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CHALLENGES EXPERIENCED BY RADIOGRAPHY STUDENTS DURING CLINICAL PLACEMENTS IN A LOW RESOURCE SETTING: A QUALITATIVE PHENOMENOLOGICAL STUDY

B Chinene *BSc (Hons) Rad, MSc Rad, DRad* | **C Sanyamandwe** *BSc (Hons) Rad, PgDip/Educ, MSc Rad, MSc Med (Ultrasound)* | **T Hlahla** *DipRad, MSc Rad*

Harare Institute of Technology, Department of Radiography, Belvedere, Zimbabwe

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Abstract

Introduction. Unlike classroom education, during clinical placements, much of the day-to-day activities are unplanned and unstructured, hence, learning occurs in a complex environment. While a clinical setting may provide a more authentic learning environment, it however does include many challenges for the students. Identifying the challenges experienced by students is of importance so that appropriate mitigation strategies can be put in place. The aim of the study was to explore the challenges experienced by radiography students during their clinical placements.

Methods. A qualitative phenomenological design employing three focus group discussions were conducted with second, third, and fourth-year radiography students. Data were managed in Nvivo 12 and analysed according to Giorgi's phenomenological approach.

Results. Six themes overlapping from all three focus groups representing the challenges experienced by students emerged. The themes include financial issues, inadequate equipment, unsatisfactory supervision, disruptive behaviours, COVID-19, and a lack of support.

Conclusion. Deliberate strategies to tackle the challenges experienced by students are recommended to create an effective clinical environment for radiography students.

Keywords. challenges, experiences, radiography students, clinical placements, low resource setting, phenomenological

INTRODUCTION AND BACKGROUND

Clinical placements are a core component of radiography training which enable students to transition from novice to truly competent practitioners.[1] During clinical placements, students gain experience in psychomotor, cognitive, and affective competencies required to perform their future roles as safe, professional, and competent radiographers.[2] Clinical placements thus allow students to bridge the gap between theory and practice and hence, socialise them into the radiography profession.[3] Unsupervised students' experiences can lead to the adoption of lower standards of care because students may not learn correct practices.[4]

Unlike classroom education, much of the day-to-day clinical activities are unplanned and unstructured, hence, learning occurs in a complex environment.[5] While a clinical setting may provide a more authentic learning environment, it provides many challenges for students. Students are likely to experience technical, environmental, teamwork, time, patient-related, and coronavirus disease 2019 (COVID-19) challenges within the clinical environment.[6,7] Identifying the challenges experienced by students during clinical placements is of paramount importance so that appropriate mitigation strategies can be put in place. Challenging experiences that are not addressed have the potential to adversely affect future clinical experiences and consequently negatively impact effective learning.[1]

Several studies have investigated the challenges experienced by radiography students globally.[7,8] Zimbabwe has suffered tremendous economic problems in the last two decades, with an ongoing decrease in healthcare funding.[9] The attrition of experienced radiographers, along with the incapacity of responsible authorities to get the resources needed for proper clinical instruction,[10] has resulted in a seemingly deficient teaching environment for radiography students. Anecdotally, clinical placements and supervision have suffered because of these challenges. Nevertheless,

the rationale for this study is that there is a dearth of published research on challenges experienced by radiography students during clinical placements in Zimbabwe. Therefore, this study aimed to address the gap by exploring the challenges experienced by radiography students during their clinical placements at a tertiary institution in Zimbabwe.

MATERIALS AND METHODS

• Study design

Consistent with the aim of the study, a qualitative phenomenological design employing three (3) focus group discussions (FGDs) was conducted between 10 and 28 February 2023. According to Adu[11] this design is used when researchers want to examine the views and stories of people who have directly or indirectly experienced the phenomenon. In this case researchers intended to describe the challenges experienced by students during their clinical placements.

This design allowed researchers to obtain the lived experiences of many students within a short time. Furthermore, the FGDs encouraged spontaneous engagement among student radiographers. According to Gundumogula and Gundumogula[12] the type and breadth of data acquired through group social interaction are generally deeper and richer than those gained through one-on-one interviews.

• Setting, population and sampling

The study was carried out at a tertiary institution in Zimbabwe. From the second year to the fourth year, the students are placed in clinical radiography departments to have experience in the different modalities. Radiographers and a specialised clinical supervisor oversee students. There is also support from the radiography academic department by regular clinical visits. Twenty-five (n=25) level 2, 3 and 4 students, who consented to take part in the study, were purposively sampled from a total of 80 from the BSc programme (n=80). The students were then randomly divided into three groups of at least eight using Excel software. The criteria for inclusion were: students who have been on clinical placements for at least three months and were willing to take part in the study. Those who did not have at least three months clinical experience exposure were excluded.

• Data collection and analysis

A pharmacy department lecturer with expertise in FGDs was asked to be the moderator. This was done to avoid the power dynamics attributed to the student-lecturer relationship which could lead to bias. The moderator initiated the focus group using a predetermined question. The main prompt was: "What challenges have you experienced during clinical placements"? However, the probing questions were adjusted to follow for a flow of the discussions. The participants were assigned numbers by the moderator and had to say their numbers before making a contribution. The average length of the FGDs was 60 minutes. Data saturation was accomplished by (i) hosting three parallel FGDs, and (ii) ensuring that each group had at least eight participants. The FGDs took place in a closed classroom that was free from noise. The FGDs were audio-recorded and then transcribed verbatim. The FGDs took place during lunchtime so that there was no disruption of lectures. Coding is required to make qualitative research data amenable to analysis.[13] All three authors read the transcripts, labelled significant quotes, and gave tentative codes independently. Coding disagreements were discussed and resolved. Data were managed in Nvivo 12[13] and analysed according to Giorgi's 1986 phenomenological approach.[14]

• Trustworthiness and integrity of the study

Lincoln and Guba's criteria[15] for assessing the trustworthiness of qualitative studies were employed to enhance the integrity of the current work. To ensure credibility focus group member checking was done Following the researchers' original thematic analysis, main topics and quotes indicating themes were submitted to each original group for member-checking. The participants were asked to evaluate the researchers' interpretations critically, and the necessity of providing honest feedback was stressed. Although major themes were established, focus group participants contributed additional information elaborating on the themes; the inclusion of not less than eight participants in each FGD allowed for data saturation to be reached.[16] To assess the transferability of the themes, the researchers checked the findings with another group of students who had not participated in the study at another local university. These students verified that the themes were relatable to their situations. For dependability and confirmability, the transcripts from the FGDs were coded independently, and the researchers met periodically to compare codes and reach a consensus. Once coding was completed, another radiography lecturer with qualitative research expertise from the department reviewed the entire set of transcripts to check the researchers' accuracy of coding, themes in terms of the verbatim inputs of the participants of their lived experiences.

ETHICAL CONSIDERATIONS

At the start of each FGD, the participants were briefed about the study's goal. The moderator obtained verbal consent from the participants, assuring and encouraging them to express themselves freely. Ethical approval was granted by the HIT Ethical Committee (SAHS/DR00015/23). In keeping with research principles each participant was given a number to ensure anonymity.

RESULTS

• Demographics

Three FGDs were conducted with 25 participants (14 females and 11 males) from academic levels 2, 3, and 4. There

Table 1. Participants' demographics

Participation Number		Focus Group	Gender	Academic Part/Level
1.	RS 1	1	M	2
2.	RS 2	1	M	2
3.	RS 3	1	F	3
4.	RS 4	1	M	3
5.	RS 5	1	F	3
6.	RS 6	1	F	4
7.	RS 7	1	F	4
8.	RS 8	1	M	4
9.	RS 9	2	M	2
10.	RS 10	2	F	2
11.	RS 11	2	F	2
12.	RS 12	2	F	3
13.	RS 13	2	M	3
14.	RS 14	2	F	3
15.	RS 15	2	M	4
16.	RS 16	2	M	4
17.	RS 17	3	F	2
18.	RS 18	3	F	2
19.	RS 19	3	M	3
20.	RS 20	3	M	3
21.	RS 21	3	F	3
22.	RS 22	3	F	4
23.	RS 23	3	M	4
24.	RS 24	3	F	4
25.	RS 25	3	F	4

were eight (n=8) in two FGDs and nine (n=9) in the other one. Table 1 gives a summary of the participants' demographics.

• Challenges faced by radiography student participants

The participants were keen to participate in this study because they considered this to be an opportunity to share the challenges that they experienced during clinical placements. Six overlapping themes were constructed from the three focus groups: financial challenges, inadequate equipment, unsatisfactory supervision, disruptive behaviour, COVID-19, and lack of support. Table 2 gives a summary of the themes, subthemes, and verbatim quotes. Verbatim comments are in italics.

Theme 1 » Financial Challenges

This theme highlights the financial challenges that the participants experience when placed in different radiology departments around the country and included accommodation and transport.

i. Accommodation

The participants highlighted the shortage of accommodation in some of the hospitals in which they are placed. Because they are placed far from home means that finding accommodation is a big challenge as evident in the verbatim comments on participants.

> *The school sends us to distant places where neither our parents nor our relatives reside. We have to look for our accommodation in a foreign place and simultaneously report to work on the assigned day* (RS 17)

This compelled many to seek accommodation outside the hospitals. However, one participant narrated that in view of needing accommodation unscrupulous property agents took advantage of their desperation by charging an exorbitant amount.

> *The school never provided or liaised with the hospital to secure accommodation for us. I was conned by many property agents to the extent of sleeping in a lodge before the accommodation thing. I ended up staying in a very expensive place that cost me money for food* (RS 23)

The challenges are sometimes further compounded by the fact that placement is not for long periods (e.g., a month or

Table 2. Themes, subthemes/categories and examples of verbatim quotes

Theme		Subtheme/category	Quote
1.	Financial challenges	i. Accommodation ii. Transport	*I face financial challenges in that I have no remuneration or at least any small token of appreciation for my labour*
2.	Inadequate equipment	i. Shortage of modalities and equipment ii. Equipment breakdown	*The first challenge at hand is the lack of equipment in the hospitals to which we should be attached. This, therefore, limits the attachment exposure and experience we are expected to have*
3.	Unsatisfactory supervision	i. Shortage of radiographers ii. Overcrowding iii. Lack of teaching competency	*… due to the high patient inflow into the department, the Radiographers end up just teaching basic machine and equipment operation which is not enough because they have a lot of patients to attend to*
4.	Disruptive behaviour	i. Harassment ii. Discrimination	*During the morning rounds, nurses would mock us and belittle us because of our lack of knowledge in the medical procedures and activities*
5.	COVID-19	i. Shortage of personal protective equipment (PPE) ii. Fear of infecting family members	*Working during the COVID era was very difficult because at times you could be given only one or two masks to sustain you for the whole day. If you get sick, there was no compensation whatsoever offered to you but you are the one working in the crossfire*
6.	Lack of support	i. Counselling ii. Compensation	*We just work and use our resources to survive and the school does not even ask how we cope even with the increased fees and the economic crisis in Zimbabwe*

two). As stated by participant RS 20 landlords prefer tenants who stay longer.

> *…when we went to XXX hospital, there was no accommodation on the hospital premises, and we had to look for accommodation in a new place for just one month. Some landlords didn't want some tenants who lived for only a month* (RS 20)

ii. Transport

The participants highlighted their travel expenses to the places where they are placed and also their daily commuting fares.

> *This short notice was very straining because more time to prepare for accommodation and transportation expenses would be needed. For example, I was told I would be attached to XXX hospital on short notice. It was difficult to raise funds for transportation and accommodation* (RS 21)

> *Home time and getting to work were hectic because we had no bus to ferry us to and fro* (RS 17)

Participant RS 19 highlighted the need for a small token of appreciation to assist them to cope with the financial challenges.

> *I face financial difficulties because I receive no remuneration or even a small token of appreciation for my efforts* (RS 19)

Theme 2 » Inadequate Equipment

The number and state of equipment, especially in public hospitals, presents a major challenge to students during clinical placements. This theme had two subthemes: shortage of modalities and equipment breakdowns.

i. Shortage of modalities and equipment

Firstly, the participants highlighted the shortage of equipment; they therefore get minimum clinical experience as fewer students can be placed at any particular hospital at any given time.

> *The first challenge is a shortage of equipment in public hospitals. This limits the attachment exposure and experience we are expected to have* (RS 25)

Furthermore, there is a shortage of advanced imaging equipment, for example, computed tomography (CT), magnetic resonance imaging (MRI), and gamma cameras . This means that students will spend most of their clinical placements doing general radiography. As evident in the respective comment by RS 2 and RS 6 students feel that the experience and exposure to other specialised modalities may be insufficient.

> *We spent the entire attachment performing general x-ray exams, with little exposure to other modalities such as ultrasound, CT, or MRI* (RS 2)

> *Due to the inadequacy of specialised imaging modalities, the majority of the students have been allocated to the general x-ray room only. Having less allocated time to the CT and MRI department makes training in this area inadequate. Radiographers are expected to have adequate knowledge and skills in all modalities but it will be difficult for the students to attain adequate knowledge on these modalities* (RS 6)

ii. Equipment breakdowns

The participants reported frequent equipment breakdowns as a challenge that limits their time in clinical practice.

> *Machines at XXXX hospital broke down during the first*

week that we were at the clinical attachments and only got fixed the last week before returning to class (RS 24)

Participant RS 15 spent the whole attachment period doing nothing as the equipment broke down and was not fixed.

I was once placed where the machines were not working the whole time. Then what was the point of being sent to a place where you are going to sit around and expected to be present every day (RS 15)

However, when the machines are finally fixed, there is overcrowding due to the backlog. This means radiographers have too much work on their hands as they try to clear the patients. This leaves less time for them to teach students.

Due to pressure, when machines are working again, the qualified radiographer will not have enough time to explain procedures in detail to us (RS 22)

Theme 3 » Unsatisfactory Supervision

This theme highlights the inadequate supervision that students receive due to several factors. The subthemes in this section included; shortage of radiographers, overcrowding and a lack of teaching competency, incomplete filled-in request forms.

i. Shortage of radiographers

The participants highlighted that the shortage of radiographers overloaded the students. Because of understaffing the students felt that they were working more than learning.

At XXX hospital there were only 2 radiographers on day duty because of a shortage. Imagine just two radiographers at a central hospital. So sometimes the radiographers left us to do the work on our own when they had to do other duties like theatre or ultrasound (RS 9)

Sometimes I felt like we were just working and not learning (RS 23)

ii. Overcrowding

The high patient inflows in the departments meant that there was little time for radiographers to adequately teach the students.

Due to the high patient inflow into the department, the Radiographers end up just teaching basic machine and equipment operation which is not enough because they have a lot of patients to attend to (RS 25)

There was also overcrowding of students because students from other institutions also placed at the same hospitals. As a result, according to the participants, they did not have enough practice time.

Another problem was overcrowding with students from other institutions at the small department. And this led to few practice hours (RS 21)

Another issue is an overload of work. At some hospitals, the workload is just too much where we have to work from 8 am to 4 pm (RS 10)

iii. Lack of teaching competency

The participants faced challenges of having clinical supervisors, which they thought they did not have the necessary teaching skillset.

The clinical supervisors should have the necessary teaching competency. It would be much better if the department employed radiographers with the necessary teaching skillset to teach students (RS 25)

However, some supervisors were just not willing to explain procedures to the participants.

The first issue was that few radiographers were willing to clearly explain the procedures we were supposed to learn, so I ended up learning most of the procedures by observing, which limited me from getting enough practical experience (RS 21)

According to participants RS 20 and RS 1 some radiographers see students as labour; they let the students do the work on their own instead of supervising them.

In most cases when there are students in the department senior Radiographers tend to relax to an extent of not even coming to the department to check for progress or to assist students on the problems they me be encountering (RS 20)

Therefore, it is of great importance that the senior radiographers be kind enough and create a friendly environment for the students to adapt and learn (RS 1)

Theme 4 » Disruptive Behaviour

This theme relates to any form of unprofessional interaction between students and radiographers or other health workers like nurses. In this case, these unprofessional interactions include harassment and discrimination. They therefore formed subthemes.

i. Harassment

The participants reported being mocked by other healthcare professionals, especially the nursing staff. Nurses belittled them and the radiography profession.

During the morning rounds, nurses would mock and belittle us because of our lack of knowledge in the medical procedures and activities (RS 23)

The radiography profession is looked down upon by other health professionals, especially the nurses. They mocked the profession and called me a button pusher. They do not value radiography or acknowledge its importance (RS 1)

However, some participants re-counted unprofessional interactions with radiographers themselves.

As for my personal experience, the male bosses were flirty which disturbed the student and teacher relationship. It also disturbed my working experience, especially in my third year. My attachment at XXX hospital was not a rosy one because of my male boss. He was cordial the first two weeks but somehow he began to resent me because he saw me with my boyfriend the other day, on a Saturday afternoon. So I noticed that from that day that's when the resentment began until the three months ended. There should be communication or follow-ups between mentors and us during attachment and how we address sexual harassment (RS 17)

ii. Discrimination

Participants described being discriminated against because of the institution that they are affiliated to. According to RS 1 radiographers preferred working with students from other institutions.

I encountered radiographers who preferred to work with Students from XXX. At first, I thought we were getting something wrong until I realised that they were operating under the stereotype (RS 1)

Some experienced discrimination by gender.

Gender discrimination by radiographers whereby some would prefer to work with females alone, so how are we supposed to learn and you cannot report such a scenario because it will come back to you again as being the one who reported (RS 8)

Theme 5 » COVID-19

This theme highlights the challenges that the participants faced during the COVID-19 pandemic. The subthemes included; shortage of PPE and fear of infecting family members.

i. Shortage of PPE

The participants bemoaned the shortage of protective personal equipment (PPE) made it difficult for them to successfully learn without fear. They had to learn to work with limited PPE.

...during the ward attachments there was COVID-19 Outbreak. Personal Protective Equipment was scarce in this hospital. As a student, I had to use the PPE available in the hospital and sometimes it was not enough (RS 25)

In some cases, they were given a single set of PPE to use for the whole day.

Working during the COVID era was very difficult because at times you could be given only one or two masks to sustain you for the whole day (RS 15)

for example being given a single mask to use the whole day, while working with coronavirus patients (RS 21)

ii. Fear of infecting family members

Due to a lack of adequate PPE provided to them, the participants feared that they would be infected by the virus and in turn infect their family members.

Masks were not pleasant and I once tested positive during clinical placement and I infected the whole family. My father almost succumbed to it and I imagined if he did, I could not live with the fact that I killed him (RS 23)

In addition to the risk of infection they did not have any form of compensation if they were infected by the deadly virus.

Also, no medical cover or medicine was offered in the case of contracting the virus. Therefore, we felt that I was just exposing myself to risk without mere benefit (RS 25)

Theme 6 » Lack Of Support

Despite the numerous challenges that the participants face during clinical placements, they felt that there was a lack of institutional mechanisms to support them. They spoke of needing support in the form of counselling and compensation, which are subthemes.

i. Counselling

One described the emotional trauma that they went through after their first encounter of critical patients. They felt that counselling would have gone a long way in making their situation better.

I thought the hospital or the school would provide counselling after our first encounters with a horrific situation, for example, my first ward was the accident and emergency ward (resuscitation room). I was confused and traumatized until nightmares and insomnia due to the experiences like the last office (RS 23)

Participants were of the opinion that the institution should put more effort into the mental welfare of students considering the prevailing harsh economic climate.

We just work and use our own resources to survive and the school does not even ask how we are coping even with the increased fees and the economic crisis in Zimbabwe (RS 23)

There should be a communication or follow-ups between mentors and us during attachment and how we address sexual harassment (RS 17)

ii. Compensation

Participants expressed the need for provision of some form of compensation, especially for working during the COVID-19 pandemic. Verbatim comments by RS 11 and RS 15 pertain to the need for compensation.

...working during COVID was exceptionally challenging for me. I found it unfair for me to go and work without any form of cover from the institute. Personally, my

mother is 64 and my being exposed to such an environment was a huge risk considering my mother's age and susceptibility to the virus. At least if we had some sort of cover whereby if I was to fall sick I would be compensated by the institute rather than going home and risking my family member's lives (RS 11)

If you got sick, we felt that little support was offered to you but you are the one working in the crossfire (RS 15)

DISCUSSION

This study aimed to explore the challenges faced by radiography students during their clinical placements. This study provided the participants with an opportunity to reflect and examine the challenges that they experience during placements while engaging with their peers in a group. In low-resource settings, such as Zimbabwe, having enough money to finance a college education may be a challenge. However, students' financial circumstances and concerns about finances have the potential to negatively impact their emotional and physical health and general well-being.[17]

The findings of this study showed that some radiography students experienced financial challenges during clinical placements. Without a doubt, the quality of the placement learning experience can be substantially compromised due to student financial stress.[18] At our academic institution the placements of students are usually for up to 12 weeks at hospitals far from their homes. The distance may be as more than 400 km. This length of time and distance from home can have dire financial implications for students.[1] The student participants in our study specified challenges in securing accommodations and commuter fares. Our findings are similar to those reported by Akpaniwo et al.;[19] they found that about 48% of the students in their study in Nigeria concurred that the distance from their accommodation to the hospital posed a challenge. Kumsa et al.[8] highlighted that the cost of transportation for the round trip to clinical placement is a challenge for some Ethiopian students in their study.

In most low-resource countries, radiology equipment is very expensive to purchase and maintain, and breakdowns occur frequently. Zimbabwe has suffered from radiological equipment breakdowns in recent years.[20] According to the participants in this study , the availability and state of equipment, especially in public hospitals, presented a major challenge to them during clinical placements. They highlighted the absence or shortage of certain imaging modalities like MRI and gamma cameras. Furthermore, frequent equipment breakdowns especially reduced their placement time. These findings are in keeping with studies done in other African settings. For instance, a study by Kyei et al.[21] revealed that a shortage of equipment resulted in inadequate exposure to certain specialised procedures, and time allotted to each treatment room. In recent years there has been enthusiastic adoption of simulation-based training healthcare education.[22] A study by Nguyen et al.[23] concluded that simulation-based training improves clinical skills, enhances visual thinking ability, and clinical practice ability of radiography students. Simulation-based training, therefore, could provide an alternative and cheaper method for equipping students with the necessary clinical competencies.

The participants in this study stated that the high patient inflows in the departments meant that there was little time for radiographers to adequately teach the students. Public hospitals in Zimbabwe are notorious for long waiting queues and overcrowding for patients. Numerous studies in radiography have reported the role of a clinical supervisor as being complex due to the competing demand for providing patient care whilst simultaneously facilitating the learning processes of students.[24] For instance, in research done in the United Kingdom (UK), radiography students expressed concern with an increase in the workload. This resulted in radiographers similarly not paying attention to students' learning needs.[5] On the other hand, overcrowding of students in the departments was also noted to be a concern in this study. Two local institutions offer the bachelor of science radiography programme; both place their students at the three local central hospitals. This also limits practice time for students. This set up is similar to an Ethiopian study:[8] the radiographers reported an inconvenience about a high student-to-placement site ratio. They highlighted a mismatch between the number of students placed at a hospital or imaging centre and the available resources to support learning.

Disruptive behaviour pertains to as any conduct, whether verbal or physical, that negatively affects patient care.[25] Such behaviours include bullying, intimidation, harassment, physical violence, cold shoulder treatment or verbal abuse.[26] In our study the participants reported disruptive behaviours in the form of harassment and discrimination perpetrated by radiographers and nurses. The Society of Radiographers in the UK has acknowledged that some students on clinical placement experience these disruptive behaviours.[27] Disruptive behaviour can gradually wear a person down, leaving them feeling inadequate, demeaned, and hopeless. Such unprofessional behaviour leaves an individual believing they can never do anything right. For students, disruptive behaviour can cause them to drop out of the programme or may wrongfully socialise them to be also disruptive in the future when they qualify.

Despite the numerous challenges that the participants faced during clinical placements, they felt that there was a lack of mechanisms to support them in this study. They stated the need for support in the form of counselling and compensation. However, according to a systematic review by Lawal et al.[28] radiography students in most studies felt that the support they got from their tutors, family, and friends helped alleviate this anxiety. The findings in our study are not in keeping with the cited systematic review; most participants bemoaned the lack of support from tutors and lecturers to alleviate their anxieties. While mentorship and counselling services are provided by the university similar mechanisms may be unavailable in the hospitals in which they are

placed. A partnered approach between clinical placements areas, universities, and professional bodies to ensure students' learning, privacy, and professional engagement is important.[1] This ensures that students access these services promptly when they need them the most.

It is hoped that the findings of this study will be used by concerned stakeholders to put in place strategies to improve the clinical experiences of students to create an effective clinical environment. While this study illuminates the participants' perspectives, a study that documents the views of the supervising radiographers is needed so that we have a holistic understanding. A study that investigates the extent of disruptive behaviours involving students in our setting is needed. The findings can then be used to formulate context-specific strategies to mitigate their impact.

LIMITATIONS

This study aimed to explore the challenges faced by radiography students during their clinical placements at one tertiary institution in Zimbabwe. The findings are thus specific to this setting and may have limited transferability to other radiography training environments.

CONCLUSION

This study unravelled the challenges experienced by radiography students during clinical placements at a tertiary institution in Zimbabwe. The challenges experienced included financial issues, inadequate hospital equipment, unsatisfactory supervision, disruptive behaviour, COVID-19, and a lack of support. Deliberate strategies to tackle the challenges experienced by students are recommended to create an effective clinical environment for radiography students.

REFERENCES

1. Chamunyonga C, Singh A, Gunn T, Edwards C. Strategies to develop student support mechanisms in medical radiation sciences clinical education. J Med Imaging Radiat Sci [Internet]. 2020; 51(4): 512-7. Available from: https://doi.org/10.1016/j.jmir.2020.08.004
2. Tay YX, Sng LH, Chow HC, Zainuldin MR. Clinical placements for undergraduate diagnostic radiography students amidst the COVID-19 pandemic in Singapore: Preparation, challenges and strategies for safe resumption. J Med Imaging Radiat Sci. 2020; 51(4): 560-566. doi: 10.1016/j.jmir.2020.08.012
3. Ondari BO, Rajeswaran L, Ekemiri KK, Xavier SF, Jean N. Experiences of medical imaging students and clinical learning in a limited resource setting – a qualitative study in Rwanda. J Glob Radiol. 2019; 5(1): 1-7.
4. Bwanga O, Lidster J. Radiography students' perceptions and experiences of their clinical placements : a qualitative systematic review. East African Sch J Med Sci. 2019; 2(7): 367-80.
5. Fowler P, Wilford B. Formative feedback in the clinical practice setting: what are the perceptions of student radiographers? Radiography. 2016; 22(1): e16-24.
6. Murphy M, Moore N, Leamy B, England A, O'Connor OJ, McEntee MF. An evaluation of the impact of the Coronavirus (COVID 19) pandemic on interventional radiographers' well-being. J Med Imaging Radiat Sci [Internet]. 2022; 53(3): 384-95. Available from: https://doi.org/10.1016/j.jmir.2022.05.006
7. Rainford LA, Zanardo M, Buissink C, Decoster R, Hennessy W, Knapp K, Kraus C, Lanca L, Lewis S, Mahlaola TB, McEntee M, O'Leary D, Precht H, Starc T, McNulty. The impact of COVID-19 upon student radiographers and clinical training. Radiography [Internet]. 2021; 27(2): 464-74. Available from: https://doi.org/10.1016/j.radi.2020.10.015
8. Kumsa MJ, Lemu BN, Nguse TM, Omiyi DO, Akudjedu TN. Radiography clinical placement challenges associated with radiography education in a low-resource setting : a qualitative exploration of the Ethiopian landscape. Radiography [Internet]. 2022; 28(3): 634-40. Available from: https://doi.org/10.1016/j.radi.2022.04.014
9. Mhazo AT, Maponga CC. The political economy of health financing reforms in Zimbabwe: a scoping review. Int J Equity Health [Internet]. 2022; 21(1): 1-14. Available from: https://doi.org/10.1186/s12939-022-01646-z
10. Jeffrey M. Renewed exodus of healthcare workers hits. Anodolu Agency [Internet]. 2022 Feb 22; 2-3. Available from: https://www.aa.com.tr/en/africa/renewed-exodus-of-healthcare-workers-hits-zimbabwe/2510150
11. Adu P. A Step-by-step guide to qualitative data coding. New York: Routledge; 2019.
12. Gundumogula M, Gundumogula M. Importance of focus groups in qualitative research. Int J Humanit Soc Sci. 2021; 8(11): 299-302.
13. Nvivo. Qualitative data analysis software; QSR International Pty Ltd. Version 12. 2018.
14. Giorgi A. A phenomenological analysis of descriptions of learning obtained from a phenomenographic perspective [Internet]. Vol. 4, Fenomenografiska Notiser. Fenomenografiska notiser Publikationer från Institutionen för pedagogik, Göteborgs universitet, I; 1986. 1-59 p. Available from: http://www.ped.gu.se/biorn/phgraph/civil/graphica/oth.ab/giorgi.html
15. Lincoln YS, Guba EG. Naturalistic Inquiry [Internet]. Sage Publications. Newbury Park, CA; 1985.
16. Polit FD, Beck TC. Nursing research. Principles and methods. 7th ed. Philadelphia, Pennsylvania: Lippincott Williams and Wilkins; 2014. 746 p.
17. Grant-Smith D, de Zwaan L. Don't spend, eat less, save more: responses to the financial stress experienced by nursing students during unpaid clinical placements. Nurse Educ Pract. 2019; 35(February): 1-6.
18. Robson J, Farquhar JD, Hindle C. Working up a debt: students as vulnerable consumers. J Mark High Educ. 2017; 27(2): 1-16.
19. Akpaniwo GM, Sadiq AA, Danfulani M, Abubakar U, Mohammed A, Iliyasu YI, Sheshu OP Challenges faced by undergraduate radiography students in Sokoto Northwest Nigeria, during long vacation clinical posting. Int J Heal Sci Res. 2018; 8 (February): 29-36.
20. Chinene B, Mudadi L, Mutandiro L, Mushosho EY, Matika W. Radiographers' views on the workplace factors that impact their mental health: findings of a survey at central hospitals in Zimbabwe. J Med Imaging Radiat Sci [Internet]. 2023; 54(2, Supplement): S52-61. Available from: https://doi.org/10.1016/j.jmir.2023.02.013
21. Kyei KA, Antwi WK, Offei RO. Challenges faced by radiography students during clinical training. Clin Med Res. 2015; 4(3-1): 36-41.
22. Motola I, Devine L., Chung H., Sullivan J., Issenberg S. Simulation in healthcare education: a best evidence practical guide. AMEE Guide No. 82. Med Teach. 2013; 35: 1511-30.

23. Nguyen TT, Hoang NT, Le VC, Nguyen T Van, Ha TH. Simulation-based training for radiography students as a solution in Covid-19 Pandemic : student's perspective from a developing country. Universal Journal of Public Health. 2022; 10(4): 385-392.

24. Bwanga O, Mwansa E. Roles of clinical supervisors in the clinical training of radiography students in Zambia : a qualitative study. Afr Health Sci. 2022; 22(2): 638-46.

25. Chinene B, Nkosi PB, Sibiya MN. Radiography managers' perspectives on the strategies to mitigate disruptive behaviours: a qualitative exploratory study. Healthc. 2022; 10: 1-12.

26. Chinene B, Sibiya MN, Nkosi PB. Factors leading to disruptive behaviours at central hospitals in Harare Metropolitan Province: radiography managers perspectives. J Med Imaging Radiat Sci [Internet]. 2022; 53(4): 580-90. Available from: https://doi.org/10.1016/j.jmir.2022.07.005

27. Cloke I, Evans R, Wigley L. Bullying and Harassment : Achieving dignity at work for all our members Message from the Chief Executive Officer [Internet]. London; 2009. Available from: https://www.sor.org

28. Lawal O, Omiyi D, York H, Akudjedu TN. Towards describing the global impact of the COVID-19 pandemic on clinical radiography education: A systematic review. J Med Imaging Radiat Sci [Internet]. 2022; 53(3): 487-97. Available from: https://doi.org/10.1016/j.jmir.2022.05.009