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Articles

Qualitative Research Designs, Sample Size and Saturation: Is Enough Always Enough?

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Abstract

Qualitative research is currently growing in acceptance, especially within the health research scope. Notwithstanding this positive trend, issues about the adequacy of sample size have been a contention among qualitative and quantitative-based researchers. Our paper seeks to address some of the issues facing popular qualitative designs in human research with this backdrop. Our article explains the five key qualitative designs (case study, narrative inquiry, ethnography, phenomenology, and grounded theory). Based on the existing studies, we reported their respective sample size ranges that supported their data adequacy points. Our paper posits that sample size concerns for qualitative designs revolve around their extensiveness and appropriateness. Therefore, qualitative researchers' judgement for data adequacy for a particular method should not only rely on data saturation or a rule-of-thumb. Instead, they should also be guided by their research goals, sampling approach, and research participants. Furthermore, we recommend that qualitative researchers always verify the quality of data saturation by conducting additional interviews and be more open in reporting their selected methodologies.

Keywords: case study, ethnography, grounded theory, narrative inquiry, phenomenology, qualitative studies, sample size, sampling.

1. Introduction

Sample size determination in qualitative research is a topic of concern (Marshall, 1996). The debate revolves around acceptable sample size and how representative the selected samples are (Kuzel, 1992). Other scholars have also argued whether researchers can decide on the number of participants sampled in a given study a priori or not (Sim et al., 2018). The sample size of any research work is crucial in satisfying the scientific quality and ethical standards (Francis et al., 2010). For instance, over-sampling and under-sampling wastes research funds and participants' time. However, the use of inadequate samples that are needed carries ethical and scientific

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challenges as participants may only reflect a limited worldview that may not necessarily reflect the general population of interest. Such data produces non-generalisable results and also wastes research funds and time. The burden of offering adequate sample sizes in research has been one of the major criticisms against qualitative studies.

One of the most acceptable standards in qualitative research is to allow the data to reach data saturation (Creswell, 2013; Creswell, Creswell, 2018). Data saturation is a data adequacy point where no new information could be obtained from participants in qualitative research (Creswell, 2013). Researchers like Morse (1995, 2007) argue that data saturation is 'theoretical' as the idea that 'true saturation' of information may only be assumed. Thus, the claim that theoretical data saturation point has arrived during qualitative research is relative to space and time. Amid all these arguments, qualitative researchers are required to address how many participants are enough to reach data adequacy and possible theoretical saturation. Failure to reach data saturation could influence the quality of research and the study's trustworthiness (Fusch, Ness, 2015).

In practice, data saturation can be problematic given the many research designs. As evident in qualitative studies, data saturation for one study is not enough for another (Fusch, Ness, 2015; Marshall, Rossman, 2011). For instance, the point at which data saturation is attained in a phenomenological design differs from a case study or an ethnographic study (Creswell, 2013; Creswell, Creswell, 2018). Also, data saturation could be determined by the available number of participants in a target population and not necessarily the amount of information. Arguably, as low as six interviews may provide saturation in a population of six women with a particular lived experience. Thus, data saturation is not about the number per se but the depth of data (Fusch, Ness, 2015). Essentially, data saturation is about the quality of data and not the quantity of data, although some rules of thumb for qualitative sample sizes suggest best practices for specific designs (Creswell, 2013).

2. Methods and Materials

The materials used in this study were obtained from scholarly publications and monographs of researchers such as Creswell, Fusch, Ness, and others. Furthermore, we consulted the official websites of several qualitative research experts worldwide to determine best practices for sample size determination.

The study was conducted mainly using the systematic review approach for literature analysis. According to Molchanova (2019), this method comprises "a variety of general research methods such as analysis, synthesis, comparison, specialisation, etc." (p. 20). Scholars like Fusch and Ness (2015) have used this approach in their study.

3. Results and Discussion

Qualitative research designs can be seen as a rough sketch to be filled in by the researcher as the study proceeds (Devers, Frankel, 2000). The sample size for qualitative studies has been argued from different perspectives. Researchers like Bernard (2000) suggests that between ten and twenty knowledgeable participants are sufficient to uncover and understand the fundamental categories in any distinct cultural domain or study of lived experience. Similarly, Ritchie et al. (2014) advise an upper limit of fifty for interview studies because the quality of data collection and analysis may suffer from larger sizes. Nevertheless, Boddy (2005) suggested an upper limit of twelve focus groups or thirty in-depth interviews if researching a relatively homogenous population.

Notwithstanding the general assertions, Onwuegbuzie and Leech (2007) did not recommend sampling specific numbers for qualitative research. Nonetheless, they proposed examining sample sizes in previous studies of similar design in which saturation was reached and using a figure within the range of such sample sizes. We analysed some five key qualitative designs (case study, narrative inquiry, ethnography, phenomenology, and grounded theory) and their respective sample sizes based on this argument.

Case Study

Case study researches aim at exploring specific phenomena, comprehensive in a contemporary context (Crowe et al., 2011; Rashid et al., 2019). As such, case study researchers do not usually focus on the cases to a larger population. As applicable in most qualitative study

designs, sample sizes in case studies are typically small (Hammarberg et al., 2016; Vasileiou et al., 2018). Sample size determination in qualitative case studies is mostly, if not always, inherent in researchers' definition of what a case is and the boundaries of the case (Gerring, 2004; Hyett et al., 2014). Yin (2018) referred to this as 'bounding the case'. By bounding the case to determine the sample size, a researcher first clearly defines the specific unit of analysis. Available evidence on qualitative case studies reveals that researchers who conduct case studies may decide to either recruit a single unit of analysis or multiple units of analyses; this defines the sample size (Crowe et al., 2011; Rashid et al., 2019; Schoch, 2016).

The sample size for a case study depends on the research question and the epistemological assumption behind the research (Mills et al., 2009). For example, a single case approach may be adequate when the researcher is interested in formulating an in-depth contextualisation and an idiographic explanation of a research problem. As the name implies, a single unit case study mainly focuses its interest on an individual case. Most researchers use it, operationalising a case study to a sample of one. Contrary, Mills et al. (2009) proposed that when the researcher is interested in using contrasting observations to provide more insight into propositions and replication of the findings, a multiple case approach is recommended. In a multiple case study approach, cases should be added until theoretical and information saturation. All the same, no specific rule dictates the number of participants in a multiple case study (Paré, Elam, 1997). However, some literature recommends using four to fifty cases for a multiple case study. Considering the focus of case study design, too many cases in a multiple case study may lose the depth of information required (Mills et al., 2009).

Narrative Inquiry

As applicable in most qualitative designs, there is no single or strict rule for determining the appropriate sample size for a narrative inquiry (Francis et al., 2010; Vasileiou et al., 2018). Primarily, narrative inquiry utilises purposive sampling techniques, where researchers focus on obtaining detailed and rich information from 'fit-for-purpose' participants (Nigar, 2020; Palinkas, 2014). Since narrative inquiry seeks to learn more about the narrator's culture, historical experiences, identity, and lifestyle, the emphasis is not on large sample sizes. As such, many narrative studies focus on one individual, and this individual is selected based on his or her ability to provide an understanding of the issues being addressed in the survey (Haydon, van der Riet, 2014; Moen, 2006).

Based on the nature of information required, some researchers may consider the need to involve more than one person in a narrative inquiry. Vygotsky (1978) argued that the researcher goes beyond interviewing the isolated individual when the study aims to understand human development and functioning. Specifically, a systematic review revealed three studies reporting specific sample sizes between one and twenty-four in education studies and sample sizes ranging from one to fifty-two at an average of two sites in health science (Guetterman, 2015).

Ethnography

Like other qualitative designs, a researcher using ethnography is not bound by the use of specific sample sizes (Morgan-Trimmer, Moser, Korstjens, 2018; Wood, 2016). Most ethnographic studies focus on offering a detailed description of a culture. Since the complete picture of the definition of culture is complex, it may be impossible to derive almost all the essential information from one person. This approach accounts for more than one participant recruitment, although one participant may be used in some cases. Most importantly, when a researcher desires to obtain information that is truly representative of a larger sample, the determination of overall sample size in ethnographic studies is influenced by the culture sharing group (Jaimangal-Jones, 2014; Jones, Smith, 2017). When the culture sharing group has an adequate number to be interviewed or may constitute a size appropriate for focus group discussion, ethnographic researchers may include the entire group within the sample (Davis, Johnson, 2008). The review of sample sizes with an emphasis on qualitative designs by Guetterman (2015) expounds on specific sample size ranges utilised in most ethnographic studies both within education and health sciences. Guetterman found that ethnographic studies conducted in education had sample sizes ranging from six to thirty-three with an average of twenty-three. The smallest sample was nineteen in health science, with 586 being the largest sample size.

Phenomenology

Phenomenological research describes the shared meaning of multiple people's lived experiences with a topic or phenomenon. According to Husserl (2012), phenomenology recognises the underlying logic of human experiences and communicates that logic accurately. Typically, phenomenological investigations begin with a query concerning a phenomenon. Hence, a phenomenological study is an explanatory method that comprehensively explains what it means to be human by studying the lived experiences of individuals or groups to build concepts (Creswell, 2013; Husserl, 2012; van Manen, 1990). The phenomenological researcher's job is to "build" the investigated object based on its manifestations, structures, and components (Creswell, 2013).

According to Morse (1995), participants in phenomenological research are interviewed by researchers to provide a considerable amount of data. Consequently, fewer individuals, typically between six and ten, are employed. Guetterman (2015) noted an average sample size of fifteen, ranging between eight and thirty-one in educational research, while participants between eight and fifty-two, with a mean sample size of twenty-five, were seen in health studies. Similarly, five to twenty-five participants are suggested as adequate for phenomenological studies by Creswell (2013). Although small sample sizes are common in phenomenological studies, it is essential to emphasise that the researcher may need to keep adding individuals until saturation to fulfil the study's goal.

Grounded Theory

The ground theory aims to create a 'theory' about a phenomenon using interviews and other data collecting methods such as observations, documents, and audiovisual material (Creswell, 2013; Guetterman, 2015). According to Strauss and Corbin (1998), a critical concept in grounded theory is that it is indicative, and theories are developed based on evidence from people who have gone through the process. As a qualitative research design, the grounded theory study attempts to uncover a theory rather than focusing on individual stories and shared experiences. According to qualitative research academics, the issue of "how many" in determining the sample size is one complex topic to answer directly. It is a crucial aspect in assessing the quality and validity of qualitative research (Spencer et al., 2004). Generally, data saturation as a principle guides data adequacy in grounded theory design. This principle usually occurs after the theory is formulated.

Determining saturation points across most qualitative studies is fluid. Some authors have proposed that data saturation for grounded studies could be reached at nine interviews. In contrast, others suggest sixteen and twenty-four interviews (Aldiabat, Navenec, 2018). Specifically, Creswell (2013) recommended twenty and thirty informants for a grounded theory study, while Morse (2000) indicated twenty to thirty participants with two or three unstructured interviews per person. Similarly, Marshall et al. (2013) recommended that the sample size for grounded theory should generally include between twenty to thirty interviews following an analysis of eighty-three studies. On the other hand, Thomson (2010) suggested that the average sample size for grounded theory is twenty-five. Nevertheless, thirty interviews allow the researcher to ultimately construct patterns, ideas, categories, characteristics, saturation, and the dimension of a particular phenomenon. According to Thomson (2010), while saturation is expected to occur around the tenth interview, it is good to verify saturation by doing more interviews.

4. Conclusion and Recommendation

Our paper study provides an understanding of 5 qualitative designs, their goals and sample size issues. It is important to note that sample size concerns for qualitative designs revolve around their extensiveness and appropriateness (Guetterman, 2015). Thus, the norm in terms of the minimum number of interviews for a specific design should not only be judged by data saturation or a rule-of-thumb alone. Given the research goals, purposive sampling during qualitative research enhances selected groups' understandings to develop theories and concepts. It is always safer to verify the quality of saturation by conducting additional interviews for any reviewed designs. Qualitative researchers should always be guided that the appropriate sample size depends on several factors specific to the study concerned.

5. Declaration of Competing Interest

The authors of the manuscript declare that there is no interest in conflict, and all reference materials were dully acknowledged.

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COVID-19 Pandemic and Its Influence on Nigeria's Education: A Review

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Abstract

The pandemic took the whole world by surprise and has caused considerable havoc in every area of human endeavour. The paper traced the origin of COVID-19 from Wuhan province in China to Nigeria. The pandemic generated a lot of adverse effects in the country by bringing untold hardships on the educational, economic, social, and psychological lives of the people. However, the emphasis of this paper is on the effects of the pandemic on education. This paper presents a review of the impact of COVID-19 on Nigeria's education. To this end, the author explored the educational and learning concepts with recommendations for future adjustments. The study noted that since the Federal Government of Nigeria announced the closure of its 104 Unity Schools on 26th March 2020, to check the spread of the coronavirus, all other schools, including higher institutions of learning, were also shut down. This closure order, coupled with poverty, negatively affects students' learning. School counsellors in Nigeria must reach out to students to assist in managing their emotional maladjustment and develop the resilience to cope with their studies despite the challenges of the pandemic in the education space. Additionally, access to virtual learning opportunities ought to be provided by the state and other stakeholders in education to support academic activities during the pandemic. Also, the government must ensure adequate post-lockdown plans to assist students in returning to everyday life gradually.

Keywords: Coronavirus/COVID-19, counselling, education, pandemic.

1. Introduction

The 31st December 2019 marked the beginning of a world pandemic. A disease with an unknown cause was reported in Wuhan, Hubei Province, China (Jones, 2020). However, on the 9th January 2020, The Chinese Center for Disease Control and Prevention (CDC) unveiled the cause of this disease as it pointed to a novel coronavirus being the cause of the coronavirus disease 2019, code-named COVID-19 (The European Centre for Disease Prevention and Control, ECDC, 2020). What started like an endemic disease in China soon became a global pandemic. The ECDC (2020) reported that by 25th March 2020, over 416,916 COVID-19 cases were reported globally by over 150 countries. Considering its spreading pattern from Wuhan, China, where it first started, it is clear that the spread of the disease is unprecedented (Bamfo et al., 2020).

COVID-19 has become a dreaded pandemic with several adverse effects in all facets of human endeavour. The pandemic affected the economy, education, and social lives because of its devastating effects and created food insecurity, loss of income, looming debts, and other challenges in Africa (Bamfo et al., 2020; Ozili, Arun, 2020). Having assumed a pandemic status with its infectious attributes, COVID-19 poses a lot of danger to these African countries like Nigeria

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(Farayibi, Asongu, 2020; Ogunode et al., 2021). Nigeria's first COVID-19 case was reported on 27th February 2020, when an Italian citizen who visited the country became ill two days later when he travelled from Lagos to Ogun State (Ebenso, Otu, 2020; Nigeria Centre for Disease Control, 2020). His status was confirmed as a positive case of COVID-19 shortly. As the world was entangled in the scourging effects of this disease, Nigeria joined the comity of nations mourning loved ones while going through the challenges elicited by the disease after its index case and many other cases followed. Despite Nigeria's aggressive and coordinated responses to curb the spread of the disease, COVID-19 continues to affect human life adversely, as Lagos and Abuja soon became epicentres for the pandemic in Africa (Ebenso, Otu, 2020; Farayibi, Asongu, 2020; Nigeria Centre for Disease Control, 2020).

COVID-19 worsened the education system in Sub-Saharan Africa (Omang, Angioha, 2021). Before the disease outbreak, UNESCO Institute for Statistics (2019) had confirmed that 47 % of 258 million were out-of-school children, with 30 % attributable to conflict and emergencies in the region. Also, the United Nations Children's Fund and UNESCO Institute for Statistics (2015) suggested that 37 % of the internally displaced persons in Borno, Adamawa and Yobe states of Nigeria were school-aged children between 6 and 17. These reports show that even before the pandemic, countries within sub-Saharan Africa were prone to educational disruptions due to myriads of challenges. Among the several areas of human life affected in Nigeria, education stands out as one of the worst (Omang, Angioha, 2021). COVID-19 outbreak, which eventually led to an abrupt end of educational activities in Nigeria like other countries, added many challenges to the already suffering system. Thus, this paper briefly reviewed the effects of the COVID-19 pandemic on education, emphasising the Nigerian situation.

2. Results and Discussion

Effects of COVID–19 Pandemic on Education in Nigeria

On 19th March 2020, the Federal Government of Nigeria announced the closure of its 104 Unity Schools across the country. This measure was a preventive step to check the spread of the coronavirus from 26th March 2020 through the Permanent Secretary, Federal Ministry of Education, Mr Sonny Echono, who gave the order on behalf of the Minister of Education, Malam Adamu Adamu (Ogunode et al., 2021). All other schools, including higher institutions of learning within the country, were also shut down. Closure of schools because of the coronavirus became a global trend as a response mechanism to combat the virus. Sintema (2020) reported that by the end of March 2020, over 180 countries ordered the closure of schools, with adverse effects on 87.4 % of learners (over 1.5 billion students).

Evidence suggested that Nigeria's disparity in access to the internet and electronic resources negatively affected students' learning (Ogunode et al., 2021). As the Nigerian government intensified the national COVID-19 measures like city lockdown, national palliative measures to cushion the livelihood were grossly inadequate, thereby placing poor students at the risk of not getting access to online education. Ozili (2020) opined that the pandemic outbreak caused suffering to poor Nigerian citizens because of weak institutions that could not effectively respond to the pandemic and the lack of social welfare structure that could cater to the poor and vulnerable citizens. Many students fall within the poor and vulnerable citizens who could not afford basic needs.

Additionally, the COVID-19 lockdown led to so many domestic violence cases in many homes globally, including Nigeria. Nigeria's chairman of the National Agency for Prohibition of Trafficking in Persons, Dame Julie Okah-Donli, decried rising domestic violence cases in a live broadcast from African Independent Television on 25th April 2020 as the lockdown continued. With evidence from studies by authors like Fawole et al. (2021) and Fabbri et al. (2021), the likely increase in domestic violence cases in Nigeria could negatively affect students' learning activities and learning outcomes during the COVID-19 period. Consequently, learners exposed to domestic violence during the lockdown may have learning difficulties after the exposure.

Further, many students' mental health during the COVID-19 lockdown were affected by stressful situations. Life's stressors like poverty, hunger, poor infrastructure, loneliness or boredom, loss of dear ones and domestic violence, which increased during the lockdown, could trigger mental health challenges like depression, anxiety disorder, insomnia and stress-related disorders. For example, Olaseni et al. (2020) confirmed insomnia, depression, posttraumatic stress

symptoms, and anxiety among Nigerians due to the COVID-19 pandemic. These disorders could mitigate the effective learning of Nigerian students during and after the pandemic.

3. Conclusion and Recommendation

This paper briefly reviewed the COVID-19 pandemic, emphasising the Nigerian situation. Additionally, the study analysed the effect of the pandemic on Nigeria's education. It is recommended that bodies like the Counselling Association of Nigeria and the Association of Professional counsellors in Nigeria provide needed learning support based on students' existing psychosocial sufferings. In conjunction with other ministries and agencies, the ministry of education should put structures that would address the educational needs of students during and after the pandemic. Online, radio and television programmes should be in place to teach students during and after the lockdown. The government should support the poor and vulnerable students to benefit from online, radio and television programmes to teach students. Finally, relevant government agents need to enlighten family members about the harmful effects of domestic violence, its impacts and what to do when there is a case of domestic violence.

4. Declaration of Competing Interest

The author declares that there is no interest in conflict, and all reference materials were dully acknowledged.

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Good Trouble – Protest Utilization of Black Teen and Adult Women's Technical Capital

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Abstract

This paper aims to extend the researcher's initial findings of information and communication technology (ICTs) of a decade ago, with current cultural and technical capital as a framework for considering alternative approaches of empowering Black Women as our next technology leaders through current social justice movements. This study focused on protest movements led by three Black women; leading groups of different ages and social classes (most notably Black Lives Matter), and their frameworks in organizing protests. The analytics used were website traffic statistics, demonstration participant numbers, and similar dominant themes revealed between all three movements. In times past, these Black women's ideas may have only been exchanged in spaces such as in family food-way meal preparation and health needs. Combined with current technological advances, these frameworks overlap with designing external performance spaces with designs by young Black girls in k-12 settings. The researcher claims that the deficit model provided by digital divide research phenomenologically captured the structure Black women efficiently used to articulate cultural capital and technology frameworks. These frameworks helped in organizing the George Floyd influenced protest marches during the challenging time of the COVID-19 pandemic.

Keywords: cultural capital, technical capital, black lives matter, foodways, digital divide.

1. Introduction

As computer functions become more accessible through television, radio, telephones, mobile phones, wi-fi, and the internet, some believed that the digital divide was becoming obsolete (Facer, 2007). However, since the recent COVID-19 pandemic, with people out of work and educational institutions "online", recent federal funding initiatives towards closing the gap have lessened that theory. People benefiting from easy accessibility include those with jobs such as first responders and high-income computers for enjoyment and innovation (e.g. chat rooms, website design). Those not benefiting include a computer-scarce public who lack accessibility, education, and finances (Barzilai-Nahon et al., 2004). However, some steps are being taken to close the digital divide. One of these steps is the development of Information and Communications (ICT) programs over the last two decades.

Generally, ICT was known as a method of assisting the nonusers in attaining access to and utilizing available technology that will lead to a superior quality of living, like a job opportunity, or improved emotional stability, like learning basic technology skills (Heres, 2005; Gary, 2011). With today's COVID-19 global climate, ICT sectors which now represent global manufacturing [many

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factory workers being women] conferences, and most financial institutions due to shutdowns have been financially hit harder more than any other time in history. This has generationally had a particular impact on women in our society.

In the early 2000s, the female population had less access and knowledge about technology and its uses for improved economic growth (Selwyn et a., 2006). Specifically, women attaining Bachelor's degrees in computer-related fields has dropped from 38 % in 1985 to 28 % in 2003, of which 17 % continue towards graduate-level work in the same field. Initially, the researcher discovered that reasons for these worsening numbers in academia include the ―nerd factor perception by women students of those attaining a computer technology degree (Dean, 2007). Research implies that women need resocialization to train towards male occupations and support in sexist technology labor malpractices such as unfair pay and lack of maternity leave (Gary, 2011).

Today, only 20 % of computer technology professionals are women (Women in Computer Science, 2019). Furthermore, out of three million working Computer and Information scientists in the United States, 796,000 are women, of which 106,000 are Black women (44,000 Hispanic Latina). Similarly, out of 291,000 working Mathematical science professionals, 107,000 are women, of which 3,000 are Black women (5,000 Hispanic Latina). For Black women with disabilities (employment in science and engineering-related fields—a broader category), the report revealed 320,000 out of 33,516,000 in total (National Center for Science and Engineering Statistics, 2019). Even with programs that teach school-aged Black girls technology design, according to Bryant, founder of "Black Girls Code," more support is needed from technology companies at this moment to invest in opportunities for Black Women (Mamiit, 2020).

Although this computer divide dilemma affects more severely women in third world countries, in first world countries, it's more challenging for Black women. Two decades ago, Black women were still more likely to live in poverty and single care providers for their children (Community Technology Works, n.d.; National Telecommunications and Information Administration, 1999). With the pandemic unemployment rate, Black women-led households disproportionally lead that poverty list (New York Times, July 1, 2020). Still, these Black women are utilizing instinctive communicative skills (e.g. motherhood, cooking, and communication via social networks) that should be utilized during the pandemic and racial protesting to develop new ICT ecosystems (Mamiit, 2020).

Black Women and ICTs

Two decades ago, low-income and urban women in the United States spent their money on ICT products with such expensive purchases as cell phone/Personal Digital Assistant (PDA) devices and hair care products (Wei, Ven-Hwei, 2006). In Black women-led households, more was spent on telephone services than any other race or gender (Humphreys, 2006). Today, 54 % of Black families have lived during the digital age of technology. Therefore, emergent such as Black Twitter, COVID-19 emergents such Verzuz musical battles amongst black musicians, and DJ-NIceClub Quarantine (Instagram) have had millions of followers, including families led by Black women. Hence, Black women use those sites the most (Pallien, 2019).

For example, women draw on kinship networks in different ways that develop reciprocity and trust in ways men cannot facilitate. Also, women master different types of communication styles such as synchronous (simultaneous) talk/interaction (e.g. Zoom Meetings and social media comments sections). This skill is evident in our current world pandemic. Similar to the Village Phone Microlending program, where third-world women became the connectors of information for their families via a centralized cell phone (Yunus, 2005; Gary, 2011), so too are first-world Black women. They are often called upon for online health research for family members with COVID-19 (without insurance) disproportionally.

Similar to the village phone-ladies of Bangladesh, according to Fox (n.d.), more common social capital practices include women cooks from all around the world that use food-way (cooking traditions) to maintain family and community relationships while gaining income. Likewise, out of work Black families, with no income, suffering from food insecurities (no food) depends on the head of the household, often Black women, to use their mobile phone (if still on) to research food-banks to put together a family meal (Centers for Disease Control and Prevention, 2020; Evich, 2020). This expectation of Black women's responsibility is seen early with young Black girls.

Adultification

The first-world remnant of gender roles as it pertains to the traditional roles in social networking norms of women has been designated a term (although generationally present). Adultification is a study captured by "The Georgetown Law Center on Poverty and Inequality" that systemically reveals that k-12 Black girls are often "less nurtured, protected, supported, comforted, are more independent, [and too adult]," in comparison to their other classmates, including African American/Black Boys. These girls are often subjected to dominant paradigm images associated with social networking norms of the slavery south, which included aggressiveness, seductiveness, and self-sacrificing perceptions. These viewpoints are often implicitly assumed by both the student and the teacher.

Consequently, a trend in the Pandemic Zoom online school is for Black girls to be more adult than their White girl counterparts. Such is in the case of Grace, a Black k-12 student with ADHD who is currently on probation. Judge Mary Ellen Brennan defined the incomplete school assignments of the Birmingham Groves High student as a probation violation, resulting in two-month incarceration starting in May 2020. As said by an online retweet by "Black Lives Matter Los Angles" matriarch Dr. Melina Abdulla, this is the "adultification of girls of Color" (See Black Lives Matter Twitter Photo commentary-Provided in this Peer Review). To reiterate, Brock (2010), the possibility of turning this cultural appropriation into a positive could transition through the use of technical capital. Furthermore, this researcher believes a new phenomenon is occurring that can transition young Black girls to effectively use their adultification nature of independence and mothering as skill-sets toward owning their identity (traits of Black Feminism) to organize large crowds of civil unrest on social websites and in person.

2. Methods and Materials

For this article, this researcher selected a topic receiving major attention during the COVID-19 lockdown. On May 25, 2020, the George Floyd killing in Minneapolis, Minnesota received international attention. During the said event, the arresting White officer, Derek Chauvin, knelt on Floyd's neck for approximately eight minutes and forty-six seconds. The reason for the arrest was for the alleged use of a counterfeit 20-dollar bill. Handcuffed and lying face down, Floyd repeatedly said "I Can't Breathe" to the demise of onlookers. Officers J. Alexander Keung and Thomas Lane supported restraining Floyd, while Officer Tou Thao separated a crowd of onlookers who pleaded with Chauvin to remove his knee, even after Floyd remained motionless and cried out to his deceased mother.

Participants

This researcher analyzed three groups operated by Black women that responded to the event on their social media sites:

- Black Lives Matter International
- Teens 4 Equality-Nashville, Tennessee
- Orange County California (OC) Protests Community.

Data Background

All three groups are responding to police brutality and/or the excessive force used against a subject, particularly Black Americans. Historically, the patrols of enslaved Africans of the diaspora created a foundation of brutality and mistreatment that lay the foundation of continued injustices and discriminatory policing that continues to this day. In the United States, even after the passing of the 13th Amendment and the abolition of slavery, slave patrols were redesignated as policemen who often doubled as Klu Klux Klansmen (the United States "anti-black" hate group) that continued life-threatening treatment of black people in the United States, in particular during the reconstruction of America when forced labor was now defined as "free" (Southern Poverty Law Center, n.d.). Albeit the Equal Rights Amendment passed in 1964, lawmakers (Democratic and Republican) found ways to criminalize Blacks, such as Nixon's War on Drugs (1971) and Clinton's Three Strikes Crime Bill (1994). The rate of such cases increased the Nation's prison system from 500,000 (1980) to 2.2 million (2015) (Georgetown, n.d.).

Table 1. Black Victims of Racial Brutality

Victim's Name and Age	Date of Brutality	Location	Event of Racial Brutality
Trayvon Martin Age 12	February 5, 2012	Miami Garderns, Florida	Shot by Security Guard George Zimmerman
Eric Garner Age 43	July 5, 2014	Staten Island, New York	Chokehold, by police officer Daniel Pantaleo * "I Can't Breath"
Michael Brown Age 18	August 9, 2014	Ferguson Missouri	Shot by police officer Darren Wilson
Ezell Ford Age 25	August 11, 2014	Los Angeles, California	Shot by police officers Sharlton Wampler (Asian) and Antonio Villegas (Hispanic /Latino)
Laquan McDonald Age 17	October 20, 2014	Chicago, Illinois	Shot by Police Officer Jason Van Dyke
Tamir Rice Age 12	November 22, 2014	Cleveland, Ohio	Shot by police officer Timothy Loehmann
Sandra Bland, Age 28	July 13, 2015	Waller County, Texas	Traffic violation, charged with assault of Officer Brian Encinia (Hispanic/ Latino hanged herself in jail.
Philando Castile Age 32	July 6, 2016	St. Anthony, Minnesota	Shot by Jeronimo Yanez (Hispanic Latino)
Stephon Clark Age 22	March 18, 2018	Sacramento, California	Shot by police off Terrance Mercadal (African descent) and Jared Robinet (White)
Atantiana Jefferson Age 28	October 12, 2019	Fort Worth, Texas	shot by police officer Aaron Dean
Ahmad Arbery Age 25	February 23, 2020	Glynn County, Georgia	Shot by citizens Travis McMichael, Gregory McMichael
Breonna Taylor Age 26	March 13, 2020	Louisville, Kentucky	Shot by police officers' Jonathan Mattingly, Brett Hankison, Myles Cosgrove
Dreasjon Read Age 21	May 6, 2020	Indianapolis, Indiana	Shot by police officer Devoured Mercer (African descent)
George Floyd Age 45	May 31, 2020	Minneapolis, Minnesota	killed by "knee to the neck" for 8:46 seconds

Black Americans (primarily men) made up the majority of this inmate increase, making up 34 % of all inmates, accounting for 13 % of the population. As a result, several civil protests ensued, such as the Watts Riots (1965), the Rodney King Riots (1992), and more recently, some civil protests of more documented evidence of daily police brutality. This event started to reveal itself most notably in 2012 with the killing of 17-year-old Trayvon Martin by a neighborhood watch coordinator (2014), the killing of 18-year-old Michael Brown (2018), and most recently, the killing

of 26-year-old Breonna Taylor in Louisville, Kentucky (March 13, 2020) and Ahmad Arbery (February 23, 2020). The following is a partial list of names of black men and women who have been killed in 10 years due to racial unrest from White men. These victims were doing nothing illegal ("The Longest List of Names Before Brianna Taylor and George Floyd", 2020).

Ethos

Different groups of Black women developed the three sites that were examined. Based on audience age demographic, financial backing, perspective on womanhood, and ethos, the groups have slightly different perspectives of the George Floyd incident. The following investigates the ethos of each group, which will lend itself to understanding how each group draws its social networking following and thematically designs its content.

Black Lives Matter (BLM) is a global organization founded in 2013 by three Black women in response to the murder of Trayvon Martin. Its goal is to build local chapters that will intervene in the "violence inflicted" upon Black people of all orientations, gender identities, nationalities, abilities, and religions at the hands of local law enforcement and hate groups. Moreover, the three founders are extremely educated, captivating public speakers, and well-published authors. One member identifies as a Black Feminist. There are currently 40 chapters globally, 16 of them alone in the US. The organization is currently operating as a 501(c) (3) non-profit since 2016. The website features a news link, a web channel, a store, and links to many social programs. All three founders are between the ages of 35 to 40 (Home, Blacklivesmatter.com, n.d.).

On June 1, 2020, OC Protests was founded by two 20-year-old White women college students, Megan Santagata and Skylar Shaffer, who via Instagram asked black activists to join. Zoe-Raven Wianeck, a 23-year-old bi-racial Black woman, responded. Ms. Wianeck, who described herself as being denied of her "blackness" by her parents, took her GED early, moved to California from the Midwest as a teenager, and started discovering her "blackness" in college. On June 4, she responded to their Instagram. By June 20, the following grew from 1,000 to 20,200. Wianeck is now The CEO of the organization. Since then, several other Black Female activists have joined. Their mission is to "[get] people to Board of Supervisors meetings, City Council and school district meetings to activate policy change" (Atwell, 2020).

Teens 4 Equality (Nashville, TN), a national organization, was launched after Zee Taylor, a 15-year-old Black girl who, on June 4, 2020, with the help of other 14 and 16-year-old girls, five Black/women of color, one White, galvanized a local march of thousands of people. Taylor was disillusioned that Nashville did not have the same response to the killing of George Floyd as other protesting cities. Therefore, via Twitter and in less than five days, the group galvanized 28,000 Instagram followers to create the march. Since then, they have been developing the local branch of Teens 5 Equality (Hineman, Bartlett, 2020).

Procedure One

The researcher examined the three social network rankings as a way to measure audience interaction.

Data Analysis

The table below lists the organizations' rankings of Instagram and Twitter, along with several comments per social networking site.

Table 2. Social Network Followings

Organization	Instagram Following	Twitter
Black Lives Matter	3.8m	935k
Teens 4 Equality	30k	30k
OC Protests Community Coalition	20k	3,937k

Figure 1 compares the social networking following of all three social networking sites.

For OC Protests and Black Lives Matter, it reveals that the majority of their followings are from Instagram. "Teens 4 Equality" reveals a stronger Twitter following.

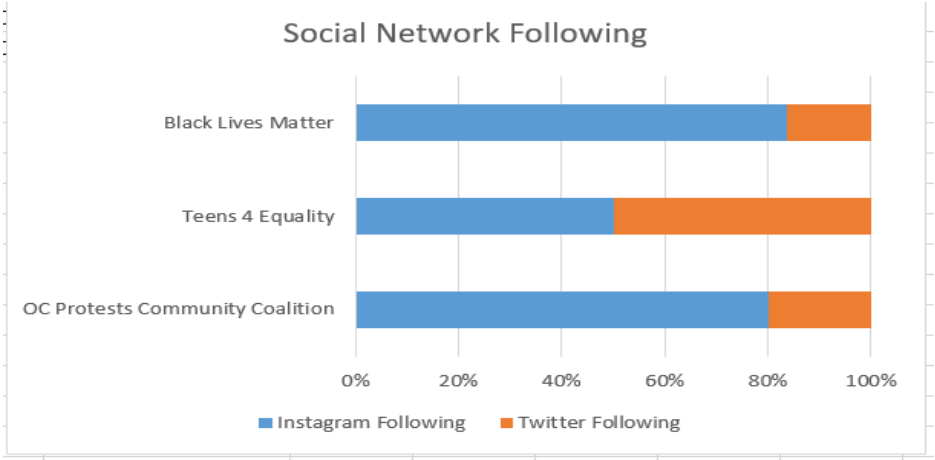

Fig. 1. OC Protests, Black Lives Matter, and Social Network Following

Procedure Two

The researcher also examined the social media website design of the social networking Instagram and Twitter sites as a way to measure organizational themes to identify similarities and differences. Instagram is a free online photo-sharing application that allows participants to edit and upload videos, while Twitter combines social networking with blogging in which registered users can post and interact with messages known as Tweets (Robarts, 2018). This researcher focused on the first pages of these sites only.

Data Analysis Two

The Format of Instagram reveals a change for a "systemic racism" theme from all organizations. Also, all three groups control their narratives. However, their themes are presented differently. Black Lives Matter – controls the narrative through its site administrator to largely concentrate on images of notable Black leaders important to this moment, such as John Lewis (desc.), important "call to action dates" (e.g. strikes), and systemic restructuring such as "defunding the police". Similarly, "Teens 4 Equality"-Nashville focus on historical images, but more so from a multicultural perspective, including an image of Malcolm X, as well as information First Nation Indigenous people, meeting times, and teaching words including slogans such as "Trigger Points." Lastly, "OC Protests Coalition" Orange County, California focuses mainly on times and dates of meetings. Both Teens 4 Equality and OC Protests Coalition reveal both were newly established sites. For photos of sites, see Figure 3.

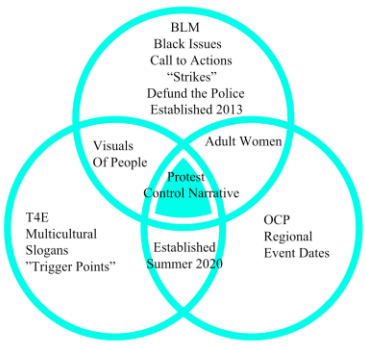

Fig. 2. Similarities and differences between the three organizations' main Instagram websites

This Venn Diagram in Figure 2 demonstrates theme similarities and differences between the three organizations' main Instagram websites (for photos of sites, see Figure 3).

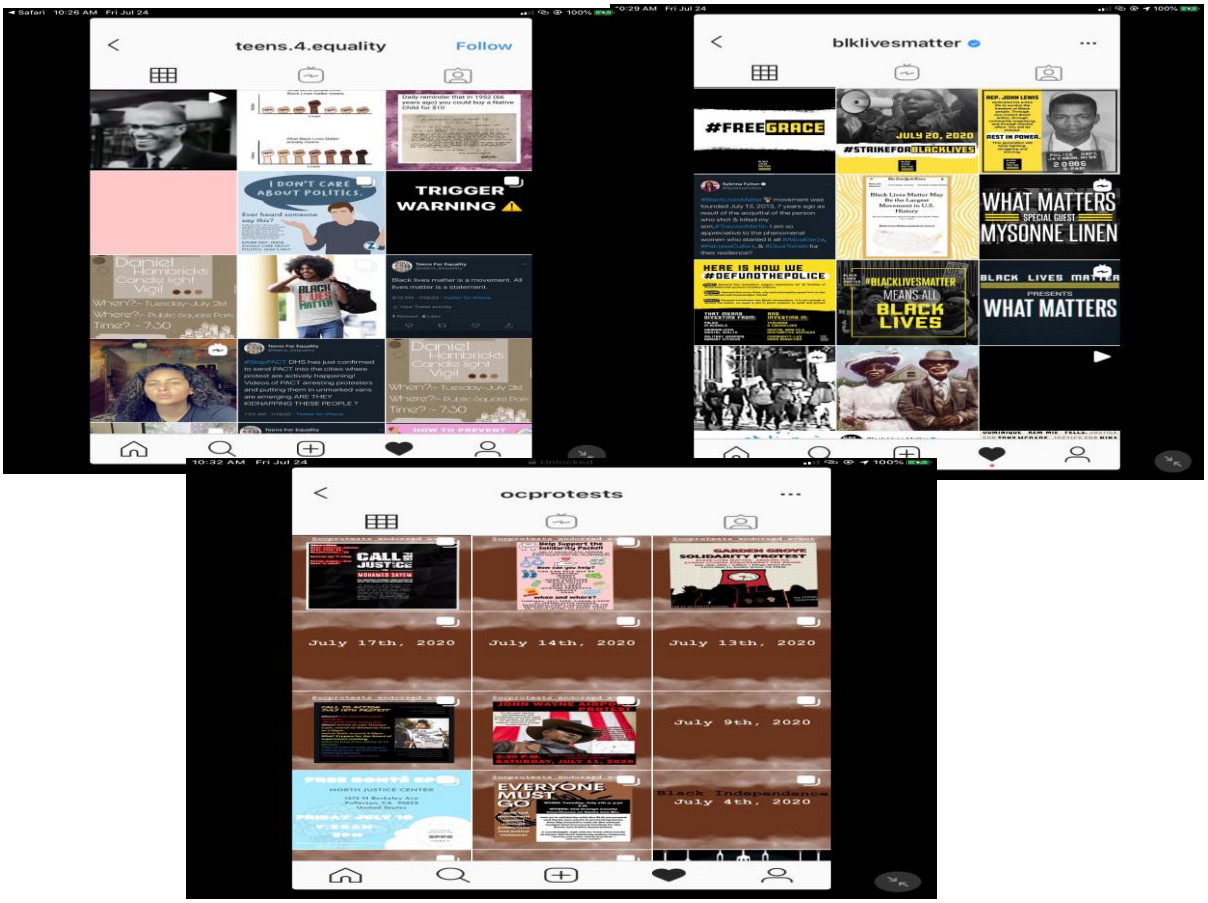

Fig. 3. Photos of Instagram websites (retrieved July 24, 2020. Images subject change). Source: https://www.instagram.com/blklivesmatter/?hl=en; https://www.instagram.com/teens.4.equality/?hl=en; https://www.instagram.com/ocprotests/?hl=en

Fig. 4. Similarities and differences between the three organizations main Twitter websites

Similar to Instagram, Twitter reveals a protest of "systemic racism" theme from all organizations. Secondly, these sites are controlling their first page narratives from outside influences. These sites also mimic Instagram visually. However, and possibly due to differences in

age, experiences, and resources, planning and policy are more aggressive with the older group. Tweets for Black Lives Matter included specific up to date black issues, including supporting news for individuals (e.g. Grace, a student held in juvenile detention for not turning in her homework online), and groups (e.g. SEIU Union).

Seemingly, these are continuations from Instagram information. Tweets for OC Protest present its leadership and a date for a protest with a planned information share at the end. Tweets for "Teens 4 Equality" (Nashville) archives their accomplishment, as well as planning a candlelight vigil. Figure 4 shows a Venn Diagram demonstrating the similarities and differences between the three organizations' main Twitter websites (for photos of sites, see Figure 5).

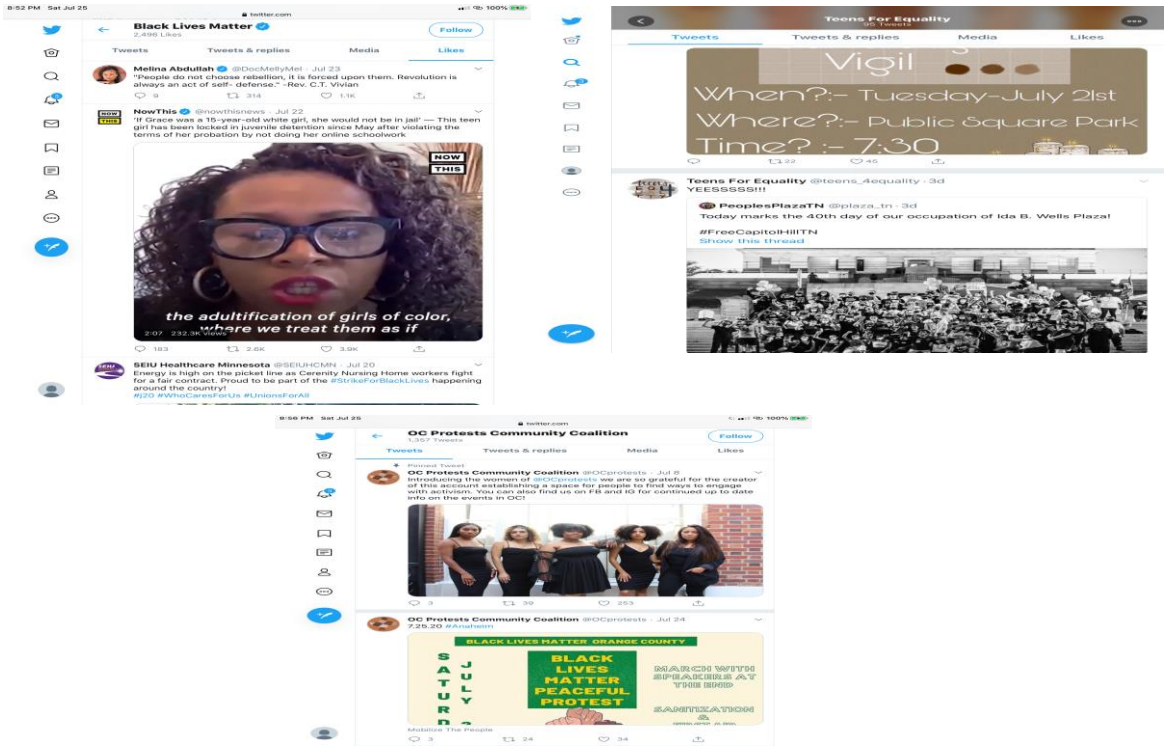

Fig. 5. Photos of Twitter websites (retrieved July 25, 2020. Images subject to change)
Source: https://twitter.com/Blklivesmatter?s=21; https://twitter.com/OCprotests?s=21; https://twitter.com/teens_4equality?s=21

3. Discussion

This researcher's analysis revealed that Black women, representing three different age demographics, contribute to the Information Communication Technology (ICT) facilitation of the George Floyd protest movement (Gary, 2011). The Instagram and Twitter images above reveal discussions about how each group supported the recent protests. These groups employed their experiences based on age and audience reach to garner the support of current civil unrest. Systematically, these groups would have initiated during traditionalized social networking, which often includes family care and food preparation (Centers for Disease Control and Prevention, 2020; Evich, 2020, Fox, n.d.). Historically and even to this day, young black girls are often introduced to these processes, known as adultification, seen as primal, and not foundational and contributory to technology-influenced social networking, which is often built and designed by White men(Brock, 2010). The researcher argues that these deficit models, port holed through technology, have ironically prepared Black women to house discourse and give direction on social sites such as Instagram and Twitter (Mamiit, 2020).

With slightly different focuses, these groups control their missions, which extend from black police brutality and systemic racism of Black Lives Matter; Black History and cross-cultural information such as from Teens 4 Equality-Nashville, and regional information, food drives, and

policing policies with OC Protests Coalition. Similarly, all three missions extend to technology skill sets being utilized. This researcher also discovered that these groups control their narrative on their social sites regarding outside influence by defining their own story and redirecting information not suitable for their mission (Mamiit, 2020). Black Lives Matter (BLM) focuses on recent systematic oppression, whereas OC Protests Coalitions sends out meetings and community services dates. Similarly, the Instagram account of BLM posted exemplars of photos, such as John Lewis, Breonna Taylor, and George Floyd, and directive posted reminders on how to "Defund the Police".

Also, Teens 4 Equality Nashville posted Instagram teaching images such as "Trigger Points", images of people in their movement, and historical icons such as Malcolm X. For their Twitter posting primarily, the confirmation thematically centered around "gaining understanding" for Black Lives Matter, who we support (beyond black people), and why Nashville is not very supportive as a city. Along with social networking control of social sites and having observed seventeen protests in Los Angeles, California, past external control over ICT via social networking and its deficit among Black women has impacted these women enough to lead groups during moments of civil unrest (Brock, 2010).

4. Limitations

Due to time constraints and resources, the researcher only focused on the first page of the organizations' social media sites for this secondary research analysis. Secondly, the researcher tracked statistics of the social networking websites from July 15-July 25, 2020, which is subject to change.

5. Conclusion

On June 7, 2020, the Black Lives Matter LA Chapter led a march of 1000,000 people. The microphone was controlled by the three top officials of the chapter, all women. There were mainly Black women speakers and no arrest for civil disobedience during this protest. Through control of the technical capital of the microphone and their social networking ability without the microphone to direct people, these women created civil order during the biggest protest in Los Angeles, 2020 to date. Furthermore, even young Black girls stood strong and immovable, holding up signs amongst thousands of people, needing minimal direction. In conclusion, Black Women (because of historic objectification) were the best prepared to become the most effective modern-day social networking developers in times, what John Lewis would call "good trouble."

6. Declaration of Competing Interest

The author declares that there is no interest in conflict, and all reference materials were dully acknowledged.

7. Funding

None.

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Reflections by Parents on the Strategies used to Implement Measures for the Prevention and Management of Learner Pregnancy Policy in Secondary Schools in Eastern Cape Province

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Abstract

Teenage pregnancy in South Africa remains heavily present despite implementing policy on Measures for the Prevention and Management of Learner Pregnancy in Schools. Anchored on a qualitative approach, using semi-structured, focus group interviews and document analysis as data collection techniques, the study used a sample size of 21 participants from three Secondary Schools as case studies. Data were analysed thematically following the inductive sequence of thematic analysis. The study results explain the following paradox: regardless of the stated strategies, schools under research used non-inclusive strategies to implement the policy. These tended to side-line the elderly and educationally challenged parents. Parents were not conversant with the policy and felt the strategies were non-beneficial because of their non-involvement during the formulation and the implementation processes. Results of the study provide evidence for a need to enhance ownership of the policy through different capacity building programmes which solely targeted parents.

Keywords: education, implementation, learners, parental involvement, policy, strategies, teenage pregnancy.

1. Introduction

Learner pregnancy is a significant challenge globally. (Yakubu & Salisa, 2018). A majority of learners who fall pregnant are teenagers between the ages of 14 and 18 years (Department of Basic Education (DBE), 2017). The extant literature highlights that there exists several factors which lead to teenage pregnancy, specifically: lack of knowledge about sex, how to use contraceptives; barriers to access contraceptives, negative attitudes of health staff; peer pressure; poverty and poor social-economic conditions; sexual abuse and coercion; low self-esteem; low educational expectations and increased sex-based messages in the media (Naidoo, Taylor, 2021; Odimegwu et al., 2013). As such, a call has been made that a holistic approach is required to address teenage pregnancy. Thus, these strategies should include parental involvement because teenage pregnancy remains a major socio-medical and socio-economic phenomenon and has become even more rampant in recent times (Akpor et al., 2017; Cameron et al., 2020; Oyedele et al., 2015).

Internationally, teenage pregnancy is high, but countries have put up different strategies to address it. Parents have been playing a role in these strategies. In the United Kingdom (UK),

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the Teenage Pregnancy Strategy was launched in 1999 to enhance school teenage pregnancy prevention (Hadley et al., 2016). One of the strategies was called 'time to talk campaign' and 'talk to your teenager about sex and relationships, encouraging parents to educate the children about sex (Department for Children, Schools and Families, 2010; Hadley et al., 2016). In the United States, parental involvement is an essential and effective component of teenage pregnancy prevention (Silk, Romero, 2014). In Kenya, the 'return to school' policy for teenage mums was introduced by the Kenyan Policy Framework in 1994. Despite the policy being there, concerns were raised that parents are not well informed about the policy and are not aware of the rights of teen mothers to return to school (World Bank, 2015).

The Constitution of the Republic of South Africa, No 108 of 1996, is the foundation and supreme law of South Africa. It guarantees the right to education for all citizens (Republic of South Africa, RSA, 1996a). Consequently, the South African Schools Act (SASA) of 1996 stipulates that all learners have equal access to education without discrimination (RSA, 1996b). However, some learners have not completed school as inscribed in the supreme law. Among the reasons for dropping out of school is teenage pregnancy. Regardless of what is highlighted in the South African Schools Act 84 of 1996 (RSA, 1996a), teenagers should remain at school even if pregnant and be treated with respect and fairness. In South Africa, teenage pregnancy is a major challenge (Mashaba, 2015). According to the DBE (2017) progress report, in 2014, there were 18,357 pregnant learners, and in 2015 a total of 15,504 learners got pregnant. It is important to note that in 2016 out of 8,732 learners who fell pregnant in the academic school year, some of these learners were from primary schools. Furthermore, the DBE has indicated that the highest teenage pregnancies are in the Eastern Cape, Limpopo, and Kwa-Zulu Natal, regardless of the numerous implementation of prevention and management strategies. For example, research conducted by Pillay et al. (2018) in Umlazi, KwaZulu-Natal province in South Africa, revealed that a staggering 99,000 secondary learners became pregnant at a rate of 271 per day in 2013.

According to Nkosi and Pretorious (2019: 108), the DoE recorded 20,000 learners who were pregnant in 2014, while 223 pregnant girls came from primary schools. Gauteng recorded the highest number of pregnancies with more than 5,000 cases. Furthermore, Govender (2015: 28) revealed that more than 176,000 teenagers got pregnant in South Africa in 2013, and out of this total, a staggering number of 2,903 were 13 years old. The preceding statistics highlight that teenage pregnancy rates remain unacceptably high despite a wide variety of modern methods of contraception. In South Africa, School Governing Bodies (SGBs) are meant to work together with schools and parents to ensure shared involvement in school policies and programmes such as care and safety programmes, curriculum development, extracurricular activities, and life skills programmes (RSA, 1996b).

Among the many roles and responsibilities of SGBs are the formulation and implementation of school policies (DBE, 2009). One of such policies implemented in schools and which all parents are supposed to be involved in is Measures for the Prevention and Management of Learner Pregnancy Policy (DBE, 2009; DoE, 2017; Ramulumo, Pitsoe, 2013). This policy is underpinned by three essential principles of the Constitution: the right to education, the right to equality, and the child's rights (including the newborn child). Thus, identifying strategies that can involve parents is an essential aspect in curbing this problem.

Notwithstanding parents' valuable role in preventing and managing teenage pregnancy in schools (DoE, 2007), poor communication about sexual matters exists between parents and adolescents in South Africa (Mostert et al., 2020; Naidoo, Taylor, 2021). In addition, research shows that parents are either not aware of the policy's existence or do not sensitise their children about the policy. Instead, the responsibility is left to learners to talk with their peers, worsening learner pregnancy cases in the country (Hadley et al., 2016; Pillay et al., 2018). Consequently, my article seeks to explore the strategies schools use to promote parental involvement in implementing the policy on the prevention and management of learner pregnancy.

2. Methods and Materials

The study was grounded in the qualitative research approach (Creswell, Plano-Clark, 2011). A multiple case study design was utilised to examine the study's research question, and two non-probability sampling techniques were adopted. Convenience sampling was used to select schools that are easily accessible. Within the researchers' proximity, purposive sampling was adopted, and

the principals in all the schools under study were requested to act gatekeepers. These techniques assisted the researchers to be refereed to participants who could provide sufficient information about their involvement in the implementation of the prevention and management of learner pregnancy policy. The study's sample size was 21 participants, and these comprised: 1 SGB chairperson from each school and six parents from each school understudy. Gender balance was observed through the selection of participants.

Data were collected using semi-structured, focus group discussions and document analysis. Semi-structured interviews were conducted with 3 SGB chairpersons from the three schools whereas, focus groups involved 6 members from each school. Interviews lasted between 45 minutes to one hour to avoid long discussions that would provide challenges in collecting data transcription. During focus group discussions, each participant was afforded an opportunity to participate. All interviews were conducted in Staff rooms, with voice recorders being used to record the discussions. IsiXhosa was used as a communication medium to ensure that participants could fully express themselves in their mother tongue. All the interviews were then translated into English. Note-taking was also used to supplement all the information that was recorded in case the tape recorder malfunctioned. Meanwhile, for document analysis purposes, policy circulars, minutes of SGB meetings, minutes of meetings with parents and minutes of staff meetings were also scrutinised. This was done to verify and add data collected from semi-structured interviews and focus group discussions. Data emerging from the study's findings were systematically organised by identifying concepts, establishing categories, coding data to build description themes and then thematically analysing it to address the main research question. As part of observing anonymity, the participants were coded as follows:

SGBC1 – School Governing Body Chairperson School 1
SGBC2 – School Governing Body Chairperson School 2
SGBC3 – School Governing Body Chairperson School 3
FGPS1 – Focus group School 1
FGPS2 – Focus group School 2
FGPS3 – Focus group School 3

The researchers obtained ethical clearance from the University of Fort Hare No: Rec-270710-028-RA-Level 01. Principles such as Informed consent, Anonymity and confidentiality, Privacy were all adhered to.

3. Results

Involvement of parents in implementing the policy on the prevention and management of learner pregnancy by Schools

Several prevention interventions have been introduced in South Africa. These include school-based sex education, peer education programmes, adolescent-friendly clinic initiatives, mass media interventions, and community-level programmes. However, these interventions have little impact on teenage pregnancy in schools without parental involvement. Participants were asked to explain how they were involved as parents in implementing prevention and managing learner pregnancy in school. Their responses differed:

SGBS1 expressed the following

"Unfortunately, parents have little role-play the assist when there are visits by nurses, talking to pregnant learners and with their parents, but most of the things are done by teachers."

FGPS1 had these views,

"If we were involved from the start maybe during the implementation or formulation of this policy them the situation would be different pregnancy there are no strategies that the school uses to involve us."

SGBS2 stated,

"We are just left out of the process, yet it is our children that attend this school."

FGPS2 said,

We know little about this policy; it is difficult to assist our kids. The school should reach out to us".

SGBS3 had this to say

"The school involves parents when there are open-days to talk to learners about prevention of pregnancy. Parents also encourage abstinence to prevent STIs, HIV and AIDS and pregnancy."

FGPS3 suggested,

"From the onset, the principal and the teachers involved us as parents, and we are to step in as parents as and when needed."

Some of the participants highlighted that they assisted the school in implementing the policy by addressing teachers and learners during open-days to talk about HIV/AIDS, abstinence and prevention of pregnancy. However, the researcher noted that parents' lack of involvement remained a reoccurring issue among the participants.

Activities performed by parents as part of implementing the policy on prevention and management of learner pregnancy

Participants were asked to explain their activities, which formed part of the strategies to implement the policy on preventing and managing learner pregnancy. Below are their responses,

SGBS1 stated,

"We assist in keeping track of attendance of pregnant female learners, assists nurses in facilitating programmes aimed to promote."

FGPS1 opined,

"We assist when there is a need for us to assist, for example, when there are visitors like nurses attended to by the nurses during their visits. This saves them time to go to the clinics."

SGBS2 expressed the following feelings,

"In our school, we are led by an autocratic principal who does not listen to other people views, even in the activities they plan with the staff, teachers mostly perform them not by us. For instance, visits by nurses are not communicated to us as parents. The other problem is that visitors are invited to speak on learner pregnancy, and they speak English, and not all parents understand English, so we end not partaking."

FGPS2 said,

"We are not involved in all activities at school. Hence, we perform in few activities such as talk with learners who are not performing well, and to those who have bad results at school due to pregnancy."

SGBS3 had these views,

"In our school, the activities that parents perform in policy implementation are checking whether learners are present and participate in programmes offered by the nurses or even NGOs that visit our school. Our role is also to promote strategies used to curb learners' pregnancy such as condom use, abstinence and peer talk."

FGPS3:

"Our role is to promote learner attendance, support pregnant learners so that they do not drop out, we follow up if they miss schools and if they have delivered, we also make a follow-up and see if they have come to school."

It can be deduced from the findings that the schools were trying as much as possible to include parents in implementing the strategies to curb learner pregnancy. In addition, an analysis of the minutes from some schools showed how different approaches should be implemented and the role of the parents. For example, the parents said that they were responsible for checking school attendance of pregnant female learners and accompanying school visitors like nurses and giving parents consent forms to sign for medical help of their children. However, SGBS2 and FGPS2 stated that they were not involved in all activities at school. Therefore, they performed a few activities such as talking to learners who were not performing well at school due to pregnancy, late coming and to those who had bad results. Meanwhile, SGBS3 and FGPS3 revealed that they are actively involved. Consequently, it may imply that the participants' responses show that schools are aware of the importance of parental involvement to facilitate the implementation of the policy on pregnancy in schools.

Non-inclusive strategies used to promote the implementation of the learner pregnancy policy

The study also sought to find out if the participants were satisfied with the strategies used to promote the implementation of the learner pregnancy policy. The following excerpts illustrate their feelings.

SGBS1 advanced,

*"I am not happy about the strategies used by the school because the school does not make an effort to find ways of communicating the policy to illiterate parents and those educated and working-class parents they do not involve themselves***."**

FGPS1 also stated their unhappiness as follows,

"We are unhappy with the use of the strategies as they were formulated for use by teachers. If we had been involved in the formulation, it would be easy to implement the strategies."

SGBS2 expressed their sentiments as follows,

"I am unhappy about the strategies in place because parents did not formulate them; maybe it is the attitude we have on them that makes us say they are not working."

FGPS2,

"... illiterate parents are not considered in these strategies by our principal, and he forgets that a majority of the parents or guardians are grandmothers and fathers who look after these kids and they consider sexual talk taboo."

SGBS3 said,

"I am happy in everything that takes place in our school. The school involves parents, and we see pregnant learns coming to school after child-delivery, they perform well, some learners and their parents even do peer and parents talk."

FGPS3 further added,

"We are so happy about all the strategies that are used as these have assisted us in penning up to our children, and we are not shy anymore."

The respondents SGBS3 and FGPS3 revealed that they are happy with using strategies to bring positive changes in their schools. However, some of the participants highlighted their lack of satisfaction concerning the adopted strategies, indicating that they were carrying out their role in implementing the policy through trial and error. Moreover, document analysis through minute books showed that none of the schools discussed assisting illiterate parents or elderly parents.

4. Discussion

Results from the study noted that parents were generally not involved in most programmes regarding child sexuality except HIV/AIDS sensitisation. According to the study participants, schools under research invited parents to school to talk to learners during open-day on HIV/AIDS issues and accompany visiting nurses to speak to pregnant learners and their parents as part of their strategies. Consistent with this finding, Peter et al. (2015) state that parents value their involvement in comprehensive, reproductive, sexual health education and school policy implementation issues. Also, Marseille et al. (2018) support the research findings and state that inviting parents and nurses on open-days to educate both parents and learners has been effective. In line with the study's results is research from Kenya, which states that pregnant schoolgirls and their parents should receive counselling (Hadley et al., 2016). The DoE (2009) also supports educational talks and programmes to prevent and manage pregnancy in school.

Meanwhile, parents' lack of involvement persisted as a reoccurring concern among the participants even though DoE (2009) has made this provision. This view is supported by Gcelu (2019) and Wankasi et al. (2020), who state that parents are and should be regarded as an essential ambit in the policy implementation process. Otherwise, they will not be interested in assisting schools in implementing a policy while being side-lined. However, a recent study by Dickson et al. (2020) indicate that parents felt that being involved in policy implementation was often affected by divergent opinions between the school, teachers, and the parents leading hostile environment. Therefore, these results suggest that schools must draw support from the South African Constitution, Act No. 108 of 1996, The South African Act No. 84 of 1996, and the policy itself to identify inclusive strategies to involve parents in implementing the policy.

Another strategy that parents used to promote the pregnancy policy was checking the attendance of female pregnant learners, requesting parents to sign consent forms for medical

examination of their children, and talking to learners who were not performing well at school due to pregnancy. A review of related literature indicated that pregnant learners should not be discriminated against. Instead, schools should protect pregnant learners from being stigmatised but ensure guidance and counselling on motherhood and child-rearing by monitoring the learner's health and academic progress (DBE, 2017; Chohan, Langa, 2011; Ramulumo, Pitsoe, 2013).

In every policy that is implemented, it is critical to determine the extent to which the key stakeholders are familiar with the outcomes of the implemented policy. Responses by the participants showed that even though there were still some pockets of challenges. Examples of such include the failure of some learners to take instructions aligned with implementing the policy and the overall positive strides realised. Accordingly, Johnson-Motoyama et al. (2016) suggest that implementing medically accurate and unbiased school-based sexual education curricula may improve adolescent sexual and reproductive health outcomes and decrease learner pregnancy. Furthermore, one of the strategies used in some schools was encouraging learners to be role models to their peers, assisting teachers in implementing the policy and involving themselves in extracurricular activities and social clubs aligned with curbing teenage pregnancy.

Moreover, the results are commensurate with the DoE (2007). Naidoo and Taylor (2019) further propose that these peer group programmes focus on male learners and their role in preventing teenage pregnancies. Marseille et al. (2018) advance that schools must have learner development programs that encourage learners to plan for their future using a broad approach that combines sex education, sports, performing arts and academic assistance. Meanwhile, some parents alluded that they were unhappy about the outcomes because the teachers had implemented the policy the way they saw it fit and excluded them in the process. Conversely, Cameron et al. (2020) suggested that parents typically say schools are obligated to implement policies that provide effective, evidence-based, and age-appropriate reproductive and sexual health education. Therefore it may be implied that implementation of pregnancy policy by parents may assist in closing the knowledge gap created by limited or absent in-home instruction, protect students and reduce sexual health disparities that continue to exist.

In this study, it was disturbing to note that some of the strategies were not positive because parents did not attend meetings when invited. However, a study by Epstein et al. (2018) highlights that it is not the parents' fault but that of the school because parents from disadvantaged communities are not invited to school meetings (Epstein, 2018). Results further indicated that those parents who were illiterate or elderly either did not attend, or if they did, they caused so many problems during meetings. Meanwhile, the narratives given by some of the parents showed that some schools had pockets of best practices emanating from the implementation of strategies used by the participants. Despite several pockets of good practices that emerged, the findings also illuminated that the performance of these strategies had yielded little or no benefits due to some challenges. Lack of support from the teachers, community, and the parents regarding attendance of meetings, the high pregnancy rate of learners, education level of parents, stigma and violation of the right to education of the female learners were some of the challenges identified. Consequently, this has led to calls being made that schools need support mechanisms given to parents by schools to ensure their involvement in implementing the policy on the prevention and management of learner pregnancy.

5. Conclusion and Recommendations

The study's outcomes established that schools used strategies to ensure parental involvement such as inviting nurses, open-days, inviting all stakeholders (DBE and DOH), encouraging abstinence, as the best way of preventing pregnancy and sexual infection and HIV and AIDS. Another strategy that was used to promote the implementation of the pregnancy policy was checking the attendance of pregnant learners requesting parents to sign consent forms as well as talking to learners who were not performing well at school due to pregnancy. However, not all schools understudy had implemented strategies to promote parental involvement in implementing policy on prevention and management of learner pregnancy. In addition, not all the parents attended open day or awareness programmes hosted by the schools under study to curb learner pregnancy. Parents must be involved in policy formulation as this will enhance ownership of the policy while promoting effective implementation of strategies to curb learner pregnancy through

the support of parents. The policy must also be translated to the official languages used in South Africa. This will assist parents in understanding the policy better and being conversant with its contents. The DBE needs to introduce different strategies which should cascade down to the school level that is in line with the involvement of parents and capacity building programmes on strategies used to implement the policy.

6. Declaration of Competing Interest

The author declares that there is no interest in conflict, and all reference materials were dully acknowledged.

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Student Teachers' Preparedness for Classroom Interaction During Teaching Practice: University of Zululand Supervisors' Perspectives

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Abstract

Classroom interaction during teaching practice is the crucial aspect that shapes schools' teaching and learning enterprise. Student teachers must develop their lesson plan guided by classroom interaction as one of the teaching styles similar to those observed from mentors. This exploratory case study was underpinned by a qualitative approach to better understand their experiences and context. The sample consisted of university supervisors who were selected from the Faculty of Education at the University of Zululand, South Africa. Using thematic analysis, narrative reflections, and one-on-one structured interviews with 17 university supervisors were analysed. Findings revealed that most student teachers failed to integrate classroom interaction when teaching, while some relied on question and answer method to implement classroom interaction. This study recommends that students first be exposed to laboratory simulated lessons capable of helping them acclimatise to classroom interaction dynamics. Also, student teachers should be introduced to more dynamics of the question and answer teaching method.

Keywords: classroom interaction, perspectives, student teachers, teaching practice, university supervisors.

1. Introduction

Classroom interaction is one of the aspects through which university supervisors evaluate student teachers at the University of Zululand during teaching practice. Its role during lesson presentation cannot be underestimated as it enables successful engagement with learners during lesson presentation. Therefore, teaching practice programmes always assume that student teachers are competent in promoting classroom interaction to support learners emotionally and academically (Pianta, Hamre, 2009). Classroom interaction tends to be ignored by lecturers, yet it is the lifeblood responsible for supporting learners to achieve their full potential and quality outcomes (Pianta et al., 2012; Vandenbroucke et al., 2018). Most of the challenges besetting classroom interaction tend to surface later when student teachers are allowed to teach for the first time. Therefore, the evaluation process in Higher Education should strengthen their abilities to engage instead of asking why students avoid classroom interaction. Meanwhile, some student teachers perform poorly during teaching practice classroom evaluation due to a lack of readiness to implement pedagogical content knowledge through an interactive classroom approach.

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Mkhasibe and Mncube (2020) argue that even though university supervisors at the University of Zululand are specialists in rendering academics to support, guide, and evaluate student teachers, pressure to help all students compromises the quality of classroom interaction during a teaching practice exercise. Additionally, classroom interaction is one of the essential elements of a prosperous teaching and learning process since it entails the exchange of thoughts, feelings, and ideas between a teacher and learner or a learner and another learner (Brown, 2007; Huriyah, Agustiani, 2018; Li, Arshad, 2015; Rido et al., 2017). Yanita et al. (2016) believe that teachers' efficiency in teaching and learning activities leans on the quality of his/her interaction with learners. However, this exchange needs facilitation. According to Huriyah and Agustiani (2018), teachers should initiate classroom interaction. Additionally, Ginting (2017) purported through verbal communication and detailed strategies that student teachers can employ to affect classroom interaction. These strategies are giving directions, asking questions, correcting learner errors, controlling the learning pace, and monitoring learner performance (Rido et al., 2014, 2015).

Student teachers should be well immune to these means of ensuring classroom interaction to ensure that they can facilitate classroom interaction to strengthen social relationships within a class. Ghazi (2011) argues that classroom interaction can maintain social relationships because it enables all parties to learn from each other and give feedback on performance promptly. Also, Sullivan et al. (2015) posit that the socialisation process that learners endure is contextual, multidirectional and transactional but shaped by the learning environment. Student teachers should be equipped with the context under which to create interaction. Therefore, it is clear that as learners and a teacher interact, they both learn from each other, thus reinforcing the social relationship among themselves.

Additionally, Huriyah and Agustiani (2018) emphasise that interaction is an important social activity that enables learners to construct knowledge and build confidence and identity. The teacher's knowledge about classroom interaction can be viewed as a sign that teachers know their learning environment (Solheim et al., 2018). The evaluation of student teachers is meant to establish whether student teachers can build learners' confidence and identity and be familiar with the environment where learners should construct their knowledge. In support of this notion, Ginting (2017) asserts that classroom interaction is crucial in a learning process since teaching and learning can be achieved through interaction. However, the intensity of an interaction depends on the teacher; hence it is incumbent for student teachers to acquire skills relative to interaction. Moreover, Ginting (2017) argues that if teachers lack creativity for opening discourse in a classroom for interaction, it can be presumed that interaction cannot proceed. Thus, institutions should help build this skill among student teachers during their teaching practice worldwide, including South Africa.

Teaching practice in South Africa is the actual teaching process opened to student teachers during their third year of study for six to eight weeks in schools. Although students are expected to put what they have learnt into practice, few studies have qualitatively explored their preparedness from their supervisors' perspectives. According to Marais and Meier (2004), teaching practice encapsulates a range of experiences to which student teachers are exposed when working in classrooms and schools. Teaching practice allows student teachers to try the art of teaching before actually getting into the real world of the teaching profession (Kasanda, 1995). Therefore, our study sought to explore supervisors' perspectives of student teachers' preparedness for classroom interaction during teaching practice at the University of Zululand.

2. Methods and Materials

We conducted our study based on the qualitative method. The qualitative approach was the most suitable in this research because it enabled us to secure in-depth information about the phenomenon under investigation (Creswell, 2009). In line with the qualitative method, we employed narrative reflections among university supervisors in this research. Narrative enquiry is a way to understand and then present real-life experiences through the stories of the research participants (Wang, Geale, 2015). Sequel to this description, the narrative approach allowed the researcher to construct a detailed description of university supervisors' experiences and explore the meanings that the university supervisors derived from their experiences.

We obtained ethical approval for the study Ethics Committee of the Faculty of Education, University of Zululand. Subsequently, seventeen lecturers at the University of Zululand were

conveniently selected as participants following approved ethical standards for human studies. These lecturers supervised student teachers during teaching practice between August to September 2019. The participants of this study, who are lecturers and also referred to as supervisors, had visited different schools in various areas within and outside the province where the student teachers undertook their teaching practice exercises. The selected participants had just supervised seven primary and ten high schools during data collection. Table 1 shows the demographic details of participants.

Table 1. Demography of Participants, (N=17)

Variables	Frequency	Percentage (%)
Gender		
Male	8	47
Female	9	53
Position		
Lecturer	11	65
Senior Lecturer	6	35
Race		
Black	17	100
Teaching Practice Schools		
Primary	7	41
High School	10	59

The researchers proceeded to collect data using a structured interview guide. This type of interview was selected to ensure that all interviewees responded strictly to the same set of questions (Fauvelle, 2020). The responses retrieved through the narrative reflections conducted with the selected university supervisors were used to proffer answers to the identified research question guiding the study. Samples of these questions include: what are the perspectives of university supervisors on student teachers' classroom interaction during teaching practice?

The interviews were transcribed verbatim and thematic analysis was conducted (Creswell, 2009). Also, we maintained the narrative reports were to complement data generated from interviews (Leedy, Ormrod, 2005). Furthermore, we included all necessary steps to ensure the rigour of our qualitative study (Hadi, José Closs, 2016; Rolfe, 2006).

3. Results and Discussion

This study was guided by the research question: what are the perspectives of university supervisors on student teachers' classroom interaction during teaching practice? Also, participants were coded as 'US', which stands for 'University Supervisor.' Following our analysis, our data yielded four major themes. These themes were student teachers' implementation of classroom interaction, some classroom interaction practices that need improvement, question and answer as a teaching and learning method for classroom interaction, and the importance of in-depth content knowledge to facilitate classroom interaction.

Theme 1: Student teachers' implementation of classroom interaction

The university supervisors acknowledged that most student teachers managed to facilitate classroom interaction with their learners. In an extract, US17 indicated that:

"...classroom interaction was evident because student teachers could conduct their lesson properly".

Similarly, US16 elaborated:

"Generally, the interaction was good between the teacher and learners; student teachers knew what was expected of them when teaching, checking previous knowledge, explaining the topic, introducing the topic and presenting lesson using Learner Teacher Support Material".

It is good to note that US17 noted the effectiveness of student teachers to implement classroom interaction. It is worth recognising that there was no presentation of issues that the student teacher engaged with to prove that they could promote interaction. Some of the activities that US16 noted to encourage classroom interaction can be regarded as a culmination of those

presented by Rido et al. (2014, 2015). This finding shows that some student teachers made attempts to implement classroom interaction. These responses demonstrate that while most student teachers do well will create a platform for conducive classroom interaction, some struggle with effecting classroom interaction.

Examining the reason for some of the challenges student teachers face, one of the participants blamed academic staff for not inculcating classroom interaction skills adequately for student teachers to implement an interactive learning environment for learners. According to US1*:*

"classroom interaction is one area that needs further support from lecturers so that student teachers can be well equipped with interaction skills before attending teaching practice".

Theme 2: Some classroom interaction practices that need improvement

Some participants noted that student teachers still need to facilitate their lesson introduction and conclusion. For instance, US4 stated:

"…some student teachers still lack *the introduction and conclusion of the lesson".*

Besides, US1 argued that:

"some student teachers need to improve especially in the introduction and conclusion of the lesson".

From this theme, the introduction and conclusion parts of the lesson are essential for classroom interaction. This finding agrees with Nurpahmi (2017) work, which states that classroom interaction can be implemented at the beginning and closing of the class. Similarly, US12 elaborated:

"some student teachers fail to create enthusiasm when they introduce; hence lessons were ineffective". Since introduction sets the mode for the entire lesson, if it is not well articulated, that can jeopardise the whole lesson. Student teachers should be clear on making their introduction catchy so that learners' enthusiasm is ensured. So, it is incumbent for student teachers to learn to handle classroom interaction conveniently and superbly at the right time.

Theme 3: Question and answer as a teaching and learning method for classroom interaction

Under theme 3, US9 suggested:

"*…most student teachers rely on question and answer method for classroom interaction, but some do not use it appropriately".*

US10 mentioned that:

"student teachers' questioning skill remains a challenge; they do not question using different levels of cognitive development as presented in Bloom Taxonomy".

As much as question and answer methods can promote interaction, questions should cover different levels of cognitive development to promote different skills for learners.

Another concern was from US8, who argued that

"*student teachers need to improve on their questions during lessons; questions should be aligned to lesson objectives".*

On the same note, US7 posited:

"classroom interaction was good, but student teachers need help with questioning technique".

There is more to questioning than just spitting out words in the form of questions. The way questions are phrased have a bearing on how learners should respond. Therefore, if questions are not adequately expressed, the whole lesson may flop since learners may fail to answer or give inappropriate answers. This suggests that student teachers should be well guided and supported to master techniques of questioning. Some participants like US15 noted this assertion:

"*…for some student teachers, they successfully involved learners throughout the lesson by asking them questions based on the lesson; asking them to give examples, and allowing them to add their views".*

Also, US6 posited:

"…in some lessons, student teachers tried to involve the learners in their lesson delivery by having learner participate in demonstrations".

Furthermore, US13 added that:

"those student teachers who were good with classroom interaction were able to engage learners throughout the lesson".

This finding is congruent with the cognitive stimulation put forward by Hamre et al. (2014). They indicated that student teachers' questioning skills could help learners give examples that encourage intersubjectivity through communicative exchanges. As noted by van de Pol et al. (2010), communicative exchanges can be achieved through student teachers' engagement with their learners.

Theme 4: The importance of in-depth content knowledge for facilitating classroom interaction

The fourth theme focused on the importance of in-depth content knowledge for facilitating classroom interaction. It is good to note that some student teachers had secured extensive content knowledge to easily implement classroom interaction. Hence, it was easy for them to give feedback to learners. Meanwhile, a review of the work of Uleanya (2021) shows that timely feedback to learners impacts their learning abilities and academic performances.

As noted by US4:

"student teachers did not have the problem of interacting with learners because they knew content for subjects specialisations". In line with this view, Solheim et al. (2018) argue that teachers can undertake classroom interaction if they know the learning environment. Thus, content knowledge can enable student teachers to give directions, ask questions, correct learner errors and monitor learner performance (Rido et al., 2014, 2015).

Furthermore, adequate content knowledge can enable student teachers to give feedback to learners because they are well vest of the logistics of their subject. US3 argued:

"…student teachers provided constructive feedback to learners in a timely manner to complement this idea".

4. Limitation

The study was limited to analysing the narrative reflections of 17 university supervisors from the University of Zululand. Although this qualitative study provides insights into student teachers' preparedness for classroom interaction, findings cannot be generalised.

5. Conclusion

This paper explored the student teachers' preparedness for classroom interaction with their learners during teaching practice from university supervisors. The qualitative method was adopted for the study. Following the findings of the analysed data, our study concludes that the guidance that student teachers receive about classroom interaction is not sufficient for them to be exposed to teaching practice exercises. Furthermore, most student teachers heavily rely on question and answer methods to engage with classroom interaction; however, they face questioning challenges. As a sequel to the findings of the study, the following recommendations are made:

- student teachers should receive more exposure to classroom interaction before they undertake teaching practice. This can be done by ensuring practical sections in class and during their observation period as level two students. Such would help prepare them and enhance their interaction skills with their learners, making them more effective during the teaching practice exercises.

- Also, student teachers should be supported and guided grossly on conducting questions and answer method. This can be done by constantly giving them tasks that demand the generation and use of question and answer type of communication. In this regard, student teachers would develop the skill of interacting with their learners through teaching practice exercises.

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7. Declaration of Competing Interest

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None.

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Sources of Academic Stress and Coping Strategies of Sandwich Students in a Nigerian University: A Quantitative Study of a Minority Student Population

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Abstract

Though lifelong education has been emphasised in current literature, studies focusing on the wellbeing of sandwich students in Nigeria have been scarce. Our study set out to identify sandwich students' academic stressors and how they cope with these stressors. The quantitative cross-sectional survey research design was applied in our study. Using a convenience sampling technique, 164 sandwich students participated in the study. Our findings showed, among others, that students perceived overcrowded hostels, congested lecture schedules, time pressure to cover the course before exams, and inconsistent lecturing timetables to be the most significant stressors of their programme. Students had higher mean scores in approach and social support coping strategies than in an avoidance coping strategy. Also, gender, year of study, and marital status were not significant factors in students' adoption of coping strategies except in social support coping, where marital status was a significant factor. Our findings show that sandwich students face some challenges that result in academic stress and are inclined to adopt mostly task-based strategies to cope with academic stress. Implications of the findings were highlighted.

Keywords: academic stress, approach coping, avoidance coping, minority, sandwich, social support coping.

1. Introduction

University education has been reported to be stressful (Ganesan et al., 2018; Pascoe et al., 2020). Moreover, the education of students who are enrolled as part-time students might be even more stressful given that they combine their studies with other responsibilities. Indeed, the combination of studies and other responsibilities, according to Kwaah and Essilfie (2017), may lead to extreme pressure, fatigue, and financial constraints. Nwosu et al. (2018) argue that part-time undergraduate students in education may be more stressed, which concurs with Deasy et al.'s (2014) finding that students who undergo training in courses that include practicums are more inclined to academic stress. Nwosu et al.'s (2018) argument is premised on the fact that sandwich students, who are part-timers in that they are likely to combine their studies with other responsibilities, also are involved in practicums.

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Students who are enrolled in sandwich programmes in Nigeria are students who are admitted to the Faculty of Education on a part-time basis. One should note that most of the students in these programmes are practising teachers who do not have a degree in education and want to scale up their qualifications and skills with in-service training (Victor, 2008). Others may be working in non-teaching fields but wish to acquire a degree in education. These students make up a minority student population in Nigerian universities. These programmes are offered during vacation periods when teachers are on holiday in Nigeria. Research has shown that most students enrol in a sandwich programme in Nigeria to improve their effectiveness in their job and earn a higher income (Victor, 2008). Agricultural students in sandwich programmes attest that these programmes enhance their social status, confidence, employment opportunities, and workplace relationships (Ikeoji et al., 2007). However, researchers have noted that observations by lecturers show that the way the sandwich programme is structured appears to be a stressor in itself (Apeh, Shamo, 2021).

Additionally, other researchers have found that problems such as poor accommodation, clashes in timetables, heavy workload, unstable electricity and transportation are encountered by students in sandwich programmes (Victor, 2008). In the study conducted by Ikeoji et al. (2007), sandwich agricultural students identified areas of deficiency in the programme to include inadequate facilities, time constraints, students not well integrated into the university social and academic life, and excessive workloads of teachers. These are likely to constitute stressors to students in the programme. However, some researchers believe that stress cannot be easily avoided in everyday life and without which individuals will become lethargic and indifferent to life activities (Amponsah et al., 2020). This may mean that there could be a form of stress that may not be harmful to an individual but could help in arousing the interest of an individual to engage in useful activities (Baqutayan, 2015). Obviously, this could be the reason behind the distinction by Ganesan et al. (2018) regarding the issue of positive and negative stress. They referred to positive stress as eustress, while negative stress is referred to as distress. Notwithstanding, stress has been seen "as an unpleasant state of emotional and physiological arousal that people experience in situations that they perceive as dangerous or threatening to their wellbeing" (Baqutayan, 2015: 479).

Nonetheless, increased levels of stress among students have been shown to be deleterious in ways that negatively impact students' academic achievement and health [mental, physical and emotional] (Aafreen et al., 2018; Edjah et al., 2020; Elias et al., 2011; Pascoe et al., 2020), and satisfaction with school (Lovenjak, Peklaj, 2016). Students who study in part-time programmes are found to have high-stress levels (Gyambrah et al., 2017). Researchers have noted that in circumstances where there is stress, understanding how people cope with the stress becomes critical (Lembas et al., 2017). Consequently, how students cope with stress will have significant consequences on their mental health and academic success (Deasy et al., 2014). Recently, coping has been viewed as the "stabilisation viewpoint", enabling an individual to overcome a stressful event (Amponsah, 2020: 2). An array of strategies exists, and individuals adopt these to overcome stressful events – some are productive while others are not (Amponsah et al., 2020; Baqutayan, 2015). In accordance with this, Sullivan (2010) refers to literature contending that different coping strategies fall within the problem-focused and avoidant coping strategy nomenclature. The problem-focused strategies are adopted to confront and change the perceived stressor. In contrast, the avoidant strategies are evasive and disengaging, including denial, distraction, drug use, and self-destructive behaviours (Sullivan, 2010).

To ensure the efficiency of sandwich programmes and student welfare, a need exists for stressors and how students cope in such programmes to be adequately identified and understood. Regardless of a renewed interest in stress-related studies reported in the literature and the apparent vulnerability of sandwich students in Nigeria to stress, little is needed to conduct an empirical study to explore their stressors and coping strategies. Sandwich students appear to be a minority in the student population in Nigerian universities; thus, understanding how they are stressed and cope with the stressors will ensure equity and address social justice issues. Therefore, our purpose was to identify the academic stressors and understand how the sandwich students cope with these stressors. We also examined how the gender and marital status of the students impact their coping strategies.

2. Methods and Materials

Research Design and Participants

We applied a cross-sectional survey design in conducting our research since our interest rests on understanding the behavioural characteristics prevalent among our respondents (Fraenkel, Wallen, 2000; Stockemer, 2019). Our study sample consisted of 164 sandwich students of Nnamdi Azikiwe University, Awka, during their 2018/2019 long vacation contact. We adopted the convenience sampling technique to sample our respondents. The researchers visited the venue of the programme and gave students copies of the questionnaire to fill in after their classes. We intended to sample more students but were constrained because a good number of students reported they had a lot to do that warranted them not giving their consent to fill in the questionnaire. After explaining the essence of the research to the students, those who gave their consent completed the questionnaire. We also informed our respondents of their rights to opt-out of the study when they feel so. Our data collection process followed the Helsinki Declaration on ethical standards by ensuring the confidentiality of personal information of our respondents, obtaining participants' consent, the provision of the opportunity to opt-out of the study if a respondent wishes to do so, and the explanation of the purpose of the research to respondents. We collected on the spot the filled-in copies of the questionnaire. Table 1 presents the demographics of our respondents.

Table 1. Characteristics of Respondents, N = 164

Variable	Characteristics	Number	Percentage (%)
Gender	Male	49	29.9
	Female	115	70.1
Year of Study	Year 1	31	18.9
	Year 2	33	20.1
	Year 3	46	28.0
	Year 4	39	23.8
	Above year 4	15	9.1
Marital Status	Single	84	51.2
	Married	79	48.2
	Divorced	0	00
	Missing value	1	0.6
Religion	Christian	160	97.6
	Muslim	3	1.8
	African traditionalist	1	0.6
Ethnic Group	Igbo	124	75.6
	Hausa	6	3.7
	Yoruba	12	7.3
	Others	22	13.4

The majority of the sandwich students were female students (70.1 %), and about 50 % were not married. Regarding their religion, almost all our respondents were Christians (97.6 %), and the majority were from the Igbo ethnic group (75.6 %).

Data Collection Instruments

Two instruments were used to collect the data. The first instrument is a 15-item questionnaire that was aimed at identifying the academic stressors sandwich students experience during their programme. The instrument was structured on a four-point scale (strongly agree= SA, agree=A, disagree= D, and strongly disagree = SD). It was a researcher-developed instrument constructed after an extensive literature search to ensure all possible causes of stress among these students have been considered. However, we restricted the items to use to those school-related and occur in the school environment. We did not regard this instrument from the standpoint of a construct with a strong theoretical backing because our list cannot be regarded as exhaustive; therefore, we did not explore the factors therein. However, the reliability index of .747 using the Cronbach Alpha shows that the instrument was reliable.

The second instrument – Academic Coping Strategies Scale (ACSS) – measured students' coping strategies. The ACSS used in this study contains 27 items. It was an adaptation of Sullivan's (2010) 33-item scale developed to measure students' academic coping strategies. The only change we made was on the response choice scale. We rescaled it to the strongly agree (SA) scale to strongly disagree (SD). Sullivan developed the scale to measure coping strategies to overcome specific academic stressors. The instrument contains three clusters of approach, avoidance, and social support strategies. The approach sub-scale measures students' efforts to change the problem or their emotional reactions to it, or their preparation to handle it. Also, the avoidance sub-scale measures "cognitive or behavioural attempts to escape or disengage from the stressful situation or environment, with no real attempt to solve the problem" (Sullivan, 2010: 120). Additionally, the social support sub-scale that measures the attempts by students to seek help from others in handling stressful situations contains eight items (Sullivan, 2010). Sullivan (2010) reported that the scale had Alpha coefficients for the factors ranging from .81 to .91. Sullivan (2010) reported that fit indices from the confirmatory factor analysis (CFA) were not perfect, and this instrument has not been confirmed in the Nigerian context. Thus, we decided to conduct an exploratory factor analysis (EFA) to understand the underlying structures of the 33 items and how the factors load.

The Kaiser-Meyer-Olkin (KMO) was .695. Furthermore, the Bartlett test of sphericity justified the running of an EFA given that it was significant at 0.000. This shows that the items correlated sufficiently. An initial extraction revealed an 11 factor-solution considering an eigenvalue greater than 1. However, factors were loaded with either one or two items. We, therefore, set the factors at 3 factors in accordance with Sullivan's (2010) factors. The initial communalities ranged between ≤ .2 and ≥ .5. Items loaded below 0.20 were deleted after the other, and the EFA was re-run. Six items had communalities values below 0.2, and one item cross-loaded and was deleted. Hence, 27 items met the criterion to be used for further analysis. Rotation showed 14.85 %, 12.31 % and 8.81 % of the variances for the first, second and third factors, respectively. The factor loadings ranged from 0.521 to 0.737. The approach coping strategies sub-scale is the factor 1, factor 2 is the avoidance coping strategy sub-scale, while factor 3 is the social support coping strategies sub-scale. The Cronbach Alpha reliability coefficients for the three factors are 0.799, 0.752, 0.638, respectively. Table 2 shows the factor loading and the communality values from principal component analysis (PCA), while Figure 1 shows the scree plot.

Table 2. PCA Factor Loadings for the Three Factors in the Scale

S/N		EFA Factor loading of the Components			
	Item Description	Approach	Avoidance	Social support	Communality values
12	Drawing on your past experiences to help you solve the problem	.433			.211
20	Thinking positively about the problem	.440			.236
21	Brainstorming a variety of possible solutions to the problem	.447			.221
22	Gathering additional information about the problem, finding out more about the problem	.481			.265
23	Trying to learn something from the experience	.576			.359
26	Trying to learn from your mistakes	.516			.355
36	Trying to think about the problem carefully before acting	.573			.401

40	Being persistent in trying to solve or fix the problem	.510			.356
41	Setting specific goals for solving the problem	.637			.440
45	Creating a specific plan of action for solving the problem	.624			.401
46	Working hard to solve the problem	.636			.450
47	Asking questions about the problem	.683			.480
16	Wishing you were more capable of dealing with the problem situation		.605		.440
17	Telling yourself the problem isn't that important		.696		.545
18	Ignoring the problem		.714		.521
24	Withdrawing from other people		.545		.323
32	Denying that the problem exists		.454		.207
38	Doing nothing about the problem		.564		.382
42	Hoping the problem will fix itself		.576		.350
43	Trying to avoid thinking about the problem		.574		.365
56	Accepting that you can't do anything about the problem		.384		.211
2	Talking to another student for emotional support			.558	.358
4	Getting other peoples' perspective of the problem			.602	.370
5	Talking to a friend from outside school, or a family member, for specific advice on how to solve the problem			.673	.485
19	Expressing your emotions to someone			.522	.322
30	Talking to a friend from outside school, or a family member, for emotional support			.567	.363
33	Expressing your emotions by crying			.496	.293

Notes.
**Items shown on the table made the .40 cut-off loading. Item numbers are the same as presented in the original Sullivan's (2010) scale after his CFA for easy reference. The wording of the items was retained as they were in the original instrument. ** Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization. a. Rotation converged in 4 iterations.*

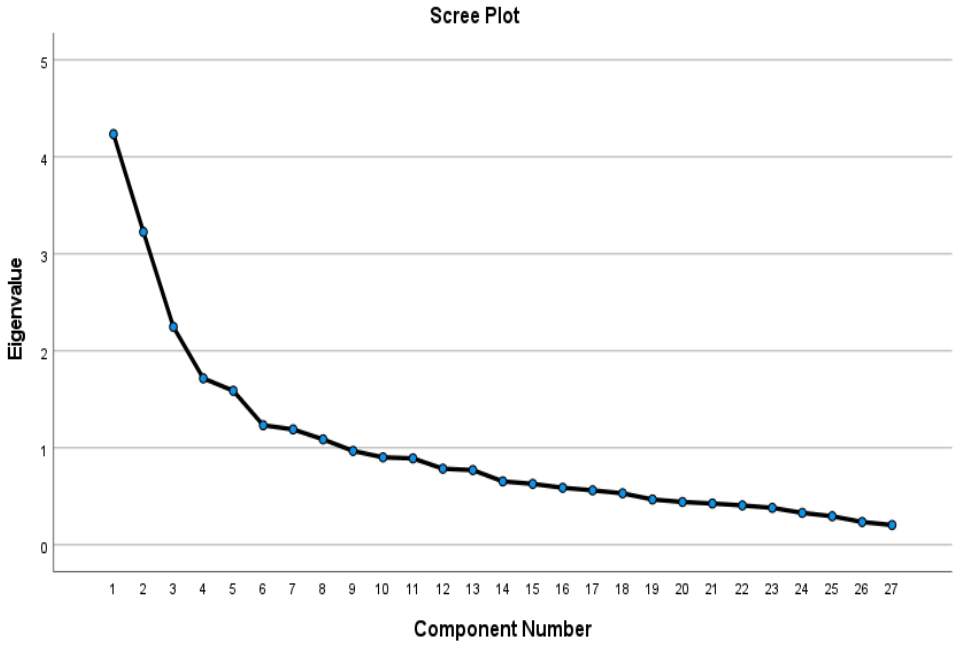

Fig. 1. Scree plot on factor number of ACSS.

Method of Data Analysis

We conducted the data analysis using SPSS version 27. Research questions were analysed using the mean, while the t-test and ANOVA statistics were used in testing the null hypotheses at a 0.05 level of significance. Before doing the actual analysis, we conducted a preliminary analysis in which we screened the data and checked for outliers. It was established that there was no significant outlier. We also conducted a test of normality. The Shapiro-Wilk test showed that approach, avoidance, and social support coping strategies were all significant, p <.05. However, Levene's test of equality of variances showed that distributions were not significant, p >.05. In the light of Levene's test being not significant and the current understanding that the violation of normality assumption, especially in distributions with large sample size, is incapable of distorting the results in t-test analysis (Rochon et al., 2012), we continued with our data analysis with the parametric statistics.

3. Results

Results in Table 3 show the mean responses of sandwich student participants on the listed academic stressors. All the items were rated above 2.5 mean score, showing that they perceived them as academic stressors. Students perceived overcrowded hostels, congested lecture schedules, time pressure to cover the course before exams and inconsistent lecture timetables as the greatest stressors during their programme.

Table 3. Students' Mean Responses on Sources of Academic Stress (N = 164)

S/N	Items	Min.	Max.	Mean	Std. Deviation
1	Overcrowded hostels	2.00	4.00	3.56	.61
2	Distance from the hostel to some classes	1.00	4.00	3.04	1.02
3	Overcrowded classrooms	1.00	4.00	3.13	.89
4	Poorly ventilated classrooms	1.00	4.00	3.14	.91
5	Congested lecture schedule	1.00	4.00	3.50	.67
6	Aggression/hostility from lecturers	1.00	4.00	3.23	.76
7	Aggression/hostility from fellow students	1.00	4.00	3.01	.84

8	Quarrelsome roommates	1.00	4.00	2.92	.89
9	Nagging colleagues	1.00	4.00	2.93	.86
10	Time pressure to cover the course content before exams	1.00	4.00	3.49	.66
11	Delayed release of examination result	1.00	4.00	3.45	.69
12	Inconsistent lecture timetable	1.00	4.00	3.48	.66
13	Inadequate learning facilities	1.00	4.00	3.24	.74
14	Unsupportive lecturers	1.00	4.00	3.30	.71
15	Failure in examination	1.00	4.00	3.29	.74

Table 4 revealed that the difference in the mean score of male students (M = 3.37, SD = .31) and that of female students (M = 3.19, SD = .37) in perceived academic stressors, were statistically significant, $t(162) = 2.958$, $p < .05$; single (unmarried) students (M = 3.29, SD = .35) had a non-significant higher mean score in approach to academic stressors than their married counterparts (M = 3.20, SD = .38), $t(161) = 1.627$, $p > .05$.

Table 4. t-test of Mean Differences on Students' Stressors Based on Gender and Marital Status

	Gender/ marital Status	N	Mean	Std. Dev	*t*	*df*	Sig. (2-tailed)	Effect size (Cohen's D)
Stressors	Male	49	3.3728	.30578	2.958	162	.004	.505
	Female	115	3.1913	.37996				
	Single	84	3.2944	.34960	1.627	161	.106	-
	Married	79	3.2017	.37833				

ANOVA as given in Table 5, shows a non-significant main effect of students' year of study (year 1, M = 3.17, SD = .37; year 2, M = 3.37, SD = .33; year 3, M = 3.26, SD = .38; year 4, M = 3.21, SD = .38; above year 4, M = 3.17, SD = .33) on their perceived academic stress, $F(3, 159) = 1.488$, $p > .05$.

Table 5. ANOVA Test on Students' Perceived Academic Stressors and Year of Study

Categories	Sum of Squares	*df*	Mean Square	*F*	Sig.
Between Groups	796	4	.199	1.488	.208
Within Groups	21.281	159	.134		
Total	22.078	163			

Results in Table 6 show that students had higher mean scores in Approach and Social Support Coping strategies than in Avoidance Coping strategies. The highest mean score occurred in the Approach Coping strategy, indicating that students may use this strategy more than any other strategy.

Table 6. Mean Responses of Sandwich Students on their Coping Strategies, N = 164

Coping Strategies	Mean	Std. Deviation	Skewness		Kurtosis	
			Statistics	std. error	statistics	std. error
Avoidance	2.2012	.55706	.387	.190	-.342	.377
Approach	3.1819	.37905	.011	.190	.150	.377
Social Support	2.9248	.49272	-.078	.190	-.179	.377

Results depicted in Table 7 show that the difference in the mean score of male students (M = 3.17, SD = .33) and that of female students (M = 3.19, SD = .40), in approach coping strategies, was not statistical significant $t(162)$ = -.260, p >.05; male students' mean score (M = 2.25, SD = .64), was also not significant in avoidance coping strategy from that of female students (M = 2.18, SD = .52), $t(162)$ = .450, p > .05; male students (M = 2.98, SD = .51), as well as non-significant higher mean scores in social support coping strategy than the female students (M = 2.90, SD = .51), $t(162)$ = .325, p > .05.

Results provided in this table further indicate that single (unmarried) students' mean score (M = 3.22, SD = .39) was not significantly different in approach coping strategies from that of married sandwich students (M = 3.14, SD = .37), $t(161)$ = 1.310, p >.05; single (unmarried) students (M = 2.18, SD = .55), had lower mean score in avoidance coping strategies that was not significant from that of married students (M = 2.23, SD = .57), $t(161)$ = -.593, p > .05; single (unmarried students (M = 3.02, SD = .49), and had a significant higher mean score in social support coping strategies than the married students (M = 2.81, SD = .48), $t(161)$ = 2.800, p < .05, ηp^2 = .439.

Table 7. t-test Statistics on Coping Strategies Mean Differences as a Result of Gender and Marital Status

Coping Strategies	Gender	N	Mean	SD	*t*	*df*	Sig. (2-tailed)	Effect size (Cohen's D)
Approach	Male	49	3.17	.33	-.260	162	.795	-
	Female	115	3.19	.40				
Avoidance	Male	49	2.25	.64	.757	162	.450	-
	Female	115	2.18	.52				
Social support	Male	49	2.98	.44	.987	162	.325	-
	Female	115	2.90	.51				
	Marital Status							
Approach	Single	84	3.22	.39	1.310	161	.192	-
	Married	79	3.14	.37				
Avoidance	Single	84	2.18	.55	-.593	161	.554	-
	Married	79	2.23	.57				
Social support	Single	84	3.02	.49	2.800	161	.006	.439
	Married	79	2.81	.48				

The ANOVA in Table 8 shows a non-significant main effect of students' year of study (year 1, M = 3.19, SD = .37; year 2, M = 3.16, SD = 38; year 3, M = 3.10, SD = .39; year 4, M = 3.25, SD = .36; above year 4, M = 3.28, SD = .40) on their approach coping strategy, $F(3, 159)$ = 1.106, p > .05; a non-significant main effect of students' year of study (year 1, M = 2.39, SD = .59; year 2, M = 2.14, SD =.57; year 3, M = 2.21, SD = .58; year 4, M = 2.10, SD = .48; above year 4, M = 2.19, SD = .55) on their avoidance coping strategies, $F(3, 159)$ = 1.32, p > .05; a non-significant main effect of students' year of study (year 1, M = 2.98, SD = .49; year 2, M = 3.10, SD =.42; year 3, M = 2.86, SD = .43; year 4, M = 2.84, SD = .53; above year 4, M = 2.82, SD = .63) on their social support coping strategies, $F(3, 585)$ = 1.823, p >.05.

Table 8. ANOVA Test on Student Coping Strategies and Year of Study

Coping Categories		Sum of Squares	df	Mean Square	F	Sig.
Approach	Between Groups	.634	4	.158	1.106	.356
	Within Groups	22.786	159	.143		

	Total	23.420	163			
Avoidance	Between Groups	1.626	4	.406	1.320	.265
	Within Groups	48.956	159	.308		
	Total	50.582	163			
Social support	Between Groups	1.738	4	.435	1.826	.126
	Within Groups	37.834	159	.238		
	Total	39.572	163			

4. Discussion

Our study attempted to identify the academic stressors among sandwich students and their strategies to cope with the stressors. This is very important due to the nature of these programmes and the impact the findings may have on university policymakers and student affairs divisions. It is even more significant that our study is the first attempt to understand the stress and coping dynamics of this minority student population in Nigeria. Findings show that all the listed items constituted stressors to students in their programmes. Students perceive issues as the most significant sources of stress were issues that had a bearing on inadequate facilities, learning pressures, and inconsistencies in teaching and learning planning. Furthermore, unhealthy relationships between students and lecturers were perceived as stressors. Similarly, Ikeoji et al. (2007) and Victor (2008) have shown that inadequate accommodation, inadequate facilities, and time constraints are challenges that can result in stress among sandwich students. Research reported similar findings among other part-time students (Kwaah, Essilfie, 2017).

Our findings show that male students had a significantly higher mean score in perceived academic stressors than their female counterparts, indicating that male students might be more stressed than their female counterparts. Over the years, researchers have tried to understand how students differ in their perception of stressors based on gender (Adasi et al., 2020; Calaguas, 2011; Chemutai, Mulambula, 2020). The finding of this study that male students have a significantly higher mean score in perceived sources of academic stress contradicts the findings of Calaguas (2011) and Chemutai and Mulambula (2020). They found that female students were more prone to stressors. However, these researchers adopted different measures to investigate the issue, and none of these studies focused on sandwich students. There is a likelihood that the source of variation might be due to different instruments that were used.

Our finding also indicated that single (unmarried) students had a non-significant higher mean score in perceived sources of academic stress than their married counterparts. This means that students who are not married may perceive these sources as stressors more than their married counterparts, though not in a significant way. This finding contradicts expectations in the sense that people who are married are expected to be more stressed than those who are not. However, there is the likelihood that the companionship in marriage could mediate the way individuals could see situations as stressors. Though carried out among a different cohort of students, Ghafoor et al. (2020) found that single students, out of a list of six listed stressors, scored higher in their mean perception of four of those items than their married counterparts. This could imply that unmarried students may be more stressed in the programme than married students. Researchers have found that companionship, especially within the family structure, could buffer life stress (Rodriguez et al., 2019). It is possible that married students may have their spouses readily available to encourage them during challenging moments.

Furthermore, the student's year of study did not significantly affect how students perceived the listed items as sources of academic stress. But an interesting finding emerged from the mean differences. First-year and fourth-year students and those above year four scored lower than those in their second and third years. It seems that first-year students might not have been used to the university, and the vigour with which they entered the university might have influenced the way they perceived these sources of academic stress. Proceeding to years two and three, students showed higher mean scores on sources of academic stress, indicating that they might be more

stressed than those in year one. However, those in year four and above had lower mean scores, suggesting that they might have gained skills to handle some of the situations. Indeed, Suleyiman and Zewdu (2018), who studied students' stress levels based on their year of study, found significant differences in the highest mean stress scores among fresh students, which contradicts our present findings. Though our research inferred students' stress through the perceptions of the sources of academic stress, there is the likelihood that those who have higher stress levels are likely to report more stressors than others.

Our findings concerning students' coping strategies showed that the most used strategy is the approach coping strategy. The least used coping strategy is the avoidance coping strategy. This may indicate that students are more likely to use strategies to tackle the situation at hand head-on and alter the situation rather than any other coping mechanism (Struthers et al., 2000). Our finding concurs with Kuncharin (2016), who found that students applied the approach coping strategy more often to solve their academic problems. Moreover, even without using the same nomenclature in describing the patterns of students' coping mechanisms, researchers (Majumdar, Ray, 2010; Kwaah, Essielfie, 2017; Nwosu et al., 2018) report that students more often adopt strategies aimed at changing the situation at hand. Our findings also show that students seek support from significant others to cope with stressful situations. Companionship has been demonstrated to be most relevant in overcoming stress (Rodriguez et al., 2019). The strategy adopted by students least of all is the avoidance strategy. This might be due to some students using a strategy of emotional/mental escape from the problem.

Furthermore, our findings showed that the gender of the students was not a significant factor in any of the sub-clusters of the ACSS. However, male students scored higher in social support and avoidance scales, while female students scored higher in the approach sub-scale. This finding contradicts the findings of Guszkowska et al. (2016), which showed that male students were inclined to use task-based coping strategies while female students preferred emotion-focused strategies. In addition, marital status also was not a significant factor in approach and avoidance coping strategies but was significant in the social support coping strategy. Unmarried students scored significantly higher than their married counterparts in social support coping strategies, indicating that they sought support when stressed. It might be that they have a wider circle of friends compared to their married counterparts. The married students possibly are restricted to a smaller circle of friends.

Our findings also showed no significant differences in the mean scores of the students on the three sub-clusters of the ACSS based on their year of study. However, the mean scores indicate that students from year four and above have higher mean scores in the approach cluster than those in years two and three. This indicates that they have a stronger inclination to adopt task-based strategies. In avoidance coping, the freshmen were inclined to use more avoidance strategies than any other group of students. This is not a very productive way of tackling stressful situations. Those in year two had the highest mean score in groups in the social support coping cluster. After their first-year experience in university, they may be that they are likely to use means of consultation with others as a coping strategy.

5. Conclusion and Implications

Our study has made a significant contribution to stress and coping strategy literature in several ways. First, it was the first study in Nigeria to examine the coping strategies of sandwich students and the impact of their gender, marital status, and year of study on their coping mechanisms. This study has revealed to stakeholders such as educational psychologists, guidance counsellors, staff of the divisions of student affairs in universities, and those interested in sustainable education and lifelong education the patterns of coping strategies of these students and what they consider as the sources of academic stress. These stakeholders can fashion out intervention strategies aimed at improving students' capacity to cope with stress during their studies. Second, this study also has contributed to our understanding of the coping strategy pattern of a minority student population group in higher education. Oftentimes, researchers focus on regular students at the neglect of minority students. This study, in a way, will ensure equity and fairness in higher education if our findings could arouse the interest of stakeholders to plan for better learning environments for the students. This is based on the findings of researchers

indicating discrimination against sandwich students in comparison to students in regular programmes at the university (Manu et al., 2020).

Notwithstanding these contributions, our study was limited by a few factors. First, is the use of one university in carrying out the study. This could limit the generalisation of the findings of this study. Also, the use of only questionnaires to collect data may have limited the robustness of the findings. Triangulation of findings may arm researchers with more robust findings. It is, therefore, suggested that further research in this field should involve the sampling of more universities and a combination of a questionnaire and an interview be used to collect data. We have found that sandwich students perceived inadequacies and inconsistencies in the higher education system as stressors through this study. Unhealthy relationships between these students and their colleagues/lecturers were mentioned as sources of academic stress, with gender as a significant factor. We also found a pattern of coping strategies, which shows that sandwich students adopted more approach coping strategies than any other, indicating their inclination towards a task-based coping strategy. Also, marital status significantly impacts the social support coping strategy. It can be concluded from our findings that sandwich students face a number of challenges that result in academic stress, and they adopt several strategies to cope with the stress emanating from these challenges.

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7. Declaration of Competing Interest

The authors of the manuscript declare that there is no interest in conflict, and all reference materials were dully acknowledged.

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None.

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