

INCIDENCE OF ORAL COMMUNICATION PROBLEMS IN PATIENTS AT KATH, GHANA

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ABSTRACT

The data of 623 patients who reported for management of oral communication disorders at the Komfo Anokye Teaching Hospital (KATH) in Kumasi, Ghana within a period of four years were retrospectively analysed and studied in respect of differences in the type of problem, age group, sex and geographical location.

Oral communication disorders affected all age groups and had high incidence in young children, infants and males. Decoding-encoding difficulty was prevalent followed by encoding difficulty, faulty encoding and loss of ability to decode and/or encode speech. Majority of the patients came from the Ashanti Region followed by stations around Kumasi, areas in Kumasi central and finally, other Regions of Ghana. The results are discussed.

Keywords: *Oral communication disorders, oral language disorders, speech disorders.*

INTRODUCTION

All good clinicians will, to some extent, investigate the speech conditions of their own communities (11). Incidentally, speech act is on a continuum and compartmentalising it into discrete units is impossible, because of that, areas of speech impairment do not occur in isolation, eg. grammatical, semantic, impressive and pragmatic, deficits [3]. The word speech itself is very often used broadly to connote oral or verbal communication, but in clinical parlance, it is used restrictively.

Speech forms part of oral language and the two are component parts of oral communication

MEDICINE

While speech concentrates on the process of the act or how the message is delivered, oral language concerns itself with the content of the message from various perspectives (4, 5). Speech disorders are more easily classified into acceptable units than language disorders. Some clinicians of the latter often operate in terms of etiological classification but others consider that causation is irrelevant to the study of speech and language disorders (1). Nevertheless, the search for a more acceptable system of classification based on speech behaviour still continues.

In this discussion of identifying disorders of speech or language, Millisen (12) warned against the use of data relevant to etiology but favoured those relevant to the nature of the faulty speech behaviour. He wrote the following: "All clients should be assigned to one of the following four groups:

1. Those who neither decode speech nor encode it as a means of communication.
2. Those who do decode speech but do not encode it as a means of communication.
3. Those who do decode speech and do encode it in expressing themselves but have a defective encoding process.
4. Those who have lost some of their ability to decode speech and/or encode it as a means of expression."

Communication disorders in the general population is estimated to be 5 to 10 percent (11). They are found in all age groups, socio-economic groups and racial groups and also, in



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both sexes (7). Invariably, in studies of school population "all workers report more males than females for all ages levels" (11). Ghana has not done any study in communication disorders in the general population and one would want to know what the position is in Ghana too.

Finally, the study focused on the geographical distribution of the clients so that the result would be used for future developmental and expanded programmes.

MATERIALS AND METHODS

Records of 623 clients with age range of 9 months to 86 years who presented communication problems at the Hearing Assessment Centre at KATH, Kumasi, for the first four years (1994 – 1997) of the establishment of a language and speech unit were retrospectively analysed as regards differences in age, sex, type of problem and residential area.

Age and Sex

Following the popular stages of human development by many psychologists (9, 10, 19) the 623 subjects were grouped as follows to find out the distribution:

| | |
|-----------------|--------------------|
| Infancy | 0 – 2 years |
| Early Childhood | 6 – 12 years |
| Late childhood | 13 – 20 years |
| Adulthood | 21 years and above |

Furthermore, the clients were grouped according to sex to find out the ratio.

Type of Problem and Geographical Distribution

Millisen's (12) classified groups of speech and language disorders, referred to earlier on, were respectively simplified thus and clients were assigned to them.

1. Non-Decoders or Encoders of Speech (NDES)
2. Decoders but Non-Encoders of Speech (DNES)
3. Decoders but Defective Encoders of Speech

(DDES)

4. Loss of Ability to Decode or Encode Speech (LADES)

Subjects in number 3 above were, also, subdivided into the three main speech problems of Articulation, Voice and Dysfluency to study the result.

Areas of residence demarcated for the study were the following:

1. Kumasi Central (KC): The area including and extending from the Central Market enclosed by major roads (Fig. 1).
2. Kumasi Metropolis (KM): The area between the major roads enclosing KC and the town planning area boundary (Fig. 1).
3. Ashanti Region (AR): Other places outside the town planning area boundary but within AR (Fig. 2).
4. Other Regions (OR): Other places outside the town planning area boundary but within AR (Fig. 2)
5. Other Countries (OC): Places outside Ghana.

Data was analysed by descriptive statistical methods.

RESULTS

Age

Communication disorders affected all age groups (Table 1). Early childhood period generally recorded the largest number of clients each year followed by infancy, Late childhood, Adulthood and Adolescence. The only 4 exceptions noted were in 1994 where Infancy and Late childhood recorded the same number (30/26.8%) and Adolescence had one more member than Adulthood. In 1995 too, Early childhood and Infancy recorded the same number (62/38.0%) and Adolescence and Adulthood also recorded the same number (5.3, 1%).

Sex

The sex distribution of clients in each age group each year is presented in Table 2. In all groups, males outnumbered females, each year. The only exception noted was in Adulthood where in 1996 males and females were 2 and 3 respectively. In terms of ratio of males to females for the whole period, the result was 1.7: 1.

Type of Communication Problem

The diagnostic groups identified are presented in Table 3. NDES recorded the largest number of clients each year except in 1994 where it had a smaller number than DNES; NDES was followed by DNES, DDES and LADES. When DDES was subdivided into its various speech groups, Articulation had 10.4% followed by Dysfluency, 3.2% and lastly, Voice, 2.7%.

Residential Area

The number of clients from each demarcated geographical area is presented in Table 4. The largest number of clients each year came from AR except in 1994 where it had less than KM which was the second largest, followed by KC, OR and OC.

DISCUSSION

In this study, the result of oral communication problems as related to age (Table 1) indicates that majority of parents became much alarmed and began seriously looking for diagnostic help for their children's speech inadequacies from the age of three years. According to Myklebust [13] "if the child's disability is marked parents will seek diagnostic assistance soon after the age at which ability to use speech is expected, usually between the ages of one to three years". While age three years was the cut off point in Myklebust's statement, it became the entry point for early childhood period which recorded the largest number of clients in this study. What this situation means is that, majority of the cases in this study were unduly delayed before being reported for diagnostic assistance from age three years and beyond.

According to parents' reports, while some of them did not know where to go for help, others were unduly delayed by the assurances of some medical practitioners that language would emerge naturally later, there were a few others, too, who delayed because of their pursuit for spiritual treatment that never materialised. Consequently, pediatricians, nurses, day-care and nursery school teachers, being the early professionals to attend to the child and parents themselves need more education to be able to identify and refer the problem early enough to the appropriate professionals. Ruben (20) explains it simply that "..... optimal care is dependent on early recognition and intervention". Early recognition is related to the time of onset of the problem. If the problem occurred pre-lingually, then it needs to be identified before age 3 years but if it occurred Post-lingually, then it must be as soon as possible. Additionally, the clinic itself must use the mass media to address the public on this important human issue. However, the total figures in Table 1 show 36.6% increase from 1994 to 1995. In 1996, there was a decrease of 15.3%. Then in 1997, there was a tremendous increase of 52.2%. The rise in figures was an indication of how the speech-language clinic was becoming popular.

As regards sex differences (Table 2), the study supported the findings that more males have communication problems than females (11). Furthermore, even with phonological consideration alone, a review of the literature (17, 21, 23) shows that females frequently demonstrate better articulation skills than males, and males are more frequently identified as having articulation problems than females (22).

Concerning the type of communication problem, articulation problems have long been recognised as the most prevalent of all the disorders of speech (18). Perkins (16) estimated that almost 75% of all communicative disorders were disorders of articulation. Actually, he gave about 12.5% to language disorders and an equal percentage to both stuttering and voice disorders. Based on this preponderance of articulation disorders in Perkins' estimation, Weiss, Lillywhite and Gordon (22) proclaimed those

disorders as the cause of more human distress and suffering than any other communicative disorder.

In a further study of the prevalence of communication disorders among school-age population, Hull, Mielke, Timmou, and Willeford (8) reported that two percent of the school-age population evidenced "extreme deviation" in their articulatory behaviour, they also found that articulation deviations were the most prevalent type of communication disorder. As a result, Bernthel and Bankson (2) concluded by saying that these prevalence figures would suggest, speech language pathologists typically have many individuals with articulation disorders in their caseload. They estimated one-third or more of a speech clinician's caseload might be made up of individuals with articulation impairments. Millisen (11), however, alerted that estimates of incidence of speech defects in the general population were few and probably inaccurate, but that those in the school population were more readily available.

This study, done at a hospital setting and open to the general public recorded 43.2% of clients, mostly children under six years, who could neither understand nor produce speech (NDES). The second group of similar age range understood speech (partly or totally) but could not produce it (DNES). Criterion for selection into the second group was ability to understand few stimulus words spoken verbally and identifying them (e.g. common plastic objects and body parts). The two groups together constituted 76%. This number was made up of 25.5% deaf children, 4.7% mentally handicapped children, 2.7% cerebral palsied children and the rest, 43.1%, might be termed as aphasic children (14, 15) including a few autistic ones. The etiological groups mentioned were identified by specialists in the various fields. Speech problems (DDES), in general, constituted 16.4% and the composition was: articulation 10.3%, dysfluency 3.4% and voice 2.7%.

What this study has exposed is the high rate of aphasic and deaf children who need early attention in Ghana. Regarding the most common communication problem in a speech clinician's

caseload, it appears different clinical settings coupled with different age groups would get different communication problems. For example, in an institution for adolescent students, it is possible to get more voice problems in a caseload than other speech problems.

Concerning geographical distribution of clients, nearly one-half of the clients (47.6%) came from the area managed by Kumasi Metropolitan Assembly (KC and KM). Clients from this area could, where necessary, respond to daily or weekly therapy programmes. The single largest number was from AR. Some clients in this area were quite close to the centre but others were vary far from it as well as those from OR. Some of the problems noted were: long distant travelling, accommodation, high transportation cost and, in some cases, linguistic differences between clinician and clients. These problems worked against regular and effective therapy.

In respect of clients from other countries, the only one recorded was incidentally detected when the parent mentioned a mother-tongue unknown to the therapist in Ghana. Foreigners living in Ghana were not considered as coming from outside. Some Ghanaian children who attended the clinic were sent home from abroad; others came on holidays with their parents, but all these were not considered as outsiders. In order to alleviate the problems raised above, Ghana has to train more Speech Therapists and attach a hearing and speech clinic to ENT Departments in the regions and still better, to those in the districts. Such a move would contribute enormously to early identification and management of oral communication problems in Ghana.

In conclusion, oral communication problems in this study affected all age groups and had high incidence in early childhood, infancy and males. The largest diagnostic group was NDES followed by DNES, DDES and LADES. The predominant speech problem was articulation followed by dystfluency and voice. A large number of clients lived in AR followed by KM, KC, OR and OC.

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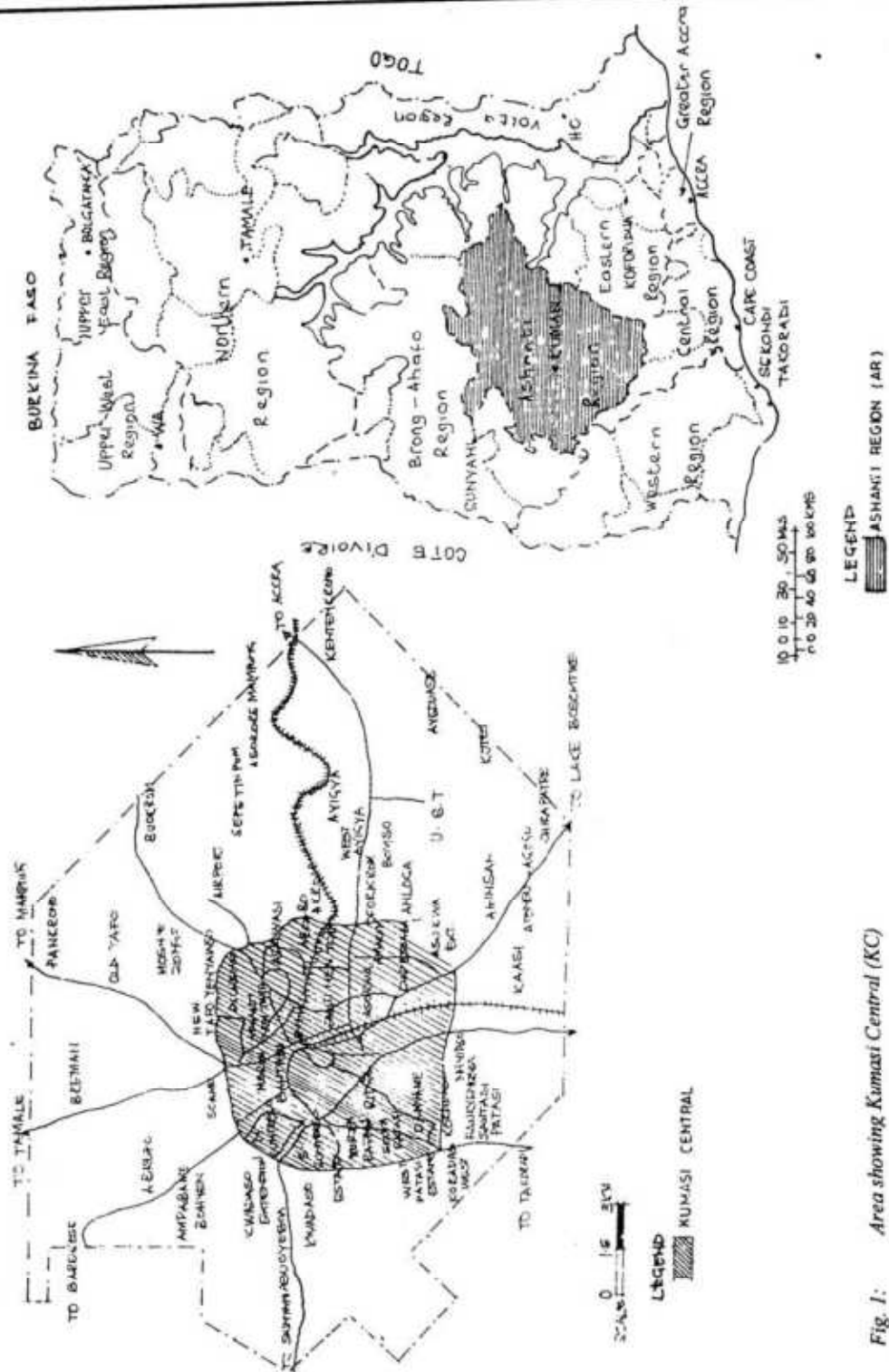


Fig. 1: Area showing Kumasi Central (KC) and Kumasi Metropolitan (KM)

Fig. 2 : Map of Ghana Showing Ashanti Region (AR) and Other regions (OR)

Table 1. Number and Percentage of Clients in Age Groups for each Year

| Age/Years | 1994 | | 1995 | | 1996 | | 1997 | | Total | % |
|--------------|------------|--------------|------------|--------------|------------|--------------|------------|--------------|------------|--------------|
| | No | % | No | % | No | % | No | % | | |
| 0-2 | 30 | 26.8 | 62 | 38.0 | 45 | 32.6 | 77 | 36.7 | 214 | 34.3 |
| 3-5 | 47 | 42.0 | 62 | 38.0 | 58 | 42.0 | 90 | 42.9 | 257 | 41.3 |
| 6-12 | 30 | 26.8 | 29 | 17.8 | 27 | 19.6 | 27 | 12.9 | 113 | 18.1 |
| 13-20 | 3 | 2.7 | 5 | 3.1 | 3 | 2.2 | 5 | 2.4 | 16 | 2.6 |
| 21+ | 2 | 1.8 | 5 | 3.1 | 5 | 3.6 | 11 | 5.2 | 23 | 3.7 |
| Total | 112 | 100.1 | 163 | 100.0 | 138 | 100.0 | 210 | 100.1 | 623 | 100.0 |

Table 2: Sex Distribution of Clients in Age Groups for each Year

| Age / Years | Sex | 1994 | 1995 | 1996 | 1997 | Total | % | | | | |
|----------------|----------|-----------|-------------|------------|-------------|-----------|-------------|------------|-------------|------------|-------------|
| 0-2 | M | 21 | 42 | 28 | 48 | 139 | 22.3 | | | | |
| | F | 9 | 20 | 17 | 29 | 75 | 12.0 | | | | |
| 3-5 | M | 27 | 35 | 42 | 49 | 153 | 24.6 | | | | |
| | F | 20 | 27 | 16 | 41 | 104 | 16.7 | | | | |
| 6-12 | M | 27 | 16 | 13 | 17 | 69 | 11.1 | | | | |
| | F | 7 | 13 | 14 | 10 | 44 | 7.1 | | | | |
| 13-20 | M | 3 | 4 | 3 | 3 | 13 | 2.1 | | | | |
| | F | 0 | 1 | 0 | 2 | 3 | 0.5 | | | | |
| 21+ | M | 2 | 3 | 2 | 8 | 15 | 2.4 | | | | |
| | F | 0 | 2 | 3 | 3 | 8 | 1.3 | | | | |
| Total % | M | 76 | 67.9 | 100 | 61.3 | 88 | 63.8 | 125 | 59.5 | 389 | 62.5 |
| | F | 36 | 32.1 | 63 | 38.7 | 50 | 36.2 | 85 | 40.5 | 234 | 37.6 |

Table 3: Distribution of Clients According to Communication Problems

| Diagnostic Group | 1994 | 1995 | 1996 | 1997 | Total | % |
|------------------|------------|------------|------------|------------|------------|------------|
| NDES | 38 | 72 | 63 | 96 | 269 | 43.2 |
| DNES | 51 | 58 | 43 | 52 | 204 | 32.7 |
| DDES | 15 | 28 | 24 | 35 | 102 | 16.4 |
| LADDS | 8 | 5 | 8 | 27 | 48 | 7.7 |
| Total | 112 | 163 | 138 | 210 | 623 | 100 |

Table 4: *Geographical Distribution of Clients (Residential Areas)*

| Residential Area | 1994 | 1995 | 1996 | 1997 | Total | % |
|------------------|------------|------------|------------|------------|------------|------------|
| KC | 25 | 31 | 30 | 38 | 124 | 19.9 |
| KM | 45 | 43 | 32 | 53 | 173 | 27.7 |
| AR | 29 | 68 | 53 | 79 | 229 | 36.8 |
| OR | 13 | 21 | 23 | 39 | 96 | 15.4 |
| OC | | | - | 1 | 1 | 0.2 |
| Total | 112 | 163 | 138 | 210 | 623 | 100 |