaching the earth thus casting its shadow on the earth's surface

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(Cofield, 2017). There are three kinds of solar eclipses namely; total solar eclipse, partial solar eclipse and annular solar eclipse. Total solar eclipse occurs when the sun, moon and earth are in direct line. In total eclipse, the sky becomes dark. It looks like the middle of the night. Partial Solar Eclipse on the other hand happens when the sun, moon and earth are not exactly lined up. This means that the sun is only partly covered. While during an annular solar eclipse the moon looks like a dark circle on top of a larger, bright circle. A ring of light shows up around the moon. Solar eclipses happen every 18 months and usually last a few minutes (NASA, 2014).

Eclipses as Natural Phenomena

Are eclipses natural phenomena? Yes, they are, hence www.newtimes.co stated that scientifically; solar eclipse is one of the natural wonder phenomena that formation can be scientifically explained. Regarding when and where it will occur, it can also be predicated many years before hand. It is noted that the sun diameter is about 400 times the moon's diameter and the sun's distance from the earth is about 400 times the moon's distance from the earth. Meaning that the ratio is one, which is why the sun and the moon appear approximately equal in size when seen from the earth.

The moon orbits the earth in 8 phases once every 29.5 days and the earth orbit the sun. These phases according www.newtimes.co are: New Moon, New Crescent, First Quarter, Waxing Gibbous, Full Moon, Waning Gibbous, Last Quarter and Crescent. A solar eclipse occurs only when the new moon occurs close to the nodes where the moon's orbit crosses the ecliptic (region between earth and sun). It is also believed that other planets such as mercury and venus also comes between the sun and the earth but they are millions of kilometers away, therefore cannot cause an impact. The moon on the other hand is 400 times closer to the earth and during the solar eclipse they look equal sized.

In the light of the foregoing, it is apparent that occurrence of eclipses are supported by scientific evidences. It is not just attached to mere superstition as some cultures in the world tend to believe. This is more so, when one point to the biblical point of view where it is stated by God himself that, this sort of superstition and fear of heavenly phenomena was not to be a part of God's people. God was speaking through the prophet Jeremiah "thus says the Lord, do not learn the way of the nations; do not be at them" (Jeremiah (www.charismanews.com). This could invariably mean that God was cautioning his people of old to trust him and not livein fear of heavenly signs (eclipses) as did the unbelievers, hence these signs were believed to be associated with bad signs. This could also clarify that eclipses are natural phenomena and not just mere superstition as erroneously thought in many cultures across the world. Looking at the Islamic point of view, an eclipse shows the greatness of Allah and Muslims are expected to be humble before Allah. As pointed out by Huda (2018) there are three reasons why Muslims should be humble before Allah during eclipse. Firstly, an eclipse is a sign of the majesty and power of Allah. The prophet said, "The sun and the moon do not eclipse because of the death of someone from the people, but they are two signs amongst the signs of Allah, when you see them stand up and pray". Secondly, an eclipse can cause people to become frightened. Therefore, frightened, Muslims turn to Allah for patience and perseverance. Allah's apostle said, "The sun and the moon are two signs amongst the signs of Allah, and they do not eclipse because of the death of someone, but Allah frightens his devotees with them". Thirdly, an eclipse is a reminder of the Day of Judgment. The prophet said, "These are signs which Allah sends, they do not occur because of the life or death of somebody. but Allah makes his worshippers afraid by them". So, when you

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see anything thereof, proceed to remember Allah, invoke him, and ask for his forgiveness. Furthermore, Abdul, Hussain, Igbal and Hassan (2022) opined that, many Muslims believe that misfortunes generally are God sent due to disobedience and according to his will. Hence, misfortunes served as a strong incentive to make believers turn to Allah for true repentance and a pathway to paradise. This generally implies that, culturally and religiously believe in offering people special supplications to Allah requesting his intervention for the forgiveness of their

Concept of Superstition

According to Harish (2016) superstition may be defined as "a belief or way of behaving that is based on fear of the unknown and faith in magic or lack": a belief that certain events or things will bring good or bad luck. Furthermore, according to the author, it is a practice, resulting from ignorance; fear of the unknown, trust or in magic or chance or a false conception of caution. Harish noted that superstition is an irrational object attitude of mind toward the super natural. It could also, mean nature or god resulting superstition. Furthermore, from Cambridge Academic Content Dictionary defined superstition as a belief that fails to recognize reason or scientific proofs but rather based explanations on the causes of events on connectivity to magic. Similarly, Dagnell and Drinkwater (2018) were of the view that superstition simply and generally means believing in powers beyond the ordinary or human comprehension.

To shade lighter on the concept of superstition Harish (2016)further illustrated thus: Once upon a time life was extremely hazardous and the central feature of day-to-day existence was pre- occupied with the explanation for the relief of human misfortune, varieties of climatic and geographical conditions. Hostile neighborhood, fear of predators etc., were constant concern of the human society

during those days. According to Harish the happenings at that time seemed to have played a role in the superstitious behaviors which are being carried to the present day. There was strong believe in miracles, remedies and supernatural magical phenomena which might have persuaded societies to remain superstitious even in this age of reason and scientific progress. Harish noted that there is a group of people society who specializes manipulating the minds of unsuspecting public to gain undue advantage over them for selfish purposes and in the process amasses wealth and power, exhibiting so called miracles and supernatural feats under the guise of divine blessings. These god men, babas, buvas, matajis and maharajas are main transporters of superstitions and have got their stronghold on maharashtrian society. Educated and elite class also supports these god men to protect their vested interests. This class has completely twisted the meaning of superstition under the name of faith.

Eclipses as Superstition-Views across Cultures and Communities

According to www.scoopwhoop.com eclipses in the past have instilled fear, inspired curiosity among people of diverse cultures, and have been linked with myths, legends and superstitions throughout history. Here we examine the perceptions and interpretations of eclipses in respect to some cultures across the globe:

India: A popular superstition in India is to avoid eating during an eclipse. Cooking, eating or drinking is prohibited by many during the eclipse period as it is believed that the food has been contaminated by Similarly, the India culture bacteria. believed that if one mistakenly cuts himself/herself during an eclipse one is likely to bleed for a long period and it can leave a permanent scar on one's body for a life time (Swamy, 2020). Furthermore, Warburton (2014) posited that eclipse is suggestive of a calamity to befall a community. In the same vein, the birth of a

Cleft Lip (CLP) and Palate Deformities (PD) child in India is considered as an act of evil spirit seeking revenge for past evil deeds committed by the people (Loh & Ascoll, 2011). Similarly, El-Shazly (2010) stated that in staring at a solar eclipse in Indian culture during pregnancy can cause a child to be born with Cleft Lip (CLP). Also, Harish (2016) suggested that already Indian astrologers are predicting doom and disaster as a consequence of the solar eclipse not only in India but in China and the South east. They have predicted communal tensions and political assassinations.

U.S.A: In the United States people believe that an eclipse is a warning of the anticipated coming of an apocalypse. This was revealed by scholars in the Bible, according to Joel 2: 31, the verse noted that "the sun will turn to darkness, and the moon to blood before the great and dreadful day of the Lord comes".

Tibet: The Tibet people are of the opinion that both good and evil are on different sides of the same coin and are tend to occur in double fold during the period of eclipse (www.scoopwhoop.com).

Togo and Benin: For these people known as the Batammaliba in Western Africa, they believe that an eclipse meant that the sun and the moon are in conflict (fighting). Therefore, when this happen Batammaliba people would offer prayers so that these two heavenly bodies resolve their problems amicably (www.britannica.com). **Inca:** The Inca see an eclipse as an attack on the moon by a jaguar. It was believed that after the moon when attacked by the jaguar would make a lot of noise and force their dogs to howl and bark to drive away the eclipse (www.britannica.com).

Aztecs: The Aztecs predicted that if a solar eclipse was accompanied by an earthquake, the world would come to an end. As a result, every year a ritual human sacrifice would be made to appease the gods to prevent the world from coming to an end.

Greeks: The Greek people thought an eclipse to mean that the gods would rain down punishment on the king. Therefore, to save the king from their wrath, a substitute king would be placed instead of the real one. However, once the eclipse was over, the substitute king would be killed (Swamy, 2020).

Australia: In some Australian Aboriginal cultures according to Musharraf and Dars (2021) an eclipse meant that the sun and the moon are having more children. Their children would appear in the night sky as stars.

The Kalina: The Kalina of Suriname believes that the sun and the moon are brothers; hence according to them the occurrence of an eclipse meant that one of them had succeeded in knocking the other out of contest.

Norse: In Norse mythology, sky wolves Hati and Skoll would chase the sun and the moon, waiting for Ragnarok. When they would swallow their prey-the sun or the moon, it would mean the destruction of the Viking gods and an eternal darkness on earth. The eclipses were seen as near misses at Ragnarok (www.timeanddate.com).

Japan: According Warburton (2014), local Japanese people are known to associate earthquakes with eclipse. He stated that "lunar eclipse is often considered a warning signs of an impending danger or doom on the community".

Vietnam: According to Swamy (2020) the cultural belief in Vietnam portrays that eclipse happens when a gigantic frog swallows the sun completely; however, it was the intervention of the Lord Hahn that the frog eventually threw out the sun from its mouth. According to Lepori (2009) the "Hispanic societies also share the belief that when eclipse occur, expectant mothers are not safe and should not be exposed; hence they are compelled to remain indoors until the phenomenon is over". In his view Warburton (2014) noted that in other parts of the world eclipses are considered generally as calamities. It is instructive to note that these cultural beliefs across the

world in respect of eclipses are not scientifically proven in any way.

3. Methodology

This study adopted the survey research design. The population of the study consists of all Hausa people living in Bauchi Local Government Area of Bauchi State. The population of Hausa people in Bauchi LGA as at the 2006 census was 493, 730 (National Population Commission, NPC, 2006). A sample of 100 participants resident in Bauchi LGA were engaged for the study, where a convenience sampling technique was used for the selection of participants in the districts of Kobi and Birshi with two major settlements each from the districts that is, Bakin Kura, Gwallaga, Baram and Bayara respectively. The instrument used for data collection was questionnaire. A structured questionnaire titled "Hausa People's Literacy Level on Eclipses Questionnaire" (HPLLEQ) was researchers. developed by the The HPLLEQ is a 20 items questionnaire developed by the researchers. questionnaire was divided into two parts namely: Eclipses as natural phenomena and Eclipses as superstition. A 4-point Likert modified type scale of Strongly Agree (SA) = 4, Agree (A) = 3, Strongly Disagree (SD) = 2, and Disagree (D) = 1 was adapted to illicit responses from the participants. In addition, to ensure face and content validity, the instrument for the data collection "Hausa People's Literacy Level on Eclipses Questionnaire" (HPLLEQ) was subjected to thorough scrutiny and vetting environmental experts in management in the Department of Environmental Management and

Toxicology, Federal University Dutse. Their contributions helped in the final draft of the instrument. A trial test group made up of 20 respondents from Misau Town in Misau Local Government Area of Bauchi State which is outside the area of the study was conducted. The reliability index of the HPLLEO was established using Cronbach alpha static. The reliability index of the HPLLEQ instrument was obtained as 0.80. This means that the reliability coefficient a high level of internal indicates consistency for the instrument which is adequate for the study. Data collected was analyzed using descriptive statistic (mean and standard deviation), using Statistical Package for Social Science (SPSS) version 23.

4. Results and Discussion Research Question One:

What is the level of Hausa people's perception of eclipses as natural phenomena?

The finding in Table 1 revealed that the level of Hausa people's perception of eclipses as natural phenomena in Bauchi State was not significant as shown by means of less than 2.50 in each of the items in the questionnaire they answered. This confirmation was shown by a grand mean of 1.93. This implies that Hausa people don't believe in the view that eclipses are natural phenomena. The overall standard deviation (SD) of approximately 5.83 is an indication that there are variations in the opinions of respondents. However, items 1-8 separately with SD of less than 1 showed homogeneous opinions of respondents. For decision making, a criterion mean (cut off score) of 2.50 was adopted.

Table 1: Mean and Standard Deviation on Eclipses as Natural Phenomena (n=100)

S/N	Items	Sample	Mean	Standard	Decision
				Dev.	
1.	Science can interpret natural phenomena	100	1.68	.67987	Not Significant
2.	Science knowledge is reliable	100	1.89	.737111	Significant

S/N	Items	Sample	Mean	Standard Dev.	Decision
3.	Science knowledge can explain eclipses	100	1.79	.60794	Significant
4.	Science can predict correctly the Occurrences of eclipses	100	2.02	.76515	Not Significant
5.	Eclipses are based on science knowledge	100	2.02	.77824	Significant
6.	Eclipses have connection to nature	100	1.79	.67112	Significant
7.	Eclipses are natural phenomena	100	1.93	.75552	Significant
8.	Science has eradicated the belief of Superstition	100	2.36	.83509	Significant
	Grand Mean:		1.94	5.830	

Source: Field Data (2020)

Research Question Two:

What is the level of Hausa people's perception of eclipses as superstition? Findings from Table 2 indicated that the level of Hausa people of Bauchi State perception of eclipses as superstition is significant. This is shown by means of more than 2.50 in each of the items answered in the questionnaire. The position was confirmed by a grand mean of 2.70. However, a negligible number still holds the view that eclipses are not superstitious

in nature as shown by means of 2.48, 2.42 and 2.23 respectively. Similarly, the overall standard deviation (SD) of approximately 11.99 also indicated that there are variations of opinions of respondents. Even though looking at the items one by one the SD of less than 1 except for item 7 which is 1.00885 indicated homogeneous opinions of the respondents. For the decision making a criterion mean (cut off score) of 2.50 was adopted.

Table 2: Mean and Standard Deviation on Eclipses as Superstition (n=100)

S/N	Items	Sample	Mean	Standard	Decision
		-		Dev.	
1.	Eclipses are superstitious in nature	100	2.48	0.95790	Not Significant
2.	Eclipses bring curse in a society	100	2.88	0.79493	Significant
3.	Eclipses are associated with certain diseases	100	2.87	.79988	Significant
4.	Watching eclipses can affect eye sight of persons	100	2.42	.85493	Not Significant
5.	Eclipses are associated with bad luck	100	3.00	.80403	Significant
6.	Eclipses are associated with evil spirit in a society	100	3.11	.78403	Significant
7.	Eclipses indicate that the sun and the Moon are at war	100	2.58	1.00885	Significant
8.	Eclipses are clear signs of end times	100	2.83	.95405	Significant

S/N	Items	Sample	Mean	Standard	Decision
				Dev.	
9.	Obedience to God can stop eclipses	100	2.75	.89188	Significant
10.	Only prayers can stop eclipses	100	2.53	.89279	Significant
11.	Eclipses have connection to religion	100	2.75	.89185	Significant
12.	Eclipses have relationship with superstition	100	2.88	.80879	Significant
13.	Science is similar to superstition	100	2.55	.71598	Significant
14.	Eclipses can be predicted by science	100	2.23	.82701	Not Significant
	Grand Mean:		2.70	11.99	

Source: Field Data (2020)

Discussions of Findings

The finding of this study revealed that the level of Hausa people's perception of eclipses as natural phenomena in Bauchi State was not significant. This implies that Hausa people don't believe in the view that eclipses are natural phenomena. The study furthermore revealed that the level of perception of eclipses as superstition by the Hausa people in Bauchi State is significant, which implies that the Hausa people believe that eclipses are superstitious in nature. This finding corroborates Izzudin, Imroni, Imroni and Mahsun (2022) who conducted a study on cultural myth of eclipse in a central Javanese village between Islamic identity and local tradition. They found that eclipses are closely linked with calamities such as death and disaster (superstition). Furthermore, the study of Izzudin et al. that there exist revealed different interpretations of eclipses in Javanese culture and Islamic theological perspective. It was also found that in Islamic stand point, prayer and worship are recommended to strengthen faith of the people instead of relying on superstitions. The finding of this study is equally supported by Abdul, Hussain, Igbal and Hassan (2022) who carried out a study on socio-cultural and religious perceptions and the individuals in Shikarpur village Southern Punjab, who found that the people's perception about

lunar eclipse are influenced by religious superstitions and attributes its occurrence to the anger of God due to human sins and immorality. Also, it was found that all unfortunate things such as that of children born with Cleft Lip (CLP) and other form of physical disabilities from birth were associated with God's will and eclipse.

5. Conclusion and Recommendations Conclusion

No matter the level of education attained by individuals, the fact still remains that quite a number of people cannot be separated from their traditional ways of belief. This is not because they are half educated, but probably because they have not been convinced enough to abandoned or change their old traditions. This is indeed true with Hausa people of Bauchi Local Government Area of Bauchi State, Nigeria. In spite of development in science knowledge, it still holds that quite a number of people do not trust that eclipses are fall out of natural phenomena. This confirmed the findings of this study which revealed that the level of Hausa people's perception of eclipses as natural phenomena was not significant. This implies that eclipses are not natural phenomena. This was shown by a grand mean of 1.94. A further finding indicates that the level of Hausa people's perception on eclipses as superstition was significant

as verified by a grand mean of 2.70. This by implication means that Hausa people of Bauchi State believe that eclipses are superstitious in nature. Be that as it may, the researchers believe that eclipses are indeed natural phenomena rather than superstition; this is because scientific knowledge and technological advancements has proved this beyond reasonable doubt.

Recommendations

The researchers recommended that:

- 1. Citizens should be properly educated on issues concerning eclipses in order to discard the misconceptions associated with it.
- 2. Eclipses should be taught across all levels of our educational system so that people can leave with it always.
- 3. Periodic enlightenment campaign should be embarked upon in the media concerning issues regarding eclipses.
- 4. Expected times for occurrences of eclipses should be made public well ahead of time, this will ensure confidence on the side of the citizens.

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