



Research article

School heads' clinical supervision practices and emerging teacher emotions in Tanzania secondary schools

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ARTICLE INFO

Keywords:

Clinical supervision
 Negative teachers' emotions
 Positive teachers' emotions
 School heads
 Secondary schools

ABSTRACT

The study was conducted in Tanzania using Njombe Region as a case study. The region is located in Southern Highlands; its land area is 21,299 Square kilometres, and its water area is 3695 Square kilometres. The government of Tanzania started to supervise secondary schools through a clinical supervision approach in 2008. The essence of employing a clinical supervision strategy is to enable teachers to develop fundamental shifts in how they view themselves as professionals in the teaching profession. This study was a mixed-methods and multiple cross-sectional case research design. Ninety-four participants filled in the questionnaires, and twenty-eight participated in the semi-structured interviews and FGDs. The SPSS version 25 supported the analysis of quantitative data, while qualitative data, on the other hand, were analysed through content analysis. The study found that effective communication and cooperation were positive factors influencing effective clinical supervision in schools. Consequently, teachers developed positive teaching emotions. The study found that textual teaching and learning materials, teaching workload and schools' infrastructure were negative factors for clinical supervision practices. As a result, teachers developed negative teaching emotions. The study concludes that effective communication and teachers' necessary supervisory cooperation significantly strengthened school heads' clinical supervision practices, and the shortage of textbooks, teachers' heavy workload, and a severe shortage of teachers' houses weakened it. Positive teachers' emotions among teachers emerged as a result of the appropriate clinical undertaking. Negative teachers' emotions emerged from improper clinical supervision practices. The government is recommended to improve clinical supervision by supplying teaching and learning resources, balancing the class size and designing teachers' housing services schemes. This article offers a practical understanding of factors that hinder and reinforce clinical supervision practices in Tanzania. A new insight brought by this article to the international communities, particularly Sub-Saharan countries, including the effects of clinical supervision on emerging teachers' emotions. Future researchers are encouraged to design developmental research studies that construct standards framework for clinical supervision practices in the context of lower secondary schools. Educationalists are encouraged to set strategies and implement them by mitigating heavy teaching workload, inadequate physical infrastructure and shortage of textual teaching and learning materials.

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<https://doi.org/10.1016/j.heliyon.2023.e13021>

Received 5 October 2022; Received in revised form 11 January 2023; Accepted 13 January 2023

Available online 16 January 2023

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1. Introduction

In Sub-Saharan countries, such as Tanzania, secondary education is increasingly recognised as an empowering tool to equip youth with skills in social-economic development [1,2,3,4,5]. [6] stipulates that secondary education is a backbone for building human resources skills and creating the mind-set of Tanzanians for social-economic development. School heads and teachers undertake the mission, whereas the school heads are assigned to supervise teachers' professional activities daily, and teachers have to facilitate classroom teaching and learning activities [7,8]. To this end, clinical supervision is a government priority that internally strengthens teachers' teaching professionals' mindfulness. In turn, improves the quality and quantity of teaching and learning practices in schools. However, building such a generic feeling, educational resources is crucial within teaching and learning settings [9,10,11,12,13,14,15,16]. With it [17], outline that, nowadays, educationalists request that teachers need professional care that makes who they want to be in their teaching profession. With that concern, every teacher needs professional security, professional status, professional acceptance, and a fair degree of emotional equilibrium, genuineness, unconditional positive regard, and concreteness [18,19]. School supervision under school heads tries to shape teachers' mind-set on teaching professional devotion, though, in lower-income countries, the foreign-emerged school-based supervision approach, which is clinical supervision in this study, is gradually growing [20,21]. Therefore, the study aimed to examine the opinions of school heads and teachers on factors that reinforced better practices of clinical supervision in publicly owned secondary schools in Tanzania.

1.1. History of clinical supervision and its meaning

Historically, clinical supervision began in the late 1950s and early 1960s [22,23,24,25]. Literature mentions that Morris Cogan and Robert Goldhammer were the founders of it at Harvard University School of Education [25,26], primarily for the preparation of pre-service teachers [27,28]. Contemporary literature on clinical supervision [29,30,31,32] insists that it is appropriate for supervising in-service teachers. In managing in-service teachers, school heads and teachers actively run teaching and learning supervision activities [33,34,35]. In line with preliminary descriptions, researchers have produced almost singular meaning of clinical supervision [27,32,34,36,37,38,39,40]. [34], for example, defined it as face-to-face interaction between the teachers and school supervisors in problem-solving reflexes directed at per class and focused on the teachers as an agent of change. The definition of [32] is closely relates to the former one: it is a face-to-face interaction between supervisors and teachers in the workplace. In addition [37], describes it as the process of helping teachers to realise professional behaviour during teaching and learning in the classrooms. Although the presented definitions are limited to face-to-face interaction [41] on the other hand, provide a broader meaning. According to Ref. [41] clinical supervision "is the process of facilitating the professional growth of teachers, primarily by observing teachers' instructional practices, giving teachers' feedback about classroom interactions and helping the teacher make use of the feedback to make teaching more effective" (p. 47). Clinical supervision, therefore, could be defined as closely and directly interaction between school heads and teachers prior to teaching, during teaching and after teaching practices for an improvement of the teaching career.

Literature related to clinical supervision conveys significant contributions to the teaching profession. It means clinical supervision benefits both teachers and school heads as teaching and supervision are concerned. To open up the discussions [42] writes: "clinical supervision if practised effectively, can have a profound impact on teachers' professional growth as well as the development of supervision skills in school principals" (p.68). In line with [42] views, [43] add that proper clinical supervision practices at workplaces improve the quality of the teaching profession. Because clinical supervision is positioned to enhance teachers' instructional knowledge and skills [43,44,45,46]. To empower these views, [35] have taken a further step ahead; in clinical supervision, school heads could be observed in teachers' teaching practices and teachers' struggling for searching new teaching and learning innovations. Clinical supervision is likely to transform teachers' ways of thinking and reflect teaching and learning practices which attract students to engage actively in the subject taught by teachers. Regarding the the contribution of clinical supervision in the teaching profession, [45] confirms that clinical supervision improves teachers' professionalism.

1.2. Stages of clinical supervision

[47] developed five clinical supervision stages and [48] eight stages. Cogan's and Goldmmer's cycles comprise five common stages. The first stage is pre-observation. This supervision stage directs school heads to review teaching and learning documents before classroom activities. School heads may provide professional support to teachers as it may be required. The second stage is known as 'observation', which fundamentally directs school heads to undertake direct observation of teaching-learning activities in the classroom. School heads take intensive records about teachers' teaching practices and teachers' and students' interactions behaviour. School heads must arrange for the third stage of analysis and interpretation of teaching and learning activities. School heads analyse the teaching and learning activities as observed and give feedback to teachers about the teaching strengths or weaknesses that have occurred under them. Professional support and post-observation are the two last stages of clinical supervision. In practising professional support, school heads are responsible for providing technical professional support to teachers based on what went wrong during classroom teaching and learning. Post-observation is the last stage that requires school heads to re-observe teachers' changes in classroom teaching and learning practices. Teachers are also provided full supervisory teaching and learning feedback for their records and reflection. This understanding implies that the stages of clinical supervision allow school heads and teachers to identify teaching and learning shortcomings in a cyclic strategy and overcome challenges through collegial ways.

1.3. Perceptions of school heads and teachers on clinical supervision

Research studies on the perceptions of education leaders and teachers regarding the practices of clinical have been conducted in the United Kingdom (UK) by Ref. [49] and in Lebanon by Ref. [50]. The study by Ref. [49] found that educational leaders had positive perceptions of the practice of clinical supervision because it made them grow professionally and, thereby, ready to remain in the teaching profession. But the study of [50] found that most of the teachers had negative perceptions of clinical supervision peer coaching, as it was not effectively being implemented, thus affecting teachers' professional development. A study by Ref. [51] on school - based managers' and educators' perceptions on the effectiveness of clinical supervision for improving quality teaching in South Africa, it found that school managers and educators had positive views on the practices of clinical supervision which they perceived as an important factor for improving teachers' work performance.

In the context of Turkey and Malaysia studies of [30,52] found that clinical supervision practices which were not limited to pre-observation, observation and post-observation were positively perceived among practitioners of clinical supervision such as educational supervisors and teachers. These practices were also noted in the context of Zimbabwe [53,54]. It appeared that although the school heads were not qualified enough to run clinical supervision, teachers were involved in planning for clinical supervision exercises and thereby felt being part of the supervision processes [54]. [54] also found that teachers had more opportunities to suggest best ways of conducting clinical supervision in their schools. Besides, a study by Ref. [53] found that mathematics teachers positively perceived clinical supervision practices. On the other hand, a study by Ref. [55] in Kuwait discovered that the methods of clinical supervision were not stable, whereby teaching and learning feedback was not provided to teachers. As a result, some teachers resisted the school heads' supervisory support. Evidently, these findings suggest that clinical supervision practices could be perceived differently across the nations. This understanding provides few research findings on factors that positively or negatively affect the school heads' clinical supervision roles in their workstations.

2. Clinical supervision in the Tanzania context

In Tanzania, school supervision, specifically clinical supervision, was established in 2008 purposely to develop the professional competence of teachers internally [56,57]. Through school heads' clinical supervision practices, teachers would have an opportunity to make teaching and learning reflections and seek professional support from school heads for further teaching and learning innovations [57]. The essence of employing a clinical supervision strategy in the Tanzanian secondary education system is to enable teachers "develop fundamental shifts in how they view themselves as professionals" [58], p. 5). The government developed two school supervisory guidelines [7,59]. These are the guidelines for school supervision of 2009 (it directs school heads to act as internal supervisors) and the School Improvement Toolkit for Tanzanian Heads of Schools (SITHS) of 2013 (it requires school heads to collaborate with teachers in teaching and learning supervision). SITHS, for example, outlines five supervisory roles: i) school heads should undertake close supervision through planning and evaluating teaching and learning materials that teachers prepare before classroom teaching practices; ii) school heads and teachers altogether go to a class as a team for actual teaching and learning practices; iii) school heads observation should be accompanied with teaching and learning feedback to teachers; iv) school heads are required to facilitate professional development to teachers through coach or mentorship; v) and school heads have to undertake post observation.

Considering the clinical supervision practices in Tanzania secondary schools [60], school heads do not carry out pre-observation; rather, they examine professional documents such as schemes of work, lesson plans and lesson notes after classroom activities [61]. In most cases, they cross-check documents once per week [62]. Experience also shows that classroom observation is rarely conducted [63, 64]. [64] adds that many heads of secondary schools undertake classroom observation only when students complain about unsatisfactory teaching, and they do not address the pedagogical challenges that most teachers are faced. To these observations, this study claims that most of Tanzanian teachers are not clinically supervised by their school heads at workplaces; hence, teachers' teaching practices are negatively affected. Although the literature has established an understanding of school heads' clinical supervision practices and teachers' attitudes, practical experiences within Tanzania and elsewhere hold little discussion on factors that influence clinical supervision undertaking and thereby emerging teachers' emotions. This study, therefore, was guided by one research question.

- What are teachers' emerged emotions as a result of factors that influence school heads' clinical supervision practices?

3. Theoretical underpinning

3.1. Theory of supervision practice

This theory states that supervision is a machinery used to construct the real world of the teaching profession [65]. Scientific, artistic, and clinical methods tie Sergiovanni's theory of supervisory practice. [65] describes that the scientific method is used to identify the appropriate teaching instructions and the professional interaction of teachers and students. The artistic practice determines what teachers and students are doing in the classroom. The clinical method is used to collect, analyse and interpret data for teachers' professional improvement.

The elements of a theory of supervisory practice were relevant to this study. For example, the scientific method guided the study of how school heads and teachers maintained professional communication in their day-to-day teaching and learning supervisory practices. The artistic process guided the study in highlighting school heads' activities during classroom observation and the position of school heads to record teaching and learning techniques as employed by teachers to their learners. The study was also guided by

clinical methods in highlighting what data school heads collected during class observation and how teachers were involved in the process of data analysis. Moreover, professional support helped study how school heads provided professional support to teachers through school-based in-service professional development to improve teachers' feelings of competence in the teaching profession.

3.2. Conceptual Model

The study was guided by the Self-constructed Conceptual Model (SCM) as follows: firstly, factors for clinical supervision were drawn from the Tanzanian ordinary-level secondary school curriculum of 2005 [66]. It stipulates that: school heads have to show basic attributes such as commitment, dynamic, caring, communication, command of good public relations and pro-team); teaching and learning materials (textual materials such as textbooks, models, and reference books should be made available); physical resources such as classrooms and administration offices shall be required for every secondary school); teaching load, mainly teaching instruction for teachers shall be 4 h per day; teacher-student ratio 1: 40 shall be observed for every school. In this study, the developed factors for clinical supervision were effective communication, cooperation, standard workload, teaching materials, and school infrastructure. These factors were expected to be perceived positively or negatively by teachers as a course of school heads' clinical supervision practices.

Secondly, positive-negative teachers' attitudes toward the teaching profession were made up from the theory of supervision practices [65]. This theory states that supervision is a machinery used to construct the real world of the teaching profession through: a scientific method that identifies the appropriate teaching instructions and the professional interaction of teachers and students, the artistic method that identify what teachers and students are doing in the classroom, and the clinical method that collects, analyses and interprets data for teachers' professional improvement. These supervisory activities require ongoing interactions, dialogues and collegiality between school heads and teachers. In it, school heads' inclusion of the theory in supervising teachers was defined as teachers' positive attitudes that led emerging of positive teachers' emotions. Otherwise, the observed exclusion of it developed teachers' negative attitudes leading to emerging negative teachers' emotions.

Thirdly and lastly, positive teachers' emotions and negative teachers' emotions. The surveyed literature [67,68,69] highlights that teachers' emotions are at the heart of teachers' teaching profession lives. Teachers' emotions are a complex state of feeling that continues to develop at the workplace [70,71,72,73,74,75]. [76] points out that teachers tend to construct their teaching emotions from societal interaction with colleagues, administration and school community members. [74], for example, describes that teachers' emotions construction is not a personal disposition but rather a social orientation from family, society and schools. It means social contexts are important in developing teachers' emotions. Literature [68,69,71,72,74,76,77,78] indicates two classifications of teacher emotions as being either positive or negative. Regarding positive emotions, these are positive feelings (pride, feel proud, love, satisfaction, happiness, enjoyment, gratitude, hope, and joy about success [68,69,70,77,79]. Positive emotions are expected to have a positive influence on teaching and learning. Negative emotions, on the other hand, are negative feelings (fear, worry, irritable, doubt, brood, confusion, dissatisfaction, anxious, and despondent [69,70,75,80]. [72] write: "negative emotions tend to be accompanied by physiological and cognitive responses that interfere with mental and physical functioning. With that, this is considered non-conductive to effective teaching" (p.4). Fig. 1 shows the relationships of variables.

The SCM helped to reach the study findings' decisions in the sense that teachers' positive emotions on the factors for clinical supervision were concluded as positive factors for clinical supervision practices and influenced the emerging of positive emotions in teachers. On the other hand, teachers' negative attitudes about factors for clinical supervision were concluded as negative factors, which caused an emerging of negative emotions in teachers. Positive teachers' emotions signify being satisfied with teaching and learning settings, whereby they maintain the status quo and strive for professional satisfaction. Negative teachers' emotions convey the self of dissatisfaction with teaching and learning settings (professional vulnerability) in the supervisory undertaking.

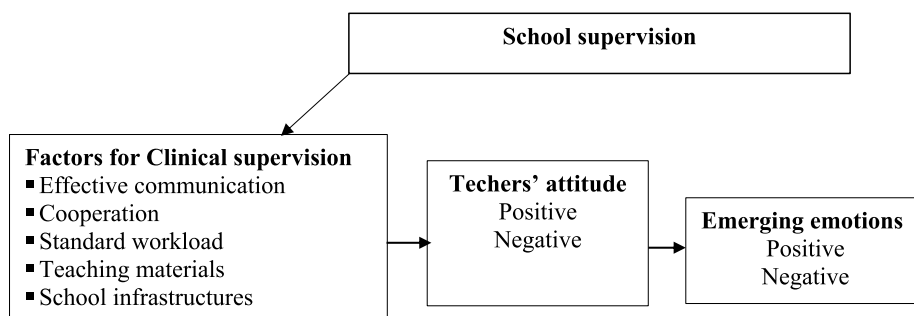


Fig. 1. Conceptual Model for clinical supervision. Sources: Researcher (2021).

4. Method and materials

4.1. Research approach

The study employed a mixed concurrent research methods approach. This approach allows the collection of non-numerical and numerical data from the field [81,82]. In this regard, teachers' opinions on factors influencing clinical supervision practices were numerically gathered, and teachers' emotions were narratively recorded. A mixed concurrent research approach enables investigators to compare the generated qualitative and quantitative findings [83] through; complementarity, triangulation, expansion and initiation [84,85]. Concerning complementarity, the study clarified if school heads' and teachers' attitudes differed significantly from clinical supervision practices. Triangulation merged informants' views and respondents' opinions as derived from factors that influenced clinical supervision practices. Regarding expansion, it served as a means of enlarging the study by presenting descriptive and narrative findings side by side. Initiation is the last reason that helped to unfold the findings contradictions that appeared in descriptive findings against narrative results to make a sturdy stand.

4.2. Research design

The study employed a multiple cross-sectional case study design. According to Ref. [86] multiple case study designs provide a chance to gather data from different participants to enrich the quality of research findings as the design puts forward strategies for deeply investigating a phenomenon from the context [87,88]. The study was conducted in public secondary schools, and data were sought from school heads and teachers. Moreover, the design met the requirement of the study approach. "Although case studies have often been considered part of qualitative research methods, they may also be quantitative or contain a combination of qualitative and quantitative approaches" [87], p. 30]. [88] support the view that "while many assume that case studies rely only on qualitative methods, such is not the case, as a variety of the methods may be used, such as those that generate quantitative data" (p. 19). From this ground, the participants' attitudes on factors that influenced the practices of clinical supervision were gathered in line an emerging teachers' emotions. The design assisted the study in crafting the extent to which each designed factor contributed to clinical supervision practicum and how it affected teachers' professional well-being.

4.3. Location of the study

4.3.1. Setting of njombe region

This study was conducted in Njombe Region. [89] describes the socio-economic profile of the Region: It is located in Southern Highlands, below the equator between latitudes 8° 40' and 10° 32' and longitude 33° 47' and 35° 45' East of Greenwich; its land area is 21,299 Square Kilometre and water area 3695 Square Kilometre; its main economy is agriculture such as tea, sunflowers, and Irish potatoes; and government employability comprises education by 73.3%, health by 22%, agriculture and livestock by 4.3%, and natural resources employs 0.3%. Based on the 2022 census, the region's population is estimated at 889,946, including 420,533 males and 469,413 females [90]. In this regard, 47% of the population was male, and 53% were female citizens. The region was chosen for this study because it has good records of students' academic achievement [91]. However, the government survey on secondary education performance delivery report shows that 43% of education stakeholders were unsatisfied with teaching and learning [92]. These findings indicated that teachers were not clinically or partially empowered to provide good instruction and learning to their learners, which affected their professional lives in one way or another. Therefore, understanding school heads' and teachers' opinions on factors that influence clinical supervision and thereby teachers' emotions was granted.

4.3.2. Education structure and competence-based teaching standard

Table 1 presents the formal education structure and standards that guide lower schools in implementing competence-based curriculum for ordinary secondary education in Tanzania as follows.

The findings in Table 1 suggest that Tanzania is committed to preparing youth with quality education for competitive global

Table 1
Education structure and teaching standards.

Tanzanian education and training policy of 2014 indicates the structure of formal education:	Tanzanian ordinary-level secondary school curriculum of 2005 underlines standards for the provision of secondary education:
Present structure 1-7 - 4 - 2 - 3+	Students shall have 194 learning days for a year, and the total instruction time shall be 5:20 h per day
1 year is for pre-primary education to pupils with 5 years,	Form I-II students shall learn 10 subjects, and III-IV students six subjects under science, social science, and commercial subjects
7 years of basic primary education to pupils with 6–12 years	Each class shall have 40 students, and the teacher-students ratio shall be 1:40
4 years of lower secondary education (form I-IV) to students with 12–15 years,	Teachers shall have instruction time 4 h per day
2 years of upper secondary education (form V-VI)	Textual materials shall be available, and every school shall have classroom and administration offices
3 or more for higher education to students 18–21 years [93].	School heads should have school supervision commitments and good public relations [66].

markets. With this goal, in 2005, the government established a competence-based education curriculum for lower secondary education and compulsory implementation [94,95,96,97,98,99]. Therefore, this study deeply studied the opinions of school heads and teachers on clinical supervision practices in lower secondary education because it is an important stage of formal education for preparing human resources for the world market.

4.4. Population, sample size and sampling techniques

The study population was 84,180 Tanzanian teachers, whereby 64.0% (n = 53,850) were male, 36.0% (n = 30,330) female teachers, and the unit population was 68.27% (n = 1651) male teachers and 31.73% (n = 767) female teachers [100]. The findings suggest that at the national and regional levels, students at the ages of 12–15 years are taught by both male and female teachers; however, the profession was dominated by male professionals compared to female professionals. Regarding sample size, the National Database for Education Statistics (2020) [100] and Yamane's sample size determination formula at 0.1% sampling error [101] were used in selecting 94 teachers for quantitative aspects and 28 informants for qualitative elements. Besides, quantitative respondents were subjected to a simple probability random sampling technique and the fishbowl draw method [102], and qualitative informants were subject to purposive sampling techniques. Wherein reputation purposive technique was employed in selecting 4 school heads and 8 experienced teachers, and criteria were used in selecting 16 teachers. These 16 teachers were selected based on inclusion criteria such as gender [103] and working experience [104], henceforth, only male and female teachers whose working experiences ranged from 5 to 10 years were included in the study. With that, social demographic details of the participants yield that 4.3% (n = 3) were male school heads, 95.7% (n = 67) male teachers. There were 2.0% (n = 1) female school head and 98.0% (n = 51) female teachers. Gender-wise, 57.4% (n = 70) were male teachers and 42.6% (n = 52) were female teachers. Regarding working experiences, there were 0.8% (n = 1) school heads with 5 years or less working experience, and 20.5% (n = 25) teachers, school heads with working experience between 6 and 20 years were 0.8% (n = 1) and 22.1% (n = 27) teachers, and there were 1.6% (n = 2) school heads whose working experience was between 21 and 35 years while teachers were 54.1% (n = 66). With those findings, the study data were obtained from both school heads and teachers with enough experience on school supervision and in particular clinical supervision. Therefore, the obtained data were satisfactory to make representation of the school heads and teachers in studied schools.

4.5. Data collection tools and procedures

The study was conducted in Tanzania for the academic year 2020–2021. The study employed self-administered structured questionnaires to collect quantitative data. At the same time, a semi-structured interview protocol and Focused Group Discussions (FGDs) were used to collect in-depth qualitative data from four public secondary schools. The structured questionnaires comprised five Likert Scales (1 = Strongly agree, 2 = Agree, 3 = Neutral, 4 = Disagree, and 5 = Strongly disagree). The principal investigator distributed copies of the questionnaire to consented participants who sat in a separate unoccupied room within the respective schools' premises. The teachers were given 60 min to accomplish filling in the questionnaire. The principal investigator administered the questionnaires himself to avoid incomplete questionnaires or questionnaires being filled in by third-party individuals and low-rate returns of the questionnaires. This resulted in a high return rate for the completed distributed questionnaires. Qualitative data collection involved in-depth interview sessions with school heads, whereas, at each school, one interview session with approximately 60–90 min was carried out. In each school, one FGD comprised 4 teachers, with attention being paid to their sex distributions at a 1:1 ratio and working experience at a 1:1 ratio was conducted. Approximately 90–120 min was the maximum time for discussions to the saturation of information. Tape recorders were used as a triangulation strategy to maximise the trustworthiness of qualitative data from participants.

4.6. Validity, reliability and trustworthiness of research instruments

Research instruments for quantitative data entitled "School Heads' Clinical Supervision Practices for Development of Teacher Profession Identity (SHCSDoTPI)" was crafted from the literature [34,52,104,105,106,107]. The instruments measured the relationship between school heads' clinical supervision practices and teachers' professional identity development. Content validity of the instruments crafted from the literature requires an expert judgement approach, and those judges must be specialists in the selected field of study [108,109]. To ensure the content validity of the developed tools, they were shared with two experts in school supervision and teaching professionalism at the University of Dodoma.

The study observed the instruments' reliability through a pre-test involving 10% of the calculated sample size [110]. Data were subjected to scale analysis of which Cronbach's coefficient (α) value, 0.90, is considered excellent, a value above 0.80 is considered good, and a value of 0.70 is regarded as acceptable [111]. The piloting instruments test produced Cronbach's Alpha of .934, and therefore, the results were treated as significant thus, questionnaires were reliable for the actual data collection. To ensure the trustworthiness of interview guides, two school heads and two experienced teachers independent to the study rated the interview guide questions for their structure, relevance, clarity, difficult level and language. It was observed that 4 out of 14 questions lacked clarity and had difficult level. The observed remarks and suggestions were relevant for tools improvements and corrections.

4.7. Variable measurements

Quantitative variables included 30 items, of which 5 assessed teachers' opinions concerning factors influencing clinical supervision in line with the development of teaching professional emotions among teachers. Items with "strongly agree" weighed 1 score, while

“strongly disagree” weighed 5 scores. Mean scores were used to define centrality and the endpoint of analysis per variable. The mean scores of 50%–100% were considered items accepted to have contributed to clinical supervision practices and treated as positive factors. Items with scores of 49%–00% were treated as rejected to the contribution of clinical supervision practices and were treated as negative factors. Qualitative variables were measured by informants’ positive or negative attitudes towards the factors that influenced clinical supervision practices. The endpoint of each emerging statement was judged as positive or negative emotions that teachers held over the teaching profession.

4.8. Data analysis

With the aid of SPSS version 25, quantitative data were analysed. The findings were reported in frequency and percentage and presented in Figures. Content analysis was used in analysing qualitative data. It was useful in building themes as it appeared on the structure questionnaires. [112] states that most of the mixed research themes are created based on the research questions found in the quantitative instruments. The descriptions of the themes were presented in key terms and statements in Tables with the support of quotations.

5. Findings

The study was designed to examine teachers’ opinions on factors that influence the practices of clinical supervision and the emerging teachers’ emotions in Tanzania secondary schools. In this regard, teachers’ opinions were descriptively examined, and the emotions teachers developed due to clinical supervision were examined narratively. Each research item was treated as an independent theme as follows.

5.1. First theme: effective communication

Fig. 2 shows the findings from an examination. It was found that 91.5% (n = 86) of teachers had positive attitudes that effective communication was enabling factor for clinical supervision practices by strongly agreeing and agreeing to responses, 7.4% (n = 7) were neutral, and 1.1% (n = 1) opted for disagree and strongly disagreed responses. The findings indicate that school heads and teachers practised effective communication, and it was a positive factor in reinforcing better clinical supervision practices at workplaces.

Table 2 shows 8 statements that emerged from narrative data analysis. In them, emerging teachers’ emotions were observed; the right place, removing the frustration, great to work, achieving stability, teachers’ positions, teachers’ mandate, and work harder.

Alongside 8 statements that offer positive teachers’ emotions, some of the informants were quoted saying:

[...] My office is open all the time to listen to the teachers. I also ask the heads of departments to listen to the teachers. Constant communication and engagement with teachers are very helpful in removing the frustration of teachers in their teaching. When a teacher misses a teaching tool, he/she has no reason to see this as a problem, but it is our employer’s problem [...] (Interview with the school head, case B: June 2021).

One of the experienced teachers added:

[...] If the head decides to collect the professional documents from teachers, heads of subject departments are asked to manage them. These assistants will do their best to ensure each teacher is informed about the task at hand at least two days before submitting the documents (Interview with a male teacher, case A: May 2021).

The quotations suggest that communication was the tool for school heads and teachers to share administrative information.

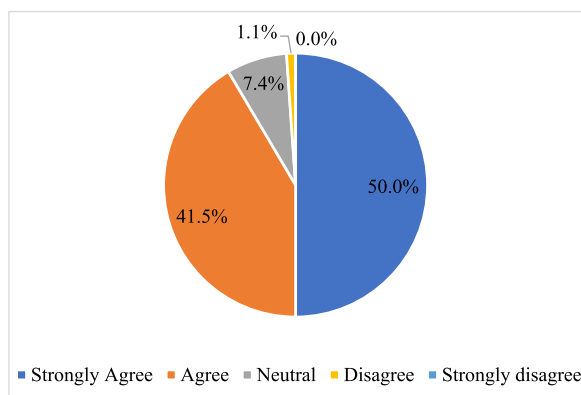


Fig. 2. Teachers’ opinions on effective communication. Source: Field data (2021).

Table 2
Effective communication and emerged teachers' emotions.

	Statements	Remarks
1	Teachers find this is the right place for them to continue working	Positive
2	Communication is very helpful in removing the frustration of teachers in their teaching	Positive
3	Information on his plans to enter the classroom or request documents has helped us greatly in working with him	Positive
4	You will see that each unit is sound and efficient in achieving the programs we have as a school	Positive
5	We can say the stability of our work has greatly contributed to the communication skills of our school head	Positive
6	Effective communication continues to allow us to identify our positions as teachers in the school	Positive
7	You will see that everything we do here, such as teaching evening sessions or vacation time, is our mandate as teachers	Positive
8	The benefit of communicating is that the teacher is heard, and in return, we must work harder to improve the existing relationships	Positive

Source: Field Data (2021).

Teachers understood that school heads were open and transparent about the school resources. By so doing, school decisions have arrived at the hands of school heads and teachers. It could be argued that the flow of communication between school heads and teachers had two ways. The first practice was based on the fact that teachers were free to communicate with school heads in their offices, and the second practice was school heads discussed with teachers in their offices. The findings imply that effective communication improved the flow of supervisory information at workplaces. This understanding has indicated that heads of schools and teachers built professional trust as teachers' professional documents and school heads' plans for actual classroom teaching and learning supervisory roles were openly among them.

5.2. Necessary cooperation

Fig. 3 shows the findings of the second examination on necessary supervisory cooperation. There were 87.2% (n = 82) of teachers who had positive attitudes with strongly agree and agree responses, 9.6% (n = 9) were neutral, and 3.2% (n = 3) had negative attitudes with disagree and strongly disagreed responses. The findings indicate that school teachers provided the necessary cooperation to school heads. In that regard, it was a positive factor in reinforcing clinical supervision practices at workplaces.

Table 3 presents 11 statements indicating that informants had positive attitudes that teachers' cooperation with school heads reinforced better clinical supervision practices, thereby emerging positive teachers' emotions. Positive teachers' emotions were noted through key terms; stakeholders, teaching is light, self-motivated, delivering knowledge, good workflow, trusting, following instructions, happy and proud, strong relationship, developing skills, and keeping us united.

Informants provided further narrative data on how school heads and teachers cooperated in implementing teaching and learning supervision practicum in their respective schools. Some of the informants delivered these remarks:

In every step my school head takes in management, I am always there, ready to support. Whatever the school head wants to see in profession-managing work, I strive to provide what I am asked for ... We continue to work in trust and have one direction (Interview with a female teacher, school case B: June 2021).

Teachers in one of the FGDs had this to explain.

[...] If you look at one side only, you will see that we cooperate with the school head, but on the other side, it is the head who gives us partnership. These school heads keep so many secrets. If you are told to do something, it is a good thing to do to it to be safe and active. We are both happy and proud to have our oldest man as our school head ... This is our man (Teachers in FGD, case A: May 2021).

The interpretations of the narrative could mean that school heads and teachers worked as one team in practising teaching and learning supervision. Teachers were provided with enough information about teaching and learning professional activities, the power of education authorities and teaching and learning demands. Teachers also understood that supervisory cooperation enhanced

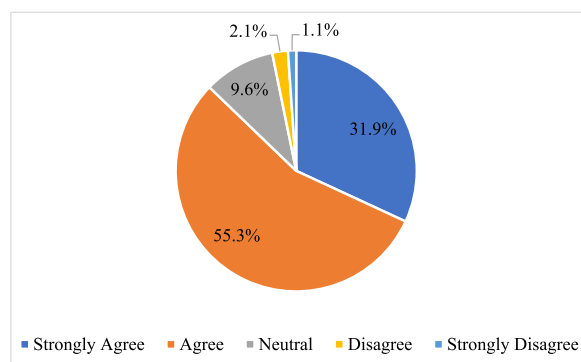


Fig. 3. Teachers' opinions on necessary supervisory cooperation. Sources: Field data (2021).

Table 3

Necessary cooperation and teachers' emotions.

	Statement	Remark
1	My teachers give me enough cooperation, and my teachers are important stakeholders in teaching students	Positive
2	My teachers feel that teaching is the light thing	Positive
3	Fruits of the partnership we have teachers who work in a disciplined manner and self-motivated	Positive
4	I would like my school head to come to the classroom to see the behaviour of the I manage to deliver knowledge of my subject	Positive
5	You will see that the existing coordination is so large that the workflow is going so fast	Positive
6	I see deciding to do this helps us work more trustingly	Positive
7	I see every teacher listens to the school head and works based on the instructions given to him/her by the school head	Positive
8	We are both happy and proud to have our oldest man as our school head. This head is our man!	Positive
9	With the leadership of the school head, every school teacher has a strong relationship with the school head	Positive
10	The head has been the prototype school head, and therefore we develop skills in teaching and learning supervision	Positive
11	The school head has taught us that we are one family that helps keep us united in carrying out our daily duties	Positive

Source: Field Data (2021).

professional happiness to the extent that their willingness to work with school heads increased. The findings confirm that teachers' adherence to school heads' advice was important in making clinical supervision work accordingly. At the end of the day, positive teachers' emotions emerged at the workplace.

5.3. Teaching and learning materials

Fig. 4 shows the findings of the third examination on required teaching and learning materials. Results have shown that 78.7% (n = 74) of teachers had positive attitudes by opting for strongly agree and agree responses, 14.9% (n = 14) were neutral, and 6.4% (n = 6) had negative attitudes with disagree and strongly disagreed responses. The findings indicated that school heads were ensuring teachers had the necessary teaching and learning materials at the end of the day school heads and teachers engaged in clinical supervision undertaking.

Table 4 presents 13 statements showing informants' negative attitudes toward available textual teaching and learning materials. Henceforth, the noted negative teachers' emotions were not limited to; failure, ignored, difficulty in preparing lessons, difficulty in supervising, feeling despised, cannot produce, difficulty teaching, working under standards, confusion, suffering, making the day go, working on the blackboard.

During interview and FGDs, informants made these narrations:

As a school, we have reasonable non-textual teaching materials. Here I mean all stationaries like chalk, notebooks, and pens. Teaching and learning materials such as books are a challenge for many schools. By the way, you have to note that nowadays, we school heads do not have the mandatory to buy textual materials until the government sends them out. What am I going to do other than waiting? Teachers who miss books are having difficulty making quick preparations for their lessons. I have often heard that the competence-based curriculum has fallen on the teacher's side and left the student. You will see teachers working, but in their spirit, they say, "the government has given the whole burden of students to them" (Interview with the school head, case C: July 2021).

One of the experienced teachers added:

Schools have a shortage of teaching and learning materials and facilities. You can't believe that some subjects have a ratio of 5/250. I am increasingly confused about continuing teaching without resources like manila cards, marker pens and books, especially considering these students are too many (Interview with a female teacher, case D: August 2021).

Teachers in one of the FGDs had this to say:

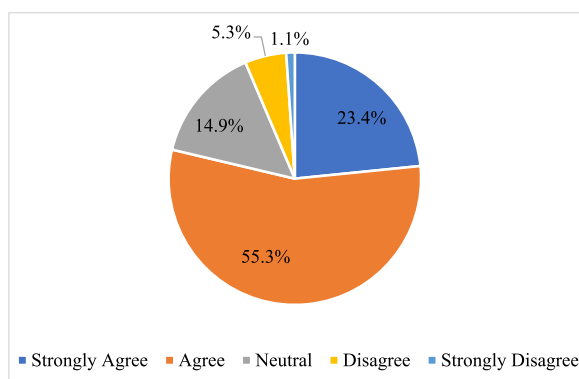


Fig. 4. Teaching and learning materials. Source: Field data (2021).

Table 4
Teaching textbooks and teachers' emotions.

Statements	Remark
1 The teacher fails to provide enough homework to students	Negative
2 The government has ignored teachers and doesn't care about the teacher's work	Negative
3 Having difficulty in making quick preparations for their lessons	Negative
4 The teacher cannot supervise the students' studying	Negative
5 We teach with difficulty, and that's why we feel despised	Negative
6 Teachers cannot produce quality students due to drilling for examinations to pass	Negative
7 Having fewer books leads to difficulty in teaching and learning	Negative
8 I find myself working under my standard as well as being praised for being hard working	Negative
9 I am increasingly confused about continuing teaching	Negative
10 We teach the irrelevant content to the context	Negative
11 Lack of materials and especially books is a serious punishment, and we suffer when teaching students	Negative
12 There is some form of teaching to make the day go	Negative
13 The task of teaching becomes more difficult because instead of guiding the teacher to read the book, we remain reading and writing on the board	Negative

Source: Field Data (2021).

[...] The biggest problem lies in the art subject textbooks! Almost all classes lack civics and history books. There are language lessons a student is required to learn by pronunciation. The pronunciation can be corrected if the student is wrong, but this is not done because we do not have 'books'. In this situation, teaching becomes more difficult because instead of guiding the teacher to read the book, we remain reading and writing on the board. You will see the student's responsibility to participate in the lesson is nonexistent (Teachers in FGD, case B: June 2021).

The narratives suggest that the textbook-students ratio was high. However, the experience was diverse between social science subjects and science subjects. In this regard, one social science textbook was shared by forty to two hundred and fifty students as some of the subjects, such as history and English, books were present for teachers alone. The analysis also found that most science subjects had sufficient textbooks and supplementary ones. It was also noted that some teaching materials, such as manila paper and mark pans, were insufficient to support effective lesson preparations. All these challenges emerged from the government's plans to supply textbooks to her schools all over the country. Therefore, this study argued that Tanzanian school heads had the supervisory task with limited purchasing power or soliciting external resources to improve educational resources.

5.4. Teaching workload

Fig. 5 shows the findings of the fourth examination on standard teaching workload. It was found that 46.8% (n = 44) of teachers had positive attitudes through strongly agree and agree, 20.2% (n = 19) were neutral, and 33% (n = 31) presented negative attitudes as they opted on disagree and strongly disagreed responses. The findings indicate that teaching workload was a strong negative factor that limited schools from properly undertaking clinical supervision at workplaces.

Table 5 shows 13 statements that signify that teachers developed negative attitudes from the existing teaching workload. With that, an emerged negative teachers' emotions included composing exams not being a priority, 60 or 70 students, plurality, feel not like a teacher, failing to work, working until 12 h pm, a duty not being implemented, being overwhelmed, without listening to students, avoid conflicts, and despicable.

The study recorded narrative data from informants about the teaching workload and some of them had this to say:

The number of students is big. There are science subjects, and the average is 1:300. I do not expect a teacher like this to have the same success as a teacher with 60 or 70 students (Interview with the school head, case B: June 2021).

One of the experienced teachers had this to say:

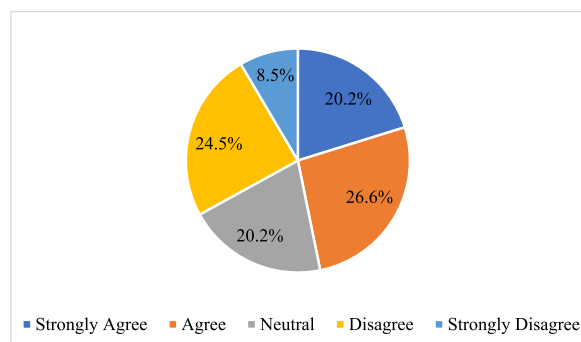


Fig. 5. Teachers' opinions on standard teaching workload. Source: Field data (2021).

Table 5
Teaching workload and teachers' emotions.

	Statement	Remark
1	My teachers do not see composing exams as a priority	Negative
2	I do not expect to see a teacher like this have the same success as a teacher with 60 or 70 students	Negative
3	Now you'll see the teacher is working twice for the same thing	Negative
4	The plurality of students leads the teacher to work under very difficult circumstances every day	Negative
5	We cannot finish some of the topics in time or we do not finish at all	Negative
6	If your students fail, you will not feel like a teacher with a degree	Negative
7	I fail to work. I continue to work, having done the test. Those who fail are always in big numbers	Negative
8	We continue to work until 12 p.m.	Negative
9	Missing one session is something that can cause you to miss out on peace in the sense that I have not implemented my duty as I should	Negative
10	We are overwhelmed, but there is no advocate for the teacher	Negative
11	The teacher works with the schedule without listening to students understanding of their learning needs	Negative
12	We continue to work to avoid conflicts and orders given to us from higher authorities	Negative
13	We, teachers, have no voice in front of the government, it is when we say that the teaching profession is despicable	Negative

Source: Field Data (2021).

I teach math to over 200 students. For 'math' to have validity, you must correct the exercise you give. You will see that I have continued to work in moderation. Some periods collide, I do my best to make students of the examination classes not miss the lessons. As a result, we cannot finish some of the topics in time or finish at all. The school head has not made enough effort to seek out teachers to help me (Interview with a male teacher, case A: May 2021).

Teachers in one of the FGDs had this to say:

This school can no longer accommodate 40–45 students per classroom. The class with the least number of students is 50–80 because each form has 200 students. We, teachers, are overwhelmed with a large number of students. Now in the teaching stages, some students cannot understand directly. These lead us to create evening classes to make revisions. Making revisions to the lessons taught is exhausting to the mind of both the teacher and the student. We continue to work to avoid conflicts and orders given to us from higher authorities (Teachers in FGD, case C: July 2021).

The narratives imply that the government has increased the number of students and is failing to accommodate the services by increasing the number of teachers. The high workload was caused by many students learning in one classroom. With that, it could be argued that government efforts in line with class size balance were not practical as government efforts in deploying teachers, particularly science teachers, were not satisfactory to teachers. Consequently, teaching many students more than the classroom capacity led many students not to understand the taught subject. Taking any remedial was like giving punishment to both teachers and students.

5.5. Teachers' housing services

Fig. 6 shows the findings of the fifth examination on teachers' housing services. It was revealed that 26.6% ($n = 25$) of teachers had positive attitudes by opting for strongly agreed and agreed responses, 5.3% ($n = 5$) neutral, and 68.1% ($n = 64$) had negative attitudes as they opted on disagree and strongly disagreed answers. These findings indicate that housing services were a negative and hindering factor in reinforcing better practices of clinical supervision at the workplace.

Table 6 shows 7 statements indicating teachers' negative attitudes toward available schools' houses. The emerged key Negative teachers' emotions are outlined: quitting work, mentally disturbed, unsettled mind, being bored, being disappointed, stability does not exist, not being valued, and teaching is difficult.

In supporting the developed statements, some of the informants were quoted as saying:

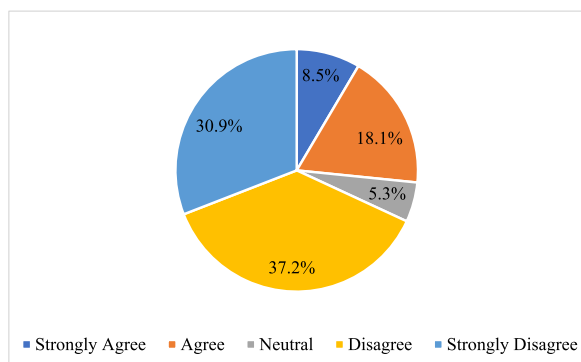


Fig. 6. Teachers' opinions on housing services. Source: Field data (2021).

Table 6
Housing services and teachers' emotions.

	Statement	Remark
1	Teachers are at workstations, but their reasoning is to quit work whenever necessary	Negative
2	The teacher who has lodged somewhere is free to do many things outside work ... some are mentally disturbed.	Negative
3	The teachers get bored when it comes to travelling ... remember, the town buses don't get there!	Negative
4	I have to say, the travel costs are hurting my teachers, so some are disappointed, and some are discouraged from the teaching	Negative
5	The renting issue lies in the constant increase; stability of the teacher in the workplace does not exist	Negative
6	There are no houses that are prepared for teachers, and the teacher's work is not valued	Negative
7	The government does not know where the teacher lives, and this is where we see 'teacher work' difficult	Negative

Source: Field Data (2021).

A wood partition separates my office and the teachers. Surely what is being talked about here is being heard on the other side. So, if something is sensitive to talk to the teacher, it is impossible because we are in the same building. My teachers have no houses but rooms! You can see a single home is shared by 3 teachers and 10 live in the village. A teacher cannot live with his wife and children! What is going on in this teacher's mind is to quit the job, but he can't because his family relies on him for a living ... "Teachers are at work stations, but their reasoning is to quit work whenever necessary" (Interview with the school head, school case A: May 2021).

School head from school D added that:

I don't have teachers' houses, including myself as the school head ... the travelling costs are hurting my teachers, so some are disappointed, and some are discouraged from teaching. Please take it as teachers are under teaching profession stress (Interview with the school head, school case D: August 2021).

Another school head narrated that:

[...] I think teachers' houses are not present in all schools. In our case, we have 6 teachers with schoolhouses, and 54 teachers have rented at the edge of the town because to evade the renting costs they would be required to pay if they rented houses in the town centre. As a result, some teachers find that teaching is their most complementary work (Interview with the school head, school case C: July 2021).

Teachers also were quoted saying the followings:

There are no houses prepared for teachers ... we are 24 in number, but only 4 teachers benefit from school houses. There is an environment we have rented out of school and there is some distance, but we continue to work Due to the distance, you may be late to reach the school, but the employer/ school head may not want to know the reasons for the teacher's delay. Such things make teachers see that the government does not care about the teacher's work so the murmurs are numerous even if they are not aired openly (Teachers in FGD, school case B: May 2021).

The narratives suggest that the lack of housing services for teachers at the workplace increases professional hardship among teachers. Some teachers live far from schools and get disturbed in travelling to schools. There are some cases where some teachers get separated from their families because schools' houses cannot provide comfortable accommodation for the family members. Teachers see all these as challenges that affect their professional practices.

6. Discussion

The study examined participants' opinions on factors influencing school heads' clinical supervision practices and emerging teachers' emotions. Therefore, the discussions are hereunder presented.

The first examination revealed that schools managed to practice clinical supervision in their respective schools due to effective communication. Properly teaching and learning supervisory communication enhanced co-teaching and workshops in studied schools. It is acknowledged that effective clinical supervision retained teachers and improved teaching and learning strategies. The findings suggest that as clinical supervision was practised, positive teachers' emotions emerged. These findings are consistent with previous studies [113,114,115] that when teachers present positive attitudes toward teaching and learning supervision, they tend to have positive emotions towards the teaching profession which in turn encourage them from performing effective and efficient teaching practices. Synonymously [116], found that school heads and teachers' frequent discussions on teaching and learning practices improved novice teachers' professional emotions.

The second examination discovered school heads received supervisory cooperation from teachers. It was a reinforcement factor for better clinical supervision practices at the workplace. As teachers held positive attitudes, positive teachers' emotions emerged, such as professional relationships between and among school heads, teachers and students [117]. found that cooperation between school heads and teachers improved clinical supervision practices [118]. discusses the implications of collaboration, which facilitates the teachers' positive emotions towards their teaching profession. It suffices to argue that cooperation is important for effective clinical supervision and develops positive teaching emotions among teachers.

The third examination discovered that schools had unsatisfactory textual and non-textual teaching and learning materials. There

was an acute lack of social sciences textbooks. With that, the book-students ratio ranged from 1:100 to 1:250 as civics, history, and some English reading textbooks were unavailable for students. Besides, science subjects such as mathematics and biology had a ratio that ranged from 1:5 to 1:25. The findings reflect Tanzania textbook report 2020, wherein basic mathematics was found to have 1,416,085 textbooks, biology 1,161,572 textbooks, and civics 378,380 books as compared to enrolled lower secondary students at 2,322,259 [100]. The study argues that schools' deficits in textual teaching and learning materials discouraged proper clinical supervision practices among school heads and teachers; consequently, negative teachers' emotions emerged. The study findings concur with [119] who found that English teachers in Iran faced a shortage of teaching materials, which negatively affected teachers' professional well-being. The implication of these findings could cause challenges in implementing competency-based education. Previous studies [94,98,120,121] found that inadequate students textbooks hindered the implementation of participatory teaching and learning practices in most secondary schools in Tanzania. The findings suggest that insufficient teaching and learning resources were one of the main factors that caused poor teaching and learning practices and declining teaching efficacy among teachers. The study findings concur with the previous literature [122,123] in that school supervision that faces a shortage of teaching and learning resources leads to the development of negative attitudes to teachers.

The fourth examination discovered that teachers experienced a heavy teaching workload. However, diversity was noted among science and social science teachers. Regarding that science, the teacher-students ratio ranges from 1:200 to 1:300. In social science, the teacher-students ratio ranges between 1:50 and 1:80. These findings suggest that lower secondary schools have failed to teach students according to competence-based education whereby a maximum teacher-students ratio is 1:40 [66]. Two reasons are highlighted; one is that the Tanzanian government is increasing students' enrolment as compared to teachers' recruitment [3,124,125,126], and two teachers are assigned with non-teaching professional activities such as administrative tasks [127,128]. Significantly, clinical supervision was negatively affected as it was hard for school heads to guide teachers in fulfilling participatory teaching and learning practices. Concurrently, in Tanzania, a heavy teaching workload has been limiting the proper performance of classroom teaching-learning processes [94,98,129]. In this manner, teachers were the main actors in drilling students to learn in a classroom. Consequently, students were discouraged from actively participating in teaching and learning processes and working hours were prolonged to weekend days. In turn, emerged negative teachers' emotions. These findings depart from Ref. [130] who found that teaching workload and class size in the United States of America were reasonable and enhanced positive professional thinking among teachers. The heavy workload in Tanzania leads to teachers' psychological disorder that negatively affects students' academic achievement. Synonymously, elsewhere as in the Philippines [131], found that uncontrolled workload and working hours significantly caused teachers' burnout.

The fifth examination found that schools' infrastructures, namely, houses and offices were negative factors in clinical supervision practices. Regarding house services, it was found that 21.3% of teachers were given school shelters, and 78.7% rented indigenous houses. Concerning teaching staff offices, most schools lacked teaching staff offices; alternatively, classes were changed into offices with limited furniture. Similarly [100], reports that in Tanzania, "there is a shortage of 2270 administration block, 75,553 teachers" (p. 315). Fairly to maintain that teachers' livings out of school situate increased teaching professional stress. Some teachers were looking for workstation transfer, and others were compelled with time management due to delays or early leave at workplaces. With this, school heads experienced difficulty managing teachers in all professional delivering, including regular one-to-one teaching and learning supervisory discussions. The findings were consistent with previous studies [128,132,133,134] that limited infrastructures hindered teachers from practising their professional accordingly. [132] adds that the shortage of housing services in newly built schools in Tanzania and shared teaching staff offices were among the factors that declined teachers' confidence and ability to teach. Conclusively, schools with a shortage of teachers' houses and teaching staff offices are likely to encourage teachers from developing negative teaching emotions, therefore, government interventions are urgently required throughout the country.

7. Implications and suggestions of the study

Clinical supervision is practised in public secondary schools in Tanzania. Its effectiveness was influenced by effective communication and cooperation between school heads and teachers. With that, teaching and learning supervision practices were organised, and teachers felt supported in implementing teaching and learning activities at the workplace. Alongside, heavy workload, shortage of students' textbooks, and inadequate teachers' houses weakened the efficiency of clinical supervision. These affected teachers from preparations and implementations of participatory teaching and learning practices. As a result, teaching was drilling for summative examination achievements and not for the academic intellectual gain of the students. Therefore, the goal of the Tanzanian educational policy of 2014 on the preparation of youth for a competitive world market is losing practical reality. The findings are very important in clinical supervision and teacher emotional development as they offer crucial clues regarding the required resources to improve clinical supervision practices and develop positive teachers' emotions. Educationalists are encouraged to set standards for clinical supervision undertaking to allow the approach to deliver the aims it was built. The government should provide enough educational resources such as textbooks and teaching housing services and improve the teaching workload for all public schools. School heads and teachers should continue trusting each other in striving for quality teaching and learning practices.

8. Limitations and future studies

This study was conducted at a small scale of four public secondary schools. In this manner, the findings are not generalised to all public secondary schools in Tanzania as a system of funding education is divided. Some public schools are under local government authority, and others are under the central government. Due to the government's priority, some schools may have important resources

supporting clinical supervision. Future researchers could conduct comparative studies on the influence of clinical supervision practices on developing teachers' emotions among locally and centrally owned secondary schools in Tanzania. Moreover, researchers are encouraged to design developmental research studies that construct standards framework for clinical supervision practices in the context of lower secondary schools. The study developed research instruments beneficial to all researchers who want to employ them in their studies.

9. Conclusions

The study findings suggest that teachers consider effective communication and cooperation positively influence clinical supervision practices. Importantly, effective clinical supervision influenced the development of positive teaching emotions among teachers. Available textual teaching and learning materials, teaching workload and teaching staff housing services were negative factors that negatively influenced clinical supervision practices. Improper practices of clinical supervision cause an emerging of negative teachers' emotions in the workplace. The study findings provide empirical evidence that proper functionality of school heads' clinical supervision requires effective communication, cooperation, enough teaching and learning resources, a standard teaching workload, and teaching staff housing services. Clinical supervision that is well-resourced has the potential for the development of positive teachers' emotions.

Declarations

Informed consent: written informed consent was collected from study participants by the principal investigator.

Consent for publication: Not applicable.

Disclosure statement: Authors declare that there is no conflict of interest concerning the research, authorships, and the publication of this article.

Fundings: This work has not received any grant from any sponsor, donor and thus, it was privately sponsored

Data availability: all data presented in this study will be made available at the time of publication via institutional contact address <http://repository@uodom.ac.tz>.

Abbreviations

- i. FGDs Focused Group Discussions
- ii. SPSS Statistical Package for Social Sciences

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