Afr J Med Med Sci (2018) 47, 429-436



# Socio-demographic characteristics of Ibadan preschool teachers: policy implication for improved child oral health education

ME Osuh[1], OO Akinyemi[2] and JI Osuh[3]

*Department of Periodontology and Community Dentistry[1] and Health Policy and Management[2], College of Medicine, University of Ibadan, Ibadan and Department of Psychology[3], Faculty of Social Sciences, Federal University of Oye, Oye Ekiti, Nigeria*

**Abstract**

*Background:* Teachers/Caregivers in preschool centres are well recognized for their role in the care and education of growing children. The sociodemographic and other work related characteristics of these caregiver staffs have been shown in many literatures to exert influence on the quality of educational delivery and care they provide in the care centers. Such information which is useful to advise policy directions in other systems is however scarce in our local environment. This study was therefore set out to assess the sociodemographic and work related variables of preschool caregivers in Ibadan.

*Methods:* A descriptive cross sectional survey using mixed methods was used. Self-administered questionnaire was used to obtain information from 362 teachers and 44 headmistresses (key-informants) also volunteered information. Three-stage sampling technique was used to enroll participants into the study. Interview questions included sociodemographic characteristics and other work-related profile of the caregiver staffs. Qualitative data were analyzed manually while the quantitative data were analyzed using SPSS version 22.

*Result:* Caregivers' male: female ratio was 1: 9 and were aged between 18 and 60 years with a mean age of 35.2 ±8.9 years. About 56.0% were of the entry level career stage and most (68.0%) were married. The majority (96.7%) of the respondents had at least, a secondary school education, 36.0% of which had Early Child Care Education (ECCE) training. Caregiver: pupil ratio was 1: 10. Mean daily work hours was 8.2±1.2 hours/day and a total of 41hours/ week. Monthly salary ranged between 15 and 35 thousand naira ($42 - $97) and increased with better education, job experience and specialized ECCE training ($p<0.001$). Twenty-one (47.7%) informants admitted to observing a regular health promotion programme in their facilities out of which 14(66.7%) of them claimed that the programmes had no oral health content.

*Conclusion:* The preschool teachers' sociodemographic and work-related profile revealed less emphasis on the required specialized training and poor remuneration. Many centres did not observe a regular health promotion programme and a significant number of the few that observed it did not have oral health content.

**Keywords:** *Preschool caregiver, Preschools, Socio-demographic characteristics, Oral health education*

**Résumé**

*Contexte: Les* enseignants / personnes responsables de soin des centres préscolaires sont reconnus pour leur rôle dans les soins et l'éducation des enfants en croissance. Il a été démontré dans de nombreuses littératures que les caractéristiques socio-démographiques et autres caractéristiques liées au travail de ces personnels soignants ont une influence sur la qualité de l'enseignement dispensé et des soins qu'ils dispensent dans les centres de soins. De telles informations, utiles pour conseiller les orientations des politiques d'autres systèmes, sont toutefois rares dans notre environnement local. Cette étude visait donc à évaluer les variables sociodémographiques et liées au travail des personnes responsables des soins préscolaires à Ibadan.

*Méthodes:* Une enquête transversale descriptive utilisant des méthodes mixtes a été utilisée. Un questionnaire auto-administré a été utilisé pour obtenir des informations auprès de 362 enseignants et aussi 44 directrices (informatrices clés) donnaient l'information volontairement. Une technique d'échantillonnage en trois étapes a été utilisée pour inscrire les participants à l'étude. Les questions de l'entrevue comprenaient les caractéristiques sociodémographiques et autre profil professionnel des personnes responsables de soin. Les données qualitatives ont été analysées manuellement, tandis que les données quantitatives ont été analysées à l'aide de SPSS version 22.

*Résultat :* Le ratio hommes / femmes des responsables de soin était de 1: 9 et était âgé entre 18 et 60 ans avec un âge moyen de 35,2 ± 8,9 ans. Environ 56,0% étaient au stade de début de carrière et la plupart (68,0%) étaient mariés. La majorité (96,7%) des répondants avaient au moins une formation de niveau secondaire, dont 36,0% avaient suivi une formation en éducation

Correspondence: Dr. Mary E. Osuh, Department of Periodontology and Community Dentistry, Faculty of Dentistry, College of Medicine, University of Ibadan, Ibadan, Nigeria. E-mail: meosuh2@gmail.com; meosuh@yahoo.com

de soin de la petite enfance (ESPE). Le ratio responsable de soin: élève était de 1: 10. La moyenne des heures de travail quotidiennes était de 8,2 ± 1,2 heures / jour et un total de 41 heures / semaine. Le salaire mensuel variait entre 15 000 et 35 000 Naira (42 à 97 dollars) et augmentait avec une meilleure éducation, une expérience de travail et une formation spécialisée en ESPE ($p < 0,001$). Vingt-et-un (47,7%) informatrices admettaient à observer un programme régulier de promotion de santé dans leurs établissements, dont 14 (66,7%) ont déclaré que ces programmes n'avaient aucun contenu en matière de santé bucco-dentaire.

*Conclusion:* Le profil sociodémographique et relatif au travail des enseignants préscolaires a révélé une moindre importance accordée à la formation spécialisée requise et à une rémunération médiocre. De nombreux centres n'observaient pas de programme régulier de promotion de la santé et un nombre significatif des peu qui l'observaient n'avait aucun contenu relatif à la santé bucco-dentaire.

**Mots clés:** *Responsable de soin préscolaire, Préscolaire, Caractéristiques sociodémographiques, Éducation en santé bucco-dentaire*

## Introduction

As realization of the need for women to earn income grows, it brings to the fore the importance of non-parental care settings such as the preschools for the care of preschool aged children. At preschool establishments, children spend between 59% and 75% of their preschool period with professional caregivers [1]. This is why preschool care facilities are projected as home extensions, and the child care workers seen as second mothers. At preschool age, the children are quite tender and impressionable, hence the years between birth and age five are well recognized as the formative years for which the foundation of adult oral health is laid. Within the same period a child's dental disease risks and pattern are also established [1, 2].

The role of a preschool teacher/caregiver regarding children's oral health education in the classroom includes helping children to imbibe the right knowledge and develop positive habits and skills. Topics such as personal health and wellness, oral health promotion and disease-prevention including concepts such as teeth brushing and healthy nutrition are expected to be well elaborated within this period. In addition, preschool caregivers demonstrate behaviours that enhance health and reduce risks, show how poor oral health can affect self-esteem, and prevent injuries, identify and develop safety strategies to prevent oral/dental injuries among others[3,4] Successfully impacting these lessons into the lifestyle and habits of children in order to instill best practice in them require skill and capacity for painstaking supervision and individualized instructions from a competent and qualified caregiver staff [5,6]. Unfortunately, the effective delivery of these educational measures had remained a challenge for oral health promotion[7].

The quality of work life, an important domain of human lives has been shown to exert significant influence on a worker's overall well-being which in turn greatly impacts on his productivity and output [8]. Therefore, some factors related to a pre-school workplace such as reasonable workload and hours, pay and benefits sufficient to maintain a socially acceptable standard of living and growth opportunities, have the capacity to influence work output among paid caregivers.

Similarly, research reports have identified caregiver qualities such as a better overall education, additional training, being older in age, being dedicated, working with a good caregiver-pupil ratio and work hours, wages and welfare packages as fundamental and important factors which could influence the quality of educational delivery and care obtained in care settings [9-16] and thus were often referred to as structural quality indicators in service delivery in child care establishments [11, 12]. As such, these qualities were encouraged as desirable virtues in preschool caregiver staffs so as to appropriately position them into their roles [10].

The goal of any center-based child care establishment and their regulatory bodies is to achieve a high-quality child care and educational delivery[13]. The preschool caregiver having been recognized as key in the realization of this goal needs to be appropriately positioned in order to effectively deliver on its mandates [10] more so, on the oral health education needs of the children.

The profile of sociodemographic and other work related conditions in preschool caregivers and how well these may influence the quality in educational delivery and care among them when compared with standards required for quality of care has been thoroughly debated in literatures[9,11,14-17]. But such information is however scarce in our local environment, hence this study.

## Methods

The study was conducted in Ibadan, the capital city of Oyo State, southwest Nigeria. Preschools in the state exist in both public and private settings co-existing with the parent school structures. It may also exist alone in the form of a preparatory or beginners setting, without any affiliation with a bigger school. The preschool establishments are populated with

children between the ages 2 and 5 years and are cared for in structures referred to as pre-nursery, nursery, pre-Kindergarten (pre-k), preparatory (prep) classes and other names as adopted by different management. Each of the Local Government Areas (LGAs) in Ibadan had an average of about six school zones- clusters of preschools facilities which affiliate within the same area or community.

The observational study was cross sectional in design and combined both key-informant interview and self-administered questionnaire methods to assess the preschool caregivers' sociodemographic and other work related variables.

The study population comprised of all caregiver staffs and headmistresses of preschool centres operating within Ibadan metropolis who were selected using a three-stage sampling technique. In the first stage, three Local Government Areas (LGAs) were selected by simple random sampling through balloting of the five LGAs that exists in Ibadan metropolis. About six school zones (SZ) were identified in each LGA from where four SZ each were selected by balloting - this gives a total of 12 SZ in all. In the last stage, five preschools were selected by balloting from the average of about nine preschools that make up each SZ. This made a total of 20 preschools from each LGA and 60 preschools for the entire three LGAs that were enrolled into the study. Since a minimum of 6 caregivers were anticipated in each preschool, then all the consenting caregivers in each of the selected preschools were enrolled in the study giving a total of 360 caregivers in all.

Ethical approval was obtained from the joint University of Ibadan/ University College Hospital (UI/UCH) ethical review committee (UI/EC/11/0039). Permissions were obtained from the Oyo state Ministry of Education and from the headmistress of each centre. Similarly, consent was obtained from the caregivers.

The qualitative part of the study involved a face-to-face semi-structured key informant interview with headmistresses of the preschools selected in the study. To be included in the study, the key informants needed to have a minimum of one year employment history in the preschool facility. Their interview schedule reflected eight questions which followed a "YES" response to the state of "currently operational preschool programme" in a facility and two questions following a "NO" response to the state of "currently operational preschool programme". Analysis was done manually. A document was created for each question on which informants' responses were summarized, commonality extents and variations were reflected and themes developed.

In the quantitative part of the study, the questionnaire enquiry from the preschool caregivers included relevant socio-demographic variables and some work-related variables such as daily working hours, employment duration, how many children under their care, how many carers in a classroom, monthly income and whether the job was a choice option. Inclusion criteria included: preschools accredited/ approved by government; caregivers who were aged 18 years or above and who cared for normal/healthy children; and caregivers who were in employment for at least three-month duration.

Instruments used for the study were tape recorders, field notes on observations made and questionnaire tools. Incentives were given to encourage participation. These were free dental consultation, free blood pressure check and scaling and polishing for participants found with poor oral hygiene. Financial exchange rate during study was at the rate of $1 to N360. Data were entered into the computer. Analysis was done using SPSS version 22.0 software package

## Results

*Key-informant interview- public preschools*

All of the headmistresses in the five-existing government owned/ public preschools facilities located within the study area were of the opinion that the preschool programme in their facilities were no longer operational. In a statement by a school headmistress, "*the parents long withdrew their wards from our school and even all other public school settings for the various private preschool establishments in the city- perhaps owing to repeated shutting down of schools following industrial strike actions by school teachers*".(KII 4, SZ 3). According to another headmistress: "*we do not have students anymore, the two caregivers posted to us were drafted to teach primary one pupils*" (KII 5, SZ 9)

*Key-informant interview- private preschools- summary of findings*

A total of 62 private schools within the study area were visited, 44(70.9%) headmistresses were available for interview and met the inclusion criteria. From the interview, the various preschool establishments had been operational for between 4 years and 32 years. They all claimed to engage preschool caregivers with specialized training in Early Childhood Care Education (ECCE) in addition to support staffs for preschool children care. In one of the headmistress words: "*Our policy for preschool teachers' recruitment is nothing short of an ECCE qualification*" (KII 37, SZ 2). Total number of pupil

**Table 1**: Socio-Demographic Distribution of Respondents (N = 362)

| Variables | Frequency | Percentage |
|---|---|---|
| *Sex* | | |
| Male | 32 | 8.8 |
| Female | 330 | 91.2 |
| *Age group (years)* | | |
| < 25 | 25 | 9.4 |
| 25 – 34 | 153 | 42.3 |
| 35 – 44 | 122 | 33.7 |
| ≥ 45 | 53 | 14.6 |
| *Marital status* | | |
| Never married | 91 | 25.1 |
| Married | 246 | 68.0 |
| Separated/divorced | 9 | 2.5 |
| Widowed | 12 | 3.3 |
| Cohabiting*Ethnic group* | 4 | 1.1 |
| Yoruba | 237 | 65.5 |
| Igbo | 72 | 19.9 |
| Hausa | 5 | 1.4 |
| Others | 48 | 13.2 |
| *Religion* | | |
| Christianity | 328 | 90.6 |
| Islam | 32 | 8.8 |
| *Others | 2 | 0.6 |
| *Educational Status* | | |
| Primary Education and < | 12 | 3.3 |
| Secondary Education | 71 | 19.6 |
| Post 2° Education e.g., NCE, Grade II, TT | 188 | 52.0 |
| University/Polytechnic | 91 | 25.1 |
| *Primary job option* | | |
| Yes | 262 | 72.4 |
| No | 100 | 27.6 |
| *ECCE training* | 132 | 36.5 |
| *Average daily working time (hours/day)* | | |
| < 8 | 59 | 16.3 |
| 8 | 182 | 50.3 |
| > 8 | 121 | 33.4 |
| Number of caregivers/teachers remunerated for work time above 8 hours | 19 | 15.7 (p=0.000) |

in enrolment in all of the facilities was about 3792, while the total number of preschool caregivers staff engaged in all the facilities was 376 thus giving a caregiver pupil ratio of 1 : 10. Classroom arrangement was that of a caregiver and one or two assistants depending on the number of children. Minimum pay for the preschool caregivers per month was 15,000: 00 naira while the maximum was 35,000: 00 naira, in one of the quotes "*Anything less than 15K would be unfair*" (KII 21, SZ 11). Benefits attached to preschool caregiver engagements included subsidized health care in 41(93.2%), training scholarship in 16(36.4%), and subsidy on tuition fee for enrolled wards in all cases. Twenty-one (47.7%) informants admitted to observing a regular health promotion programme in their facilities out of which 14(66.7%) of them claimed that the programmes had no oral health content. (Table 1)

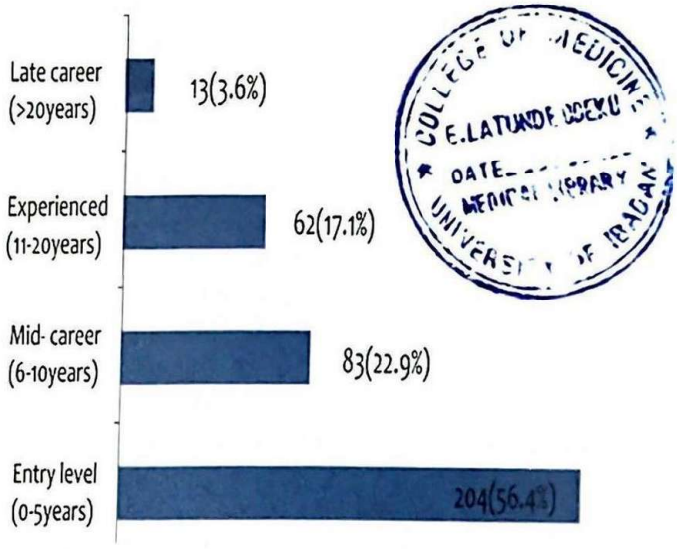


**Fig 1:** Caregivers' work experience

*Self-administered questionnaire on preschool caregivers*

A total of 362 caregivers were interviewed. The response rate was 96.3%. The male: female ratio of the respondents was 1: 9. The minimum age was 18 while the maximum age was 60 years. The mean age was 35.2 ±8.9 years. The highest proportion (42.3%) of participants fell within the age group 25 to 34 years of age and two hundred and forty-six (68%) of them were married (Table 1).

Participants were mostly of the Yoruba tribe and practiced Christianity. The majority (96.7%) of the respondents had at least, secondary school education. Of these, caregivers with post-secondary education in the form of National Certificate in Education (NCE), teacher training or Grade II certificates constituted the larger majority. About a quarter of the caregivers (25.1%) were graduates of a university or a polytechnic. More than a third of the caregivers (36.5%) had ECCE training. About 262 (72.4%) respondents admitted that their preschool caregiver job was a primary job option, the rest would have preferred other jobs (Table 1). Participants work experience as preschool caregivers ranged between 3months to 35 years. Majority of them (56.4%) had an entry level experience followed by 83(22.9%) of them with mid-level experience (Fig 1).

The median years of work experience recorded among the participants was 5.0 (34.8) years.

Daily working time ranged between 4 to 11 hours. About a third 121(33.4%) of the respondents worked for more than 8 hours daily on the average with the children. Of this, only 19 (15.7%) admitted to receiving remuneration for the extra hours spent ($p<0.001$). Mean working time spent each day on the job by the caregivers was 8.2±1.2 hours (table 1).

Monthly salary ranged between ₦15,000 ($41.7) to ₦35,000 thousand ($97.2), and increased with increase in the number of years of experience, a rise in the level of education and whether or not the caregivers had ECCE training ($p<0.001$) (table 2).

of the ECC centre ownership with private firms. In each classroom, a caregiver and an assistant cared for a number of pupils. This is an expected arrangement as it is the general practice in reports from other similar studies.[16,20]

Traditionally, child care is seen predominantly as the responsibility of the feminine gender and through the years, research identified gender polarisation in child care work force, placing the female as a preferred gender till date.[21] This explains the preponderance of female child care workers in this study and other similar studies[16, 20]. Though adoption of a motherly role in child care may have aided the preference for women, men on the other hand albeit fewer may be sought after

**Table 2:** Association between caregivers' socio-demographic characteristics and monthly income (N = 362)

| Variables | Monthly Income <19,000 | 20,000 -¦ 24,000 | 25,000 -¦ 29,000 | 30,000 and Above | Total | $\chi^2$ | P-value |
|---|---|---|---|---|---|---|---|
| *Caregivers' Work Experience (years)* | | | | | | | |
| Entry Level (0 – 5) | 72(35.3) | 105(51.5) | 22(10.0) | 5(2.5) | 204(100%) | | |
| Mid-career (6 – 10) | 13(15.7) | 45(54.2) | 20(24.1) | 5(6.0) | 83(100%) | | |
| Experienced (11 – 20) | 0(0.0) | 28(45.2) | 25(40.3) | 9(14.5) | 62(100%) | | |
| Late career (> 20) | 0(0.0) | 1(7.7) | 3(23.1) | 9(69.2) | 13(100%) | 135.088 | <0.001 |
| *Educational Status* | | | | | | | |
| No formal Education | 3(100.0) | 0(0.0) | 0(0.0) | 0(0.0) | 3(100%) | | |
| Primary Education | 7(77.8) | 2(22.2) | 0(0.0) | 0(0.0) | 9(100%) | | |
| Secondary Education | 42(59.2) | 26(36.6) | 3(4.2) | 0(0.0) | 71(100%) | | |
| Post 2° Education e.g., NCE, Grade II, TT | 28(14.9) | 96(51.1) | 47(25.0) | 17(9.0) | 188(100%) | | |
| University/Polytechnic | 5(5.5) | 55(60.4) | 20(22.0) | 11(12.1) | 91(100%) | 106.439 | <0.001 |
| *ECCDE training* | | | | | | | |
| Yes | 14(10.6) | 58(43.9) | 41(31.1) | 19(14.4) | 132(100) | | |
| No | 71(30.9) | 121(52.6) | 29(12.6) | 9(3.9) | 230(100%) | 42.618 | <0.001 |

## Discussion

All functional preschool care facilities within the study area were owned and operated by private establishments just as it was observed in similar reports from other studies in Nigeria [17,18]. Situations as such thus highlights the interest preschool educational sector in the country has received from the private sector. Although a growing demand for early childhood care (ECC) and education coupled with an official provision made for such needs in the National Policy on Education FGN paper of 2004 [19] of Nigeria may have contributed to the attention. According to one of the study informants, preschool care facilities previously existed in some government owned schools, but that they all suffered attrition probably due to repeated and incessant industrial actions by teachers in the parent schools thus leaving majority

because of the perceived need to have male role models for the children.[21]. Regarding the caregiver's educational qualification, emphasis appeared placed more on general education at the expense of the much needed training in Early childhood Care and Education as only a few of the caregivers acquired the specialized form of training. This observation is consistent with report from a similar study[22]. Perhaps, profit maximization in the hands of the businessmen/women who dominate the educational sector may have played a role since having a higher caregiver staff qualification should confer more in terms of financial commitment on the part of the owners of such institutions[18].

Fortunately, only a few study participants took up the child care giver job by chance unlike the finding in a similar study conducted in Malaysia[20]

where preschool child care was not a first job option for the majority of the caregivers. Conceivably, a lack of preferred job options which was fingered as a likely cause in the study may also have a bearing in Nigerian preschools. In such cases, the right qualifications, in terms of specialized training, skill, passion, patience, creativity, dedication and motivation which were identified as qualities in a good preschool caregiver staff, may be rare. [14, 23, 24]. Furthermore, as many researchers believe that the developmental well-being of the child depends on the quality of care received, [24, 25] then as much as possible, the child care profession should be an exclusive preserve of those for whom it is a first job option.

The caregiver-pupil ratio of 1:10 observed in this study, is in line with the recommendations of the Nigerian National Policy on Education[26] and recommendations from other researchers.[19, 27] These reports had shown an agreement on a caregiver-pupil ratio of not exceeding 1:20 and 1:15 with assistants respectively for pre-primary classes depending on age for both public and private school settings. It was thus argued that the ratio was acceptable in order for a child to receive optimum care and attention and ensure that the caregivers themselves were not overworked. However, the actual ratio for each class in this study, was observed to reduce with lower age range of the children in each classroom as stated in the recommendations [19, 26, 27] and similar to the study conducted in Lagos [17] and other centres in Nigeria[19, 26, 27]. None of the schools visited in the study had a caregiver/child ratio of greater than 1:20.

The mean working hours of 8.2 hours per day which was observed in this study sums up to 41 hours per week. Similarly, in Malaysia, a mean working hour of 9.9 hours per day[20] was reported. Clearly, these two values were in contrast with average of 36 hours per week obtained in similar child care settings in developed countries like the United States of America [10]. Moreover, such values were undoubtedly higher than the maximum of 40 hours per week recommended world over, for workplace productivity and profit[28]. The Nigerian government, in line with this recommendation, had through a decree in 1974 stipulated payment for extra work done over the legal limit of 40 hours per week. Unfortunately, of the entire third of all the participants who had admitted to having worked for more than 8 hours per day (40hours per week) on the average, very few (16%) acknowledged a form of remuneration for the extra hours put in. This situation, in accordance with work place productivity and profit recommendations, may result in less efficiency and less productivity among preschool teachers.

Regarding remuneration in terms of monthly salary, the preschool caregivers' take home which stood between $41.7 and $97.2 was quite low unlike in United States of America where such jobs attract an average hourly payment of $11.47 with attendant benefits. Albeit, the Nigerian national minimum wage which currently stands at N18,000 naira ($50) per month, still translates to less than one dollar per hour. These types of remunerations may risk placing a family of three or more below the poverty line[29]. According to some researchers, job satisfaction and work place motivation towards effectively caring for and interacting with children is influenced not only by the caregivers' level of education and training but also by external factors, such as salary and other benefits such as welfare packages, training scholarships, nonfinancial support and incentives. [8, 12, 30, 31]

The importance and benefits of inclusion of oral health promotional activities in schools cannot be overemphasized [32-34]. In WHO health promoting school (HPS) models, it is established that the need to plan educational content and oral health practices to be offered in schools together with the professional development for teachers and collaboration with health professionals/educators/agencies are essential to the success of oral health promotion. It is believed that these measures aids the process of delivery by improving participation by school staff and sustaining their commitment[34]. Unfortunately, less than half of the informants (headmistresses) claimed to observe a regular health promotional programmes in their facilities. Worrisome still, was the fact that, a significant proportion of the few that observe a regular health promotional activities admitted to not having oral health contents included in such programmes.

**Limitation of study**

The study is subject to some limitations. First, the self-reported nature of the questionnaire tool may render some of the data subject to recall bias in reporting. Second, the cross-sectional design precludes causal inferences and only associations can be drawn. Finally, the samples were not selected from across the country, and so the findings may not be representative of caregivers in Nigeria. However, the strengths of the study include the fact that clusters of school were selected at random to ensure representativeness while using appropriate sampling strategy. The questionnaire was pilot tested to ensure

the quality and face validity of the data collection tool and key informant interview conducted as check for some claims. Overall, the study highlighted the sociodemographic and work related variables of Ibadan preschool caregivers.

## Conclusion

Preschool care outfits in the study area were majorly private owned. Though the majority of the caregiver staffs were well educated but few of them had the required specialized training. The monthly remuneration though associated non-financial benefits, was low. Many preschools centres did not observe a regular health promotion programme and a significant number of the few that observed it did not have oral health content

It is clear that the preschool caregivers' capacity to deliver quality education and skills towards optimal oral health of young children beginning at very early ages is critical, and that previous researches have linked these capacities with the caregiver's socio-demographic and work related profile.[11, 12] Therefore, efforts should be made at enhancing motivational factors among staffs in preschool work places.

There is a need to enhance some of the work conditions of the caregivers to bring these closer to the set standards in order to improve the delivery of oral health education at the preschool level. A re-vamping of the government owned but non-functional preschool facilities should be considered and these facilities should be set up as model preschools with more approving work conditions in accordance with standard practice for private investors to copy. Introduction of equal working conditions in terms of wages, benefits and professional development opportunities for similar qualifications across preschool settings should be considered by concerned regulatory bodies. The issue of minimum educational requirement for a preschool caregiver employment should be critically looked into in order to arrive at basic requirements. Specialized early childhood care training should be emphasized in addition to the other educational requirements. Similarly, the job should be a preferred or primary job option for applicants. These conditions would ensure, attraction of more competent hands for the job. The standard number of 8 work hours should be adhered to across board and forms of remuneration instituted for all extra hours above it. Health promotional programmes with inclusion of oral health contents should be observed as regular activities in all pre-school establishments and should be considered mandatory requirement in the curriculum.

## References


1. Youngblut JM, Brooten D, Lobar SL HL and MM. Child Care Use by Low-Income Single Mothers of Preschoolers born preterm versus those of Preschoolers born full term. J Pediatr Nurs. 2005;20(4):246–257.
2. Johnsen DC. The Preschool 'Passage'. An overview of dental health. Dent Clin North Am. 1995;39:695–707.
3. American Academy of Pediatrics., National Resource Center for Health and Safety in Child Care (U.S.)/ : Guidelines for Early Care and Education Programs. American Academy of Pediatrics; 2011. 579 p.
4. Tenenbaum IM. Oral Health Supplemental Curriculum Resource. Preschool children 3 to 4 years of age. The South Carolina Department of Education's Oral Health Curriculum Guide. 2003: 1-61.
5. Leal SC, Bezerra ACB and Toledo OA de. Effectiveness of teaching methods for toothbrushing in preschool children. Braz Dent J. 2002;13(2):133–136.
6. Damle SG, Patil A, Jain S, Damle D and Chopal N. Effectiveness of supervised toothbrushing and oral health education in improving oral hygiene status and practices of urban and rural school children: A comparative study. J Int Soc Prev Community Dent. 2014 Sep;4(3):175–181.
7. Choo A, Delac DM and Messer LB. Oral Hygiene Measures and Promotion: Review and Considerations. Aust Dent J. 2001 Sep;46(3):166–173.
8. Al-Qutop MY HH. Quality of Worklife Human Well-being Linkage: Integrated Conceptual Framework. Int J Bus Manag. 2011;6(8).193-205.
9. Helburn SW, Culkin ML and Morris JR CR. The cost, quality, and child outcomes study theoretical structure in child care centers: Technical report. Denver, CO: Center for Research in Economic and Social Policy, University of Colorado at D. 1995; 5-10.
10. Child Care Workers. Bureau of Labor Statistics, U.S. Department of Labor. Occupational Outlook Handbook, 2010-11 Edition [Internet]. Available from: http://www.bls.gov/ooh/Personal-Care-and-Service/Childcare-workers

11. Taguma M, Litjens I and Makowieck K. Chapter 2: What does Research Say ? What matters most?. Quality Matters in Early Childhood Education and Care. Source Ackerman Diam Powell Litjens Taguma. 2006; 33-36.
12. Shonkoff J. and Philips DA. From Neurons to Neighborhoods: The Science of Early Childhood Development. Washington DC. 2000. The National Academy Press; 9-42. Available from: http://doi.org/10.17226/9824.
13. Owen MT. Child care - Early education and care: Development of young children | Encyclopedia on Early Childhood Development [Internet]. [cited 2017 Mar 21]. Available from: http://www.child-encyclopedia.com/child-care-early-childhood-education-and-care/according-experts/child-care-and-development-young.
14. Chukwubikem PE. Resources for Early Childhood Education (E.C.E). Mediterr J Soc Sci. 2013;4(8):161–172.
15. Clarke-Stewart K. A., Vandell D. L., Burchinal M *et al.* Do regulable features of child-care homes affect children's development? Early Child Res Quarterly,. 2002;17(1):52–86.
16. Antunes L dos S, Antunes LAA and Corvino MPF. Educative practices and attitudes within the pre-school environment: evaluating the education professionals. Braz Oral Res. 2008 Dec;22(4):340–345.
17. Bidwell K and Watine L. Exploring Early Education Programs in Peri-urban Settings in Africa: Lagos, Nigeria. New Haven. CT, USA. 2013 Innovation for Poverty Action :10-14.
18. Sooter T. Early Childhood Education in Nigeria: Issues and Problems. J Educ Soc Res. 2013;3(5).
19. Federal Government of Nigeria (FGN). National Policy on Education. In: National Policy on Education. 2004.
20. Mani SA, Aziz AA, John J and Ismail NM. Knowledge, attitude and practice of oral health promoting factors among caretakers of children attending day-care centers in Kubang Kerian, Malaysia: a preliminary study. J Indian Soc Pedod Prev Dent. 2010;28(2):78–83.
21. Owen C. Men's Work? Changing the gender mix of the children and early years workforce. Facing the future Policy papers. The National Childcare Campaign. Day Care Trust. 2003;6:1–8.
22. Odiagbe SI. The National Minimum Standard on Early Child Care Centers (ECCC) in Nigeria and the Status of PrePrimary Education in Uhunmwode Local Government Area of Edo State. Am J Educ Res. 2015;3(4):399–405.
23. Howes C and Phillipsen LC P-FE. The consistency of perceived teacher-child relationships between preschool and kindergarten. J Sch Psychol. 2000;38:113–32.
24. Colker I J. Twelve characteristics of Effective childhood Teacher. National Association for the education of young children. beyond the journal. Young Child web. 2008;12:1–6.
25. Price SS VD. Dental Health Issues in Child-Care Centers. Journ Dent Hyg summer. 1999;73(3):135–140.
26. Obayan PAI, Nwangwu R, Fagbulu A, *et al.* Nigeria Education Sector Diagnosis. (Condensed version). A framework for Re-engineering the Education Sector. Education Sector analysis unit of Federal Ministry of Education. In: National Policy Provision on Education. 2005; 33–50.
27. Ajayi H O. Early Childhood Education in Nigeria: A reality or a mirage? Contemp Issues Early Childhood,. 2008;9(4):375–380.
28. Robinson S. Why We Have to Go Back to a 40-Hour Work Week to Keep Our Sanity | Alternet [Internet]. Alternet Vision Newsletter. 2012 [cited 2017 Apr 5]. Available from: http://www.alternet.org/story/154518/why_we_have_to_go_back_to_a_40-hour_work_week_to_keep_our_sanity
29. Akinwale AA. Precarious Working Cond itions and Exploitation of Workers in the Nigerian Informal Economy. Soc Sci DILIMAN. 2014;10(1):117–146.
30. Singh P and Masters WA. Impact of caregiver incentives on child health: Evidence from an experiment with Anganwadi workers in India. 2017.
31. Huntsman L. Determinants of quality in child care: A review of the research evidence. Centre for Parenting & Research Service System Development Division NSW Department of Community Services. 2008.
32. Garbin CAS, Garbin AJI and Dos Santos AT LD. Oral health education in schools: promoting health agents. Int J Dent Hyg. 2009;15(3):212–216.
33. American Academy of Paediactric Dentists. Policy on Oral Health in Child Care Centres. Vol. 37, Oral health Policies. Reference Manual. 2011.
34. Macnab AJ. Children's Oral Health: The Opportunity for Improvement Using the WHO Health Promoting School Model. Adv Public Heal. 2015 Jan 8;2015:1–6.