Exploring the Involvement, Challenges, and Perceptions in Promoting Oral Health at Schools Among Former Trainee Teachers in Malaysia

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Abstract:
This study aimed to explore the involvement, challenges, and perceptions of former trainee teachers regarding their role in promoting oral health at schools. A validated cross-sectional questionnaire was distributed via a Google Form Link to former trainee teachers from Institutes of Teacher Education who had participated in the Oral Health Programme for Trainee Teachers organised by the Malaysian Ministry of Health. The 146 respondents had a mean age of 26.08 ± 4.35 years and an average of 2.44 ± 3.54 years of working experience. Most former trainee teachers provided individual advice on oral health to schoolchildren and were involved in the toothbrushing activities (demonstration and exercise). However, their primary teaching duties often impeded these efforts. Their perception regarding promoting oral health in schools was considered good, 3.22 ± 0.44 ($p<0.05$), but need to be improved. The findings can guide stakeholders in strategising the role of teachers as oral health educators.

Keywords: barrier, facilitators, oral health promotion, perception

1. Introduction

The teaching profession is particularly well-suited to implementing two key actions from the Ottawa Charter for Health Promotion: developing personal skills and strengthening community action. In addition to needing to take control of their own oral health, utilising the unique role of teachers as oral health educators is one of the options to ensure the continuous delivery of oral health education at school. Teachers can ensure that the general and oral health messages are conveyed to the schoolchildren continuously because they spend much time with them during school days (N.A. Mohd Nor, 2013). Additionally, teachers will be able to incorporate oral health messages into the general health curriculum of the school (Ehizele, 2011). Furthermore, teachers can emphasise oral health messages throughout the school year (Kwan, 2005). Hence, it is crucial to consider teachers' perceptions and the challenges they face in promoting oral health at school, as their understanding and support are key to effectively delivering oral health education and fostering healthy habits among schoolchildren.

Teachers often showed positive perceptions towards oral health activities. A study in Hail, Saudi Arabia revealed that 94.2% of teachers agreed that teachers could play a significant role in oral health promotion, while 96% expressed interest in taking on additional responsibilities as oral health promoters. The majority (84%) of them also expressed a desire for teachers to receive training in oral health education (Aljanakh et al., 2016). Teachers in Uganda also believed they could serve as role models by demonstrating healthy behaviours and encouraging children to adopt healthy lifestyles (Akera et al., 2022). Earlier studies also revealed that teachers in countries like Poland and Thailand expressed their willingness in contributing to oral health education (Eungpoonsawat, 2002; Wierzbicka et al., 2002). In Malaysia, the National Oral Health Survey of Preschool Children 2015 (NOHPS 2015) demonstrated that 92.1% of preschool teachers had a positive perception of their role in promoting oral health. These perceptions included their responsibilities in recognising oral health issues in preschool children, supervising daily toothbrushing during school hours, managing the foods served, setting a good example by maintaining their oral health, consistently incorporating oral health messages into their lessons, and sharing responsible of oral health promotion (OHP, 2015). Another Malaysian study in the state of Terengganu found that preschool teachers had positive perceptions of their roles in oral health education even before attending the oral health seminar (N.A. Mohd Nor, 2013). However, another study exhibited that teachers in rural Minnesota preferred to take passive roles in oral health education (Lopez et al., 2022). In addition, only 51% of teachers in Pondicherry felt that it was their responsibility to provide oral health education to their students (Sekhar et al., 2014).

Several studies explored the challenges that schools and teachers encountered while promoting oral health in schools. A World Health Organisation (WHO) survey evaluating 108 school oral health projects across 61 countries identified several challenges associated with school-based oral health activities. These challenges included financial barriers (44%), limited capacity and availability of human resources (38%), insufficient collaboration at lower levels (30%), and an inadequate policy framework (24%) (Jürgensen & Petersen, 2013). In a qualitative study exploring the same issues, primary schoolteachers in Brazil reported a lack of clear and accurate materials with information in their language that was easily understandable for children. The teachers emphasised the need for well-developed resources that provided precise information in a child-friendly manner to facilitate their understanding (Kubo et al., 2014). A cross-sectional study investigating the oral health programme activities of Early Head Start (EHS) teachers in North Carolina also noted a shortage of educational materials related to oral health (Kranz et al., 2011). Lack of materials may exist due to the school's financial constraints. Funding issues were one of the primary challenges faced by staff in implementing oral health promotion programmes. Reports indicated that preventive programmes were often not prioritised for budget allocations. Consequently, the previous study emphasised the need for a dedicated budget for oral health promotion (Reddy & Singh, 2015).

A supportive environment is essential for teachers to educate and promote oral healthcare among schoolchildren effectively. The supportive environment includes various sources provided

by the schools. In addition, a lack of support from school leadership can contribute to the challenges associated with implementing oral health education promotion within schools. A prior study in KwaZulu-Natal, South Africa, demonstrated that school principals lacked knowledge and understanding of health and education-related policies, and insufficient support from the Department of Education (Reddy & Singh, 2015). Despite the numerous challenges reported by teachers involved in oral health education and promotion activities at school, some teachers indicated that they encountered no difficulties in teaching oral health topics because they received support in the form of materials, as well as institutional and family backing to effectively carry out these activities (Kubo et al., 2014). Research on the challenges teachers face in delivering oral health education and promotion remains limited in Malaysia. By understanding these challenges, stakeholders can develop strategies and support systems to strengthen teachers' capacity to engage in oral health education and promotion within schools.

1.2 The Oral Health Programme for Trainee Teachers in Malaysia

The Oral Health Programme for Trainee Teachers is one of the oral health promotion initiatives designed by the Oral Health Programme, Ministry of Health Malaysia (OHP MOH). It was rebranded as bGEMS (*Program Kesihatan Pergigian Untuk Bakal Guru: Perkasa Mulut Sihat*) in December 2022. It is a collaborative programme between OHP MOH and the Ministry of Education Malaysia, and is implemented in all 27 Institutes of Teacher Education (ITEs) in Malaysia. The bGEMS Programme has been established since 1991 and all the State Oral Health Divisions (SOHD) in Malaysia are mandated to conduct the bGEMS Programme at ITEs in their respective states annually, with monitoring from the Oral Health Promotion Division of the OHP MOH (OHP, 2022). "Trainee teachers" refers to students enrolled in ITEs who are preparing to become future schoolteachers.

The main objective of the bGEMS Programme is to empower trainee teachers to effectively contribute to improving the oral health of schoolchildren. It also aims to develop effective oral health care skills and practice among trainee teachers. Furthermore, trainee teachers are encouraged to incorporate oral health education into the school curriculum and integrate oral health components with other school activities (OHP, 2022).

The routine activities of the bGEMS Programme are; i) oral health lectures, ii) oral examination, iii) toothbrushing demonstration, and iv) Daily Lesson Plan Workshop (group work). The SOHDs can implement other activities based on creativity and initiative (OHP, 2022). Although the bGEMS Programme's guidelines recommend long-term evaluation involving former trainee teachers (ITEs graduates) who have participated in the bGEMS Programme during their studies at ITEs, there is a notable lack of written reports documenting these evaluations once they transition into full-time teaching roles.

1.3 Objectives of the Study

The objectives of the study are:

i. To explore the involvement and challenges in oral health promotion activities at schools among the former trainee teachers who participated in the bGEMS Programme
ii. To explore the former trainee teachers' perceived views on their roles in oral health promotion activities at schools

1.4 Significance of the Study

This study provides inputs from former trainee teachers of ITEs who participated in the bGEMS Programme to stakeholders such as the OHP MOH and the Institute of Teacher Education Malaysia. These inputs can improve the bGEMS Programme's execution in the future, making it more effective for participants. Effective improvements may benefit former trainee teachers by enhancing their perceptions of promoting oral health. As a result, their oral health status and quality of life will be improved. Teachers' involvement in delivering oral health education and promotion may also benefit schoolchildren, including improving oral health status and awareness. Insights

from former trainee teachers regarding the factors that facilitate or hinder their participation in oral health education and promotion at school may benefit all stakeholders, including the schools. The OHP MOH may consider reviewing how teachers can contribute to oral health education and promotion in schools. Schools may also create a supportive environment for teachers to serve as oral health educators, benefiting the schoolchildren.

2. Methodology

2.1 Study Design

This study is cross-sectional and data collection was conducted from September 2023 to January 2024. Five states representing five regions in Malaysia were selected using simple random sampling. All ITEs in the chosen states participated in this study. Based on observations during the pilot study, proportional sampling by ITEs was not feasible due to challenges in obtaining a commitment from former trainee teachers. As a result, the respondents in this study were selected based on voluntary participation. This approach ensured that those involved were willing to contribute, despite the limitations in sampling methods. Table 1 displays the list of the thirteen ITEs engaged in the study.

Table 1. The Selected ITEs According to Regions and States

Region	State	ITE
Central Region	The Federal of Kuala Lumpur	IPGM Kampus Bahasa Melayu IPGM Kampus Bahasa Antarabangsa IPGM Kampus Ilmu Khas
Southern Region	Negeri Sembilan	IPGM Kampus Raja Melewar IPGM Kampus Pendidikan Teknik
Northern Region	Kedah	IPGM Kampus Sultan Abdul Halim IPGM Kampus Darulaman
East Coast Region	Terengganu	IPGM Kampus Sultan Mizan IPGM Kampus Dato' Razali Ismail
West Malaysia	Sarawak	IPGM Kampus Batu Lintang IPGM Kampus Tun Abdul Razak IPGM Kampus Rajang IPGM Kampus Sarawak

*IPGM- *Institut Pendidikan Guru Malaysia*

The following are the inclusion criteria of respondents of the study:

- Former trainee teachers who participated in the bGEMS Programme at their former ITEs
- Had experience as permanent teachers at schools
- Consented to participate in the study
- Understood Malay language

2.2 Sample Size Determination

The sample size calculation was conducted using the mean and standard deviation from the pilot study on the perceptions of former and current trainee teachers (other part of the study). The pilot study revealed a mean of 2.5988 ± 0.38469 for former trainee teachers and a mean of 2.7183 ± 0.32851 for trainee teachers. The power of the study was set at 0.8, with a 5% margin of error. Considering a 20% attrition rate (Subedi et al., 2020), the final sample size was determined to be 168 respondents.

2.3 Study Tools

The self-administered questionnaire consisted of four sections: i) Demographic Profile (eight questions), ii) Application of Oral Health Knowledge and Skills in School (two questions), iii) Facilitators and Barriers in Carrying Out Oral Health Activities in School (two questions), iv) Perceptions of Teachers' Roles in Oral Health Promotion (six questions). All items were presented in frequency and percentage. The section on the application of oral health knowledge and skills in schools was designed to assess the involvement of former trainee teachers in promoting oral health. The section on facilitators and barriers to implementing oral health activities at school addressed the challenges associated with promoting oral health in the school setting. The perception section utilised the 4-point Likert scale, which presented the scores in mean and deviation. This questionnaire was adapted from the evaluation tool for former trainee teachers developed by the OHP MOH, outlined in the Guideline of Oral Health Programme for Trainee Teachers published in December 2022 (OHP, 2022). Seven experts with minimum qualification of a Master's degree in Dental Public Health conducted content validation. Additionally, a pilot study was carried out with 27 former trainee teachers of IPGM Kampus Bahasa Antarabangsa and Darulaman. Some changes were made to the questionnaire based on feedback from the validators and the pilot study respondents.

The questionnaire was distributed using Google Link in Malay. It was shared with former trainee teachers through the alumni networks of selected ITEs. The link was sent out through either WhatsApp or email, depending on the preference of each ITE. Reminders were sent to the ITEs at least three times to redistribute the link to ensure maximum participation. The questionnaire included a consent form, and only those respondents who provided their consent could proceed with answering the questions.

2.4 Data Analysis

Data were analysed using the Statistical Package for the Social Sciences (SPSS) version 23. Data cleaning was performed manually by conducting simple statistical analyses. Samples with 50% or more missing data were excluded from the data analysis. In this study, the confidence interval was set at 95%, and a p-value of less than 0.05 was considered statistically significant.

2.5 Ethical Approval

This study received approval from several agencies; i) the Research Ethics Committee, Universiti Teknologi MARA (UiTM), ii) the Medical Research and Ethics Committee (MREC), iii) the OHP MOH, iv) the Ministry of Education Malaysia, and v) the Malaysian Institute of Teaching Education.

3. Results

3.1 Demographics Characteristics of the Respondents

A total of 146 former trainee teachers from thirteen ITEs completed the questionnaire, and the response rate was 86.90%. Females (69.20%) and Malay (69.90%) ethnicity recorded the highest response. The mean age of respondents was 26.08 ± 4.35 years old, and the mean working experience of respondents was 2.44 ± 3.54 years. 35 (24%) respondents were teaching subjects related to Science and Health (physical and health education). Only 5 (3.40%) respondents played the role of health teacher at their schools. Table 2 shows the demographic characteristics of respondents.

Table 2. Demographic Characteristics of Respondents, (n=146)

Characteristics	Frequency n (%)
Gender	
Male	45 (30.80)
Female	101 (69.20)
Age (Years)	
Mean ± SD	26.08 ± 4.35
Minimum age	23
Maximum age	49
Ethnicity	
Malay	102 (69.90)
Chinese	7 (4.80)
Indian	6 (4.10)
Others	31 (21.20)
Marital Status	
Single	102 (69.90)
Married	44 (30.10)
Group of Year of Services	
1 year and below	90 (61.60)
More than 1 year	56 (38.40)
Teaching related to Science and Health	35 (24.00)
Health Teacher	5 (3.40)
Institutes of Teaching Education	
IPGM Kampus Bahasa Melayu	33 (22.60)
IPGM Kampus Bahasa Antarabangsa	1 (0.70)
IPGM Kampus Ilmu Khas	8 (5.50)
IPGM Kampus Raja Melewar	15 (10.30)
IPGM Kampus Pendidikan Teknik	3 (2.10)
IPGM Kampus Sultan Abdul Halim	2 (1.40)
IPGM Kampus Darulaman	15 (10.30)
IPGM Kampus Sultan Mizan	3 (2.10)
IPGM Kampus Dato' Razali Ismail	7 (4.80)
IPGM Kampus Batu Lintang	10 (6.80)
IPGM Kampus Tun Abdul Razak	27 (18.50)
IPGM Kampus Rajang	20 (13.70)
IPGM Kampus Sarawak	2 (1.40)

3.2 Application of Oral Health Knowledge and Skills Among Former Trainee Teachers

Respondents were asked about their application of oral health knowledge and skills to determine respondents' involvement in oral health promotion at school. Respondents were allowed to choose more than one answer option for the two questions in this section. Table 3 shows 116 (79.50%) respondents regularly provided individual oral health advice to schoolchildren, while 104

(71.20%) integrated oral health messages into their daily lessons. Additionally, 9 (6.20%) respondents reported never applying their oral health knowledge to schoolchildren. 36 (24.70%) respondents reported never participating in any oral health activities at school. The majority were involved in toothbrushing demonstrations, 72 (49.30%).

Table 3. Application of Oral Health Knowledge and Skills in School Among Former Trainee Teachers

Items	Frequency n (%)
How did you apply oral health knowledge to schoolchildren?	
Never apply oral health knowledge to schoolchildren.	9 (6.20)
Provided individual advice on oral health to schoolchildren on a regular basis.	116 (79.50)
Applied oral health messages in daily lessons.	104 (71.20)
Others	7 (4.80)
Have you ever done any oral health activities at school?	
Never involved/conducted oral health activities at school.	36 (24.70)
Toothbrushing demonstration	72 (49.30)
Toothbrushing exercise	67 (45.90)
Roleplay	47 (32.20)
Oral examination	45 (30.80)
Others	0 (0.00)

3.3 Challenges in Carrying Out Oral Health Activities in School

The respondents were asked about the challenges which were facilitators and barriers that they encountered when engaging in oral health activities at school (Table 4). They were allowed to select multiple answer options for both questions. The majority, 125 (85.60%) respondents, indicated that their involvement was driven by a sense of responsibility to be involved in oral health activities. Additionally, 50 (34.20%) respondents reported that they carried out these activities because of directives from higher administration, while 43 (29.50%) respondents carried out their own interest in oral health.

Several factors hindered respondents from conducting oral health activities at school (Table 4). Although they were interested in the activities, 100 (68.50%) acknowledged that their primary teaching responsibilities prevented them from continuing such activities. Furthermore, 70 (47.90%) respondents indicated that they lacked opportunities for oral health promotions. Unfortunately, 11 (7.50%) respondents admitted they were not interested.

Table 4. Facilitators and Barriers to Carrying Out Oral Health Activities in School

Items	Frequency n (%)
What factors motivate you to carry out oral health activities?	
Interest in oral health.	43 (29.50)
A sense of responsibility to be involved in oral health activities.	125 (85.60)
Carry out activities on instructions.	50 (34.20)
Others	2 (1.40)
What factors hinder you from carrying out oral health activities?	
Not interested.	11 (7.50)
Interested but busy with the real job of a teacher.	100 (68.50)
Interested but no opportunity to carry out oral health activities.	70 (47.90)
Others	4 (2.70)

3.4 Perceptions of Teachers' Roles Towards Oral Health Promotion Among Former Trainee Teachers

Table 5 illustrates the descriptive outcomes of respondents' perceptions of teachers' roles in promoting oral health at school. The majority of respondents, 139 (95.20%), agreed (strongly agree and agree) with the statement of item OHP1, which addressed the importance of detecting oral diseases among schoolchildren, while 7 (4.80%) respondents indicated disagreement (strongly disagree and disagree).

Regarding item OHP2, 107 (73.30%) respondents disagreed (strongly disagree and disagree) with the neglect to supervise toothbrushing activity among schoolchildren. However, 39 (26.70%) agreed (strongly agree and agree) that this responsibility was not theirs.

133 (91.10%) respondents agreed (strongly agree and agree) that monitoring the type of food/drink served to the schoolchildren was their responsibility. Conversely, 13 (8.90%) disagreed with the statement of the item OHP3.

All the respondents agreed (strongly agree and agree) that they should become role models to their schoolchildren regarding having good oral health (OHP4). Regarding item OHP5, 126 (86.40%) respondents disagreed (strongly disagree and disagree) that they were unwilling to apply oral health messages in their teaching. This means that 20 (13.70%) respondents were reluctant to incorporate oral health messages in their teaching.

Item OHP6 addressed the belief that promoting oral health is solely the responsibility of the dental team. In response, 125 (85.60%) disagreed (strongly disagree and disagree) with this statement. In contrast, 21 (14.40%) respondents agreed (strongly agree and agree) that the dental team should exclusively handle this responsibility. Finally, the mean perception of former trainee teachers on their roles in promoting oral health in school was 3.22 ± 0.44 ($p<0.05$).

Table 5. Former Trainee Teachers' Perceptions of Teachers' Roles in Promoting Oral Health at School

Items	Frequency n (%)
OHP1. It is important for me to be able to detect tooth decay and gum problems among schoolchildren.	
Strongly agree	61 (41.80)
Agree	78 (53.40)
Disagree	2 (1.40)
Strongly disagree	5 (3.40)
OHP2. It is not my job to supervise the toothbrushing activity among schoolchildren during school hours.	
Strongly agree	12 (8.20)
Agree	27 (18.50)
Disagree	76 (52.10)
Strongly disagree	31 (21.20)
OHP3. It is my responsibility to monitor the type of food/drink served to the schoolchildren.	
Strongly agree	39 (26.70)
Agree	94 (64.40)
Disagree	13 (8.90)
Strongly disagree	0 (0.00)
OHP4. I must be a role to schoolchildren by having good oral health.	
Strongly agree	86 (58.90)
Agree	60 (41.10)
Disagree	0 (0.00)
Strongly disagree	0 (0.00)
OHP5. I am not willing to apply the oral health message in the teaching as often as possible.	
Strongly agree	8 (5.50)
Agree	12 (8.20)
Disagree	63 (43.20)
Strongly disagree	63 (43.20)

OHP6. Promoting oral health is the sole responsibility of the dental team.	
Strongly agree	12 (8.20)
Agree	9 (6.20)
Disagree	79 (54.10)
Strongly disagree	46 (31.50)

4. Discussion

4.1 Application of Oral Health Knowledge and Skills in School

Regarding applying oral health knowledge to schoolchildren, 9 (6.20%) of the former trainee teachers never imparted oral health knowledge to schoolchildren throughout their service as a teacher. This number is lower than the findings in Davangere, India, which recorded 16.67% of teachers never attempting to deliver knowledge related to oral health to their students (Maganur et al., 2017). However, this study indicated that former trainee teachers participated in various oral health activities at school. The most commonly engaged activity was the toothbrushing demonstration (49.30%), followed by the toothbrushing exercise (45.90%). This involvement might be attributed to the dental team at the school, which conducted toothbrushing activities, allowing teachers to assist in those activities. These findings were comparable with those from a previous qualitative study in Uganda, which revealed that teachers participated in various oral health activities, including toothbrushing demonstrations, oral examinations, and advocating for oral health awareness (Akera et al., 2022).

4.2 Facilitators and Barriers in Carrying Out Oral Health Activities at School

Most former trainee teachers, 125 (85.60%), believed participating in oral health activities was part of their responsibility towards schoolchildren. Additionally, 29.50% expressed their interest in oral health, motivating them to engage in related activities. The bGEMS Programme might influence former trainee teachers' sense of responsibility and interest in oral health. A prior study in North Carolina found that teachers who received dental training participated more frequently in both child and parent oral health activities compared to those who did not receive such training (Kranz et al., 2011).

The primary teachers' job was the main barrier for former trainee teachers to get involved with oral health activities, followed by no opportunity being given to them. Oral health promotion was seen as an extra burden on teachers' workloads and was not incorporated into their daily routines because of time limitations and heavy responsibilities (Reddy & Singh, 2015). Some teachers claimed that their workloads extended beyond the school day, requiring them to spend additional time after hours to be more effective and productive in their roles (JohariJohari et al., 2018). The lack of opportunities might be linked to insufficient school and environment support. The study in KwaZulu-Natal, Nigeria, revealed that school principals reported limited knowledge of health and education policies, as well as inadequate support from the Department of Education (Reddy & Singh, 2015). Additionally, leadership must be strengthened to motivate teachers (Firdaus et al., 2019).

The barriers presented challenges for teachers in implementing school oral health activities, highlighting the need for solutions. Attention should be given to teachers who remained uninterested in participating in oral health activities, even after attending the bGEMS Programme at ITEs. The stakeholders should develop strategies to boost former trainee teachers' motivation, enabling them to contribute to oral health education and promotion in schools actively.

4.3 Perceptions of Teachers' Roles Towards Oral Health Promotion Among Former Trainee Teachers

Two other local studies employed questions similar to those in the present study to explore teachers' perceptions of their roles in promoting oral health (OHP, 2015; Paiizi, 2024). The NOHPS 2015 study applied these questions to preschool teachers, while another recent study used them with trainee teachers one month after they attended the bGEMS Programme at their respective ITEs.

Former trainee teachers demonstrated a lower percentage of positive responses than the two local studies on most questions, except for two: being a role model for good oral health (OHP4) and responsible for oral health promotion (OHP6). Notably, 100% of former trainee teachers agreed they should set an example for schoolchildren by maintaining good oral health, slightly higher than the 99% recorded in both local studies (OHP4). Additionally, former trainee teachers showed a higher percentage of positive responses (85.60%) on the belief that promoting oral health is not solely the responsibility of the dental team, compared to the NOHPS 2015 study (84.10%) (OHP, 2015) and the study on trainee teachers (83.50%) (Paiizi, 2024) for question OHP6.

The other four perception items showed a lower percentage of positive responses among former trainee teachers compared to the NOHPS 2015 study and the study on trainee teachers. The most significant gap was supervising toothbrushing (OHP2) and incorporating oral health messages into teaching (OHP5). Only 73.30% of former trainee teachers viewed supervising toothbrushing as part of their role, compared to 84.30% in the NOHPS 2015 study (OHP, 2015) and 83.50% in the trainee teachers' study (Paiizi, 2024). Similarly, 86.40% of former trainee teachers were willing to include often oral health messages in their teaching, lower than 87.70% in NOHPS 2015 (OHP, 2015) and 96.60% among trainee teachers (Paiizi, 2024).

Former trainee teachers recorded a mean perception score of 3.22 ± 0.44 ($p<0.05$), which was lower than the 3.45 ± 0.41 mean score of trainee teachers from a recent local study who had completed the bGEMS Programme (Paiizi, 2024). The difference in mean perception scores between the former and trainee teachers might be attributed to several factors. Similar variations were observed in a previous study conducted in Guntur City, India, which compared oral health knowledge, attitudes, and hygiene practices among different age groups of teachers, showing diverse results across the groups. It revealed that the 35-44 age group exhibited significantly better knowledge, levels of positive attitudes, and oral hygiene practices than the other age groups (Naidu et al., 2014). The lower mean perception score among former trainee teachers than trainee teachers might stem from their primary role as full-time schoolteachers. Having faced real-life situations in the classroom, former trainee teachers' perceptions of their roles in promoting oral health education might be influenced by various challenges within the school environment. 68.50% of former trainee teachers recognised that their primary responsibilities as teachers kept them busy, even though they were interested in oral health activities. Oral health promotion was perceived as an additional burden on teachers' workloads and was not incorporated into their daily routines due to time constraints and heavy workloads (Reddy & Singh, 2015). As a result, teachers' workloads created barriers that hindered their ability to effectively conduct oral health education and promotion activities for schoolchildren (Kubo et al., 2014).

5. Conclusion

Most of the former trainee teachers provided individual advice on oral health to schoolchildren, and the toothbrushing activity (demonstration and exercise) was the most participated in by former trainee teachers. More than half were interested in carrying out oral health activities at schools but were hindered by their primary job as teachers. The perceptions of former trainee teachers regarding promoting oral health in schools were generally positive. However, certain areas require attention, including their role in supervising schoolchildren's toothbrushing, incorporating oral health messages into their teaching, and understanding that oral health promotion is a shared responsibility with the dental team. Despite being exposed to the bGEMS Programme, former trainee teachers in this study faced several challenges that impacted their ability to promote oral health in schools, which might have influenced their perceptions of their role. Stakeholders, including school administrators, can use the study's findings to address teachers' challenges, provide continuous oral health awareness to teachers, and evaluate teachers' roles as oral health educators.

5.1 Limitation of the Study

Utilising the online platform for distributing questionnaires, such as Google Link, may have introduced biases into the assessment process. Relying on self-reported data in online surveys could lead to recall bias, affecting respondents' ability to remember past events accurately. This study also faced low response rates due to concerns about scammers who frequently target users on online platforms. Additionally, respondents might have misinterpreted questions due to a lack of clarification, resulting in inconsistent or inaccurate data.

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