



Philosophical Perspectives on Vaccine Hesitancy and the Media in Nigeria: A Critical Reflection

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ABSTRACT

The atmosphere created by the Covid19 pandemic; one of necessity, stoked by fear draws upon the reality of Nigerian's innate disposition towards health-security as operational on "One's own terms." This is further exacerbated by the daily unanswered plausible questions about the validity of the vaccine and vaccination process; hinged not on a critique of the scientific presuppositions or facts, but rather on an individualistic worry drawing on the psychological fear of either being dominated, deceived, or just being wrong; to which stories fluttering through the media space, either serve to inflame or allay. This paper explores the nature of vaccine hesitancy, by examining the perception and clash of epistemic rationale towards the vaccine acceptability, alongside the underlying ethical factors which propels such perception vis-à-vis; previous histories of vaccination, while drawing on the role(s) information, mal-information, and misinformation play in inflaming perceived hysteria, to which attempts at censorship rather creates a notion of social control. This paper thus raises fundamental questions as to the intersection between the media and vaccine hesitancy? The value of life and role of media? What does "Responsibility" (The status of being responsible) mean between the state and individuals? As well as what could be the impact of such intersection on public sentiments about the ranging pandemic? With recent issues happening within the country on vaccination does the notion of freedom still holds weight? To what extent can we assert the individual's freedom and dignity of personhood?

Keywords: Media, COVID-19, Vaccination, Responsibility, Vaccine hesitancy.

Introduction

The first confirmed novel COVID-19 case in Nigeria was affirmed in Lagos in the morning of February 27, 2020. Just as it was across the Globe, pandemic kept being on the rise such that by March 30, 2020 the number of confirmed COVID-19 cases in Lagos had risen to eighty-three, with recorded increased cases in all the states whilst Lagos and FCT Abuja remained the epicenter of COVID-19 pandemic in Nigeria. COVID-19 has being described as an infectious disease caused by a new strain of Coronavirus first discovered in Wuhan, the Hubei region of China. 'CO' stands for corona; 'VI' for virus; and 'D' stand for disease. The disease was first referred to as '2019 novel-corona virus' or 2019-nCoV. The COVID-19 virus is linked to the same family of viruses such as Severe Acute Respiratory Syndrome (SARS) and Middle East Respiratory Syndrome (MERS). It is also related to some types of common cold, and include symptoms such as; fever, cough, and shortness of breath. Coronavirus (Covid-19) as an infectious disease causes respiratory infections ranging from the common cold to more severe respiratory difficulties. According to Shereen, Khan et al. it originated from the Hunan seafood market at Wuhan, China where live bats, snakes, raccoon dogs, wild animals among others were sold in December 2019. Similarly a report by the United Nations Children's Emergency Fund (UNICEF) (March, 2020) avows that "in more severe cases, infection can cause pneumonia or breathing difficulties. More rarely, the disease can be fatal. These symptoms are similar to the flu (influenza) or the cold, which are a lot more common than COVID-19. This is why testing is required to confirm if someone has COVID-19."

The fast rate at which the virus spread over several climes, led to the engagement of several agencies who got involved in pulling resources, experience and professionalism into fighting this global virus, still the fundamental aspect of information sharing has remained crucial to knowledge of individuals about the virus, which has further played an all important role in determine the perception and response from individual towards the pandemic, of which a major component in the dispensing of such information remains the media.

COVID-19 and the role of the Media

Any attempt at interrogating the influence of the media on individual actions cum activities, must come with an understanding of the general functionality of the media in its holistic term. On such note, it becomes imperative to first understand the role(s) information, mal-information, and misinformation play in inflaming perceived hysteria, to which attempts at censorship rather creates a notion of social control. The media are mandated with the fundamental role of educating, creating awareness, and informing the public (Gever & Ezeah, 2020), this role becomes even more vital in the event of a pandemic. While information can be seen as a telling or retelling of facts or incidences or 'what the case may be', which although is subject to perspective

based reporting, misinformation depicts an unintended false information, believed to be true by its conveyor, and on the extreme side is mal-information, which can be seen as a deliberate attempt to inflict harm on a certain group or cause such group to perform a task, or refrain from such task, by spreading information which is untrue, but is based on reality and thus perceived to be true. This thus necessitates the basic questions viz; did the Nigerian media provide sufficient warning messages on coronavirus disease? Or to what extent did the reportage aid individuals in making the right decisions concerning their health choices?

While it can be affirmed that the media serves an all-important role of being a recognized authority for information dissemination in Nigeria, the media within the Nigerian society has overtime proven itself to be a two-prong hook tool, availing information to citizens on the one hand, yet, been in some ways instrumental, or aiding the instruments used in misinforming the populace as well as letting off unverifiable and deceptive messages to citizens. This comes in ways of either being directly involved in the spread of misinformation, or refusing to debunk an already spreading misinformation, thus creating a scenario which may look almost similar to that of either killing or letting die.

To further elucidate this point; a look at Oberiri, and Bahiya (2021) research which examined Television news coverage of COVID-19 pandemic in Nigeria from February 2020 to July 2020, with focus on African Independent Television (AIT), a privately owned TV, and Nigerian Television Authority (NTA), a government-owned TV- having been top television stations which paid undivided attention to the episodes of the pandemic, remains an invaluable resource. In documenting their findings, the researchers noted that;

“The private media allocated more prominence to the coverage of COVID-19. By implication, the private media had more COVID-19 stories telecasted on its headline which also appeared as the first headline in many cases. Furthermore, they had more stories that were aired 61 seconds and above. The findings also showed that the government media outlet cited more of government officials while the private media dwelled more on the Nigeria Centre for Disease Control (NCDC). The private media had more negative tone stories, and most of its stories used visual and motion footages. Overall, our findings suggest that media ownership and politics play a large role in the coverage of COVID-19 in Nigeria. This has affected the attitude of the public as many of them no longer see the pandemic as something serious, but rather politically motivated virus to highlight the failings of the political party in power” (Oberiri, and Bahiya, 2021, p. 1).

The above situates a negation in the act of "media framing". According to Msughter and Phillips (2020) media framing is the process by which an issue is portrayed in the news media. News and visual framing deals with the way the media present the issues of COVID-19 through text and visuals. Thus, the way audiences interpret what they are provided with, are products of media framing. This thus raises the fundamental questions; to what extent did the media coverage of the COVID-19 influence individual perception and overall thinking regarding the pandemic? Did the coverage cause persons to act and take precautionary measures or perform its opposite? Do we indict the media as being complacent in spreading misinformation or mal-information? In that regards, on whom do we affix the above blame; the media personnel who works for profit, or the gullible individual who appears to be lazy in making a proper research? Or do we indict the political landscape in Nigeria as being responsible for a lopsided coverage of the COVID-19 pandemic? Furthermore, with the present drive towards a global vaccination as a scientific measure geared towards eliminating the virus, to what extent can the above factors be said to have either increased or reduced the rate of vaccine hesitancy within Nigeria?

Vaccine hesitancy and the question of an ethical imperative

Realistically, the existence of an obvious global pandemic draws within a basic notion of health-security fuelled by some level of hysterical pandemonium, and fostered by what can be described as some form of scientific autocracy; which in the long run has been deemed as a beneficial form of hegemony. This further cuts across a basic permutation which sees hegemony and super-hegemony as an offshoot of the Hegelian thesis antithesis divide, with hegemony being placed at the level of the society, overwhelming and sometimes overriding the individualistic instinct of self preservation, in order to achieve public good, while super-hegemony would be constructed within the terms of this paper as an antithetical opposition to societal hegemony, wherein the individual argues for absolute independence in taking health decisions, that is; a claim that decisions pertaining to individual health should be based on 'one's own terms.'

What is thus described as a scientific autocracy depict the replacement of individualized autonomy over health decisions, for one directed by governmental decisions at the State level on the basis of scientific direction. By state, is meant an “association primarily designed to maintain order and security, exercising universal jurisdiction within territorial boundaries, by means of law backed by force, and recognized as possessing sovereign authority” (Raphael, 1990, p. 55). On this background, the rest section of this paper will attempt to show how the conflict between hegemony and super-hegemony, reflects in the perception of individuals to the pandemic, as well as how this conflict-based interrelation fuels what has been termed ‘vaccine hesitancy’, by evaluating its societal implication and the question of an ethical imperative. Starting from its discovery in China, the death toll of the pandemic and its fast spreading ability raised earlier question with which science itself tended to grapple with. Was it okay to tag the virus an airborne virus? Or disprove such claim? This debate again spiraled into one of mitigation measures; was it okay for government to shut down its airspace and restrict travels or was it quite a ridiculous idea? This also spiraled into a debate concerning preventive measures; was wearing a mask dependable as a preventive measure? Or was it just a protective technique? The fundamental challenge with this argument hinged then, even as it do now on the seeming problematic that wearing a mask wasn't necessarily protecting the first person from the disease, but the third person viz; an individual was to wear a mask not because wearing it would protect him per se, but rather it would prevent organic droplets (incase he were an unbeknownst carrier), from falling on spots from whence others could pick them up. Thus it was more of a preventive than a protective measure. But the debate again about the medical implication of those organic droplets trapped in the mask and the problematic it could cause for the individual wearer remained non-existent. Further still, the question as to what kind of masks ought to be worn raised another challenge; was it to be a surgical facemask? Or just a clothe nose mask? Notably, in each of these seeming

problematic, the place of decision making and independent choice gradually eroded the individual and rested on the specialist. The scientist was deemed best to know what kind of mask should be worn, what kind of places should and shouldn't be kept open, what kind of actions should be taken, much to the point that fired up with these new-found responsibilities, the scientific expert had taken the place of and become more like a mystic; seeming citadel of human knowledge with whom individual decision pertaining to his very existence must be checked.

The spiraling of these antics culminated in an early debate over what was more important viz; a cure for the virus or a vaccine for its prevention. This debate drew much similarity with the debate over mask wearing as to whether the mitigatory effect of wearing a mask was in itself a preventive or protective measure. However, the divide between getting a vaccine or a cure became one rift with both political and religious squabbles. Was it that easy to get a cure? Or was a cure much beneficial than a vaccine? The early researches into the nature of the virus showed the possibility of getting a cure, but the effectiveness of such cure led to a shift in focus from the necessity of a cure to the importance of a vaccine. Obviously seemingly guided by the notion that prevention appeared much better than a cure, the energies of researchers shifted into the development of vaccines, culminating in the announcement of successful vaccines such as AstraZeneca, Moderna, et al. but to what extent has the vaccine in itself being deemed safe, effective, or generally acceptable? While the question as to the safety of the vaccine has become a major aspect of popular debate, its effectiveness as a preventive measure remains an assailing point for a rejection of its reliability. This is not saying that questions as to its safety hasn't formed a major obstacle, however while such obstacle exists on an individualistic level, {that is; it is subjective, and may lack full empirical proofs, owing to the fact that the baseline adoption concerning the validity of the vaccine – as with major scientific researches – is based on an inductive model thus shielding it from any form of an absolutist claim as scientific facts in themselves must be subject to falsifiability, a point expanded upon by Karl Popper}, the question as to the vaccine's effectiveness have become surrounded by what seem 'tangible facts' of its ineffectiveness fluttering through waves of the media, most especially the social media. This has been followed by proofs of vaccinated fellows contracting the virus with some even dying of it, raising the question as to what extent the vaccinated could be protected from the virus? And whether or not being vaccinated have any meaning? Furthermore a major question has remained that if the vaccine in itself haven't adequately shielded the vaccinated from death, why then should the unvaccinated be obliged to take such vaccines? These as well as several other pertinent questions, have formed a fundamental foundation for disbelief in the vaccine, and the high spate of vaccine hesitancy within Nigeria.

By vaccine hesitancy is meant the "delay in acceptance or refusal of vaccines despite availability of vaccine services. Vaccine hesitancy is complex and context specific, varying across time, place and vaccines. It is influenced by factors such as complacency, convenience and confidence" (MacDonald, 2015, p. 4163). This definition further sees vaccine hesitancy as 'operating on,' or being influenced by three categories viz; confidence, complacency, and convenience, which have being described as the 3C model of vaccine hesitancy. In this model,

Confidence is defined as trust in (i) the effectiveness and safety of vaccines; (ii) the system that delivers them, including the reliability and competence of the health services and health professionals and (iii) the motivations of policy-makers who decide on the needed vaccines. **Vaccination complacency** exists where perceived risks of vaccine-preventable diseases are low and vaccination is not deemed a necessary preventive action. Complacency about a particular vaccine or about vaccination in general is influenced by many factors, including other life/health responsibilities that may be seen to be more important at that point in time. Immunization programme success may, paradoxically, result in complacency and ultimately, hesitancy, as individuals weigh risks of vaccination with a particular vaccine against risks of the disease the vaccine prevents... **Vaccination convenience** is a significant factor when physical availability, affordability and willingness-to-pay, geographical accessibility, ability to understand (language and health literacy) and appeal of immunization services affect uptake. The quality of the service (real and/or perceived) and the degree to which vaccination services are delivered at a time and place and in a cultural context that is convenient and comfortable also affect the decision to be vaccinated and could lead to vaccine hesitancy. (MacDonald, 2015, p. 4162-4163)

In this report, communication is seen as being an integral factor in vaccine hesitancy, although it may not necessarily be seen as a determinant (MacDonald, 2015, p. 4163). However, Machingaidze and Wiysonge (2021) suggest a 5C model for viewing vaccine hesitancy, while placing information as a major driver of these five determinants. To them;

The reluctance of people to receive safe and recommended available vaccines, known as 'vaccine hesitancy', was already a growing concern before the COVID-19 pandemic. A framework developed from research done in high-income countries, called 'the 5C model of the drivers of vaccine hesitancy', provides five main individual person-level determinants for vaccine hesitancy: **confidence, complacency, convenience (or constraints), risk calculation, and collective responsibility**. Promoting the uptake of vaccines (particularly those against COVID-19) will require understanding whether people are willing to be vaccinated, the reasons why they are willing or unwilling to do so, and the most trusted sources of information in their decision-making. (Machingaidze & Wiysonge, 2021, p. 1338)

It is thus evident that the spate of vaccine hesitancy in Nigeria cannot be separated from the huge influence these 3C and 5C model portend. Noticeably, major reasons for a rejection of the Covid19 vaccine borders around either one or more of these above outlined factors, to which information plays an integral role in determining such decision. In a research carried out at Ibadan about the perception and willingness of community members towards the Covid-19 vaccine, the results bordered in brazen similarity to two of the above 5C model, and hinged on convenience (or constraints) and risk assessment. The respondents feared a possible side effect of the vaccine, and worried about its cost; in the event of being required to pay for it (Illesanmi, Afolabi, & Uchendu, 2020). However, despite the present free nature of the vaccine, one may wonder what forms the yardstick for a rejection of its intake. Could it be linked more to a fear of some possible side effects? An obvious lack of confidence in the vaccination process? Or a worry over the potentiality of some yet unannounced risk hidden from public view? Or could the rising theories of a perceived social control, vis-à-vis; the emergence of a new world order, which serves as a threat to the religious sensibilities of a large number of Nigerians – who of course are predominantly religious – be a major reason for such hesitancy? The question about information spread most especially as pertains to the social and main stream media cannot be ruled out, however in

view of the forgoing, is there a single point, a factual convincing ground, a compelling narrative or an ethical imperative to which the state may appeal in view of decongesting these biases and thus create a willingness in the minds of Nigerians towards taking the vaccine?

The question of an ethical imperative must again be brought into the hegemony/super-hegemony position. Do we accept that the State possesses hegemony and thus some element of power to act in the will of the people for the benefit of all even though it may trample on the sensibilities of some, or do the individual possess some form of super-hegemony, that is; the authority to act on his own freewill whether or not his actions impede the health sensibilities of others? But most importantly, isn't the very fact of man's existence in society a major proof to the ethical responsibility we all owe each other? Isn't it the case that an individual ought to consider what should also be to the benefit of others even while making his individualistic decision? This is set against the background that man does not exist in isolation; his beingness is tied to the beingness of other beings. *Vis-à-vis*; the fact that one is a being, is tied to the very fact that others also are beings, and by virtue of such, the individual ought to act in the interest not just of his individualistic self, but also of the community. The very nature of several African indigenous societies was founded on a communitarian principle, wherein individual freedom was checked against the background of collective good. This draws much in line with the Utilitarian principle of ethics, which sees a moral action as that which would produce the greatest possible balance of happiness over unhappiness for everyone who would be affected by our action. Thus "the moral end to be sought in all we do is the greatest possible balance of good over evil" (Frankena, 1973, p. 34). However both the Kantian notion of categorical imperative, that is; the believe that humans are inherently capable of choosing the good over the bad, and the Aristotelian virtue ethics; which sees a good action as one inherent in its doer, sees the individual as a moral agent, to which a basic proof of his morality is in his consideration of the needs of others over his own individualistic permutations. This is not to negate the relevance of caring for one's self, but to bring to bear the realistic notion that human happiness is not individualistic in nature but must be with the greater good in mind. However, to what extent can the individual be trusted to act within the premise of this ethical imperative? Ethics in itself is not a law, and several ethical suggestions end up being just suggestions without any form of adherence. If in reality the individual holds an important ethical imperative in looking after the health of his neighbor by taking the Covid-19 vaccine, should it not be the case that such ethical notion comes with it a force of law? In reality, isn't the government, in its role as a purveyor of societal good permitted to seize on its constitutional powers in mandating a compulsory intake of the vaccine? At what point then do individual right intersect with corporate responsibility, and at the point of such intersection, what variable exactly comes to play? Or put more strictly, what does responsibility (the status of being responsible) mean between the state and the individual? Is the responsibility on the state or the individual?

Vaccine hesitancy and the question of responsibility

By responsibility is meant; the state of being accountable for an action. It could be linked more properly with the notion of freedom to act or take particular decisions about one's own life without any form of hindrance. However in the case of a ranging pandemic such as this, the question of responsibility borders on who ought to be the sole purveyor of health decisions, not just on an individual but also on a societal scale. The contention as to the designation of this purveyor borders between the state and the individual. On the one hand, the state attempts to exert the privilege of being the chief custodian of societal coherence, on the other hand, the individual argument is hinged on a premise which sees individuality as the base material from which the state itself is composed, if the state is seen as a collection of different individuals, to what extent can responsibility for actions be placed on it, rather than on the individuals from which its composition is derived, furthermore how do a juxtaposition occur between an emphasis on the 'me' of the individual versus the 'us' of society?

While a pragmatist approach on vaccine hesitancy would place the responsibility clause on the individual, that is; whatever works for the individual is deemed as true, on what premise the individual thus becomes the sole determinant of his action, whether or not such action would impact on the generality of society, in the same vein, no form of overt pressure, apart from rational persuasion can feature in his decision making process. However, the utilitarian approach would place responsibility on the state. This is hinged on the fact that the good, is that which is deemed as favorable or that which will give the greater happiness to the greater number of persons. On this premise, the state can assume the responsibility of being an arbiter, in its role as the "association primarily designed to maintain order and security, exercising universal jurisdiction within territorial boundaries, by means of law backed by force, and recognised as possessing sovereign authority" (Raphael, 1990, p. 55). Here, the authority of the state would be said to transcend that of the individual to the extent to which such authority remains legal, that is; remains operational within the ambits of recognised laws and legal precedents. In attempting a synchrony on how the state power must exceed the premises of moral or religious arguments against its enacted precepts, Raphael posits;

The individual may claim that he is entitled to disobey the law, but the state has the power to force him to comply with its requirements... a conscientious objector who has not been able to satisfy the state authorities, may think himself morally entitled or obliged to disobey the law... it is for such reasons as this that some theorists speak of a concept of 'political sovereignty', distinct from legal sovereignty. The argument is designed to show that the sovereignty of the state should be defined for the purpose of politics, as supremacy of coercive power rather than of legal authority. (Raphael, 1990, p.157)

This raises critical questions as to whether or not citizens of the state could end up becoming victims or captives of the law creating a form of obedience based on coercion and not freewill. But the foundation of democratic society is built on the notion of freedom. Each individual ought to be at liberty to act based on one's own freewill rather than a coercive force. However, a further argument in this regards draws on the supposition that democracy runs on a platter of majority rule but such argument is immediately trampled on the premise that the protection of minority rights ought to form a foundational subset of democratic principles. But the very fundamental question remains even if government possess such coercive privilege; does such privilege extend over to a determination of what an individual takes into his system, when fundamentally the individual's body is his property and not that of the state?

There obviously exist a limit to state power, and in the debates surrounding vaccinations such limits comes to full glare. Firstly the individual is an independent entity, “a concrete and intelligible unity-identity-whole,” (Lonergan, 1957, p. 343) this draws on the most basic reality that the individual possesses sovereign authority over matters that pertains to himself. But also the individual is a being amongst other beings which impresses a limitation to a performance of whatever comes to his mind, yet most importantly the individual is a rational being, which leaves him with an ability to reason not just within the context of himself, but in view of an existing social structure of which he is a part, and whose very existence must serve to promote rather than destroy the existing bond of societal harmony, security and health. This thus brings to bear the notion of a corporate social responsibility to which a case for the necessity of being vaccinated can be fronted, still in a way that leaves the individual at the center of the decision making process. The individual is to see both from the perspective of his health protection, and that of the community, that there exists tangible benefits both for self and others in getting vaccinated, not on the basis of some coercive sanctions threat, but on grounds of a corporate social responsibility, bringing to purview the Rortarian view of knowledge as a form of social agreement, as fronted by his notion of ‘Epistemological behaviorism’ (Rorty, 1979). To Rorty, while no objective arbiter exists for human claim to knowledge and thus no authoritative premise for juxtaposing any such claims, knowledge must be seen as a form of agreement amongst individuals in a society. This means that individuals set the benchmark for what should be termed acceptable or unacceptable within the framework of their existing social strata. This does not mean that there exists no knowledge claims which may be more viable than others, yet the very notion of human existence is bound within the framework of existing social structures; hence knowledge must be viewed from the perspective of what society lets us say. While counter arguments assail the Rortarian position, the very core of his claim hinges on a reality that man’s very nature of being a social animal creates a tendency to base actions on ‘his own terms.’ The individual desires to exert decisive role over his own affair thus bringing to light the very notion that contra an objective healthcare decision centered on the precepts of the central government and scientific experts, there needs must be a diversified format which thus brings along the community into making decisions based on their communal peculiarities. This infers that the scientific notion concerning the necessity of a vaccine should rather form objective grounds for subjective interrogations, that is; while the scientific facts presented are obviously objective in nature, the decision on communal safety should be set on communal terms, in such way, the community serves as a check on the excesses of individuality, and since such health decisions emanates from a process of communal interrogations, the individual is more tied to oblige. While this approach may seem workable on the foundation that several African, and in a particularistic sense Nigerian societies are communitarian in nature, and a major domain of vaccine hesitancy has been the rural communities, the approach to urban areas may involve more sensitizations from the media, thus bringing to bear the fundamental aspect of her role in the vaccine discourse. However all decisions on the question of a vaccine must stem from the individual, as the society itself cannot exist without taking cognizance of the important principles of personhood.

Conclusion

This paper has examined the nature of vaccine hesitancy and the role of the media in either stoking or dampening negative perceptions towards the vaccine. While arguing for the placement of emphasis on individual right over any form of coercive force which the state may take in ensuring that citizens receive the covid-19 vaccines and are thus sure of being protected, the paper favors an arrangement based on the Rortarian model of ‘Epistemological behaviorism’, which sees the society as being the determinant of what can be categorized as knowledge. On this premise, balancing Rorty’s idea with the communitarian framework of several African societies, the paper argues that a community based model, emanating from the community in itself, on the basis of objective health information provided by government would aid in creating a willingness amongst individuals, based on shared social bonds at the community level, to get vaccinated. Furthermore, the paper treats the subject-matter of the media, and how it’s reporting play an integral role in increasing trust or skepticism towards the vaccine. Fundamentally, the question of the covid-19 pandemic, while objectively a fact cannot be separated from the various subjectivities that surrounds its discourse; however, despite these existing grey areas, the question of individual autonomy remains paramount, as the entirety of the Covid-19 narrative, is built against the background of being a health challenge to the individual.

References

- Frankena, W. K. (1973). *Ethics (2nd edition)*. New Jersey: Prentice-hall inc.
- Gever, V. C. & Ezeah, G. (2020). The Media And Health Education : Did Nigerian Media Provide Sufficient Warning Messages on Coronavirus Disease. *Health Education Research*, 35(5). <https://doi.org/10.1093/her/cyaa020>
- Ilesanmi O, Afolabi A, Uchendu O. (2021). The prospective COVID-19 vaccine: willingness to pay and perception of community members in Ibadan, Nigeria. *PeerJ*. DOI 10.7717/peerj.11153
- Lonergan, B. J. F. (1957). *Insight: A study of human understanding*. 5th ed. London: Longmans, Green & Co.
- MacDonald N. E. (2015). Vaccine Hesitancy: Definition, Scope and Determinants. *Vaccine*, 33(34), 4161-4164. DOI: 10/1016/j.vaccine.2015.04.036.
- Machingaidze, S. & Wiysonge, C. S. (2021). Understanding Covid-19 vaccine hesitancy. *Nature medicine* 27: 1338-1344.
- Mslugter, A. E., Phillips, D. (2020). Media framing of Covid-19 pandemic: A study of daily trust and vanguard newspapers in Nigeria. *International Journal of Health, Safety and Environment*, 6(5), 588–596
- Oberiri D.A & Bahiyah O. (2021). Television News Coverage of COVID-19 Pandemic in Nigeria: Missed Opportunities to Promote Health Due to Ownership and Politics. *SAGE Open*. DOI: 10.1177/21582440211032675.
- Raphael, D. D. (1990). *Problems of political philosophy (2nd edition)*. London: MacMillan education LTD.

Rorty, R. (1979). *Philosophy and the mirror of nature*. Princeton: Princeton University Press.

Shereen, M. A., Khan, S., Kazmi, A., Bashir, N., & Siddique, R. (2020). COVID-19 infection: Origin, transmission, and characteristics of human coronaviruses. *Journal of Advanced Research*, 24, 91–98. DOI: <https://doi.org/10.1016/j.jare.2020.03.005>

UNICEF. (2020). *UNICEF Key Messages and Prevention and Control in Schools*.