

Nutritional Assessment of Refugees at a Refugee Camp

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Abstract

Forced migration/refugee status is as old as man, ever increasing and literature is sparse when searching for references regarding nutritional assessment among this very important population. We aimed at making an assessment of the nutritional status among refugees at Oru refugee camp, Nigeria. Subjects were adult males and females, 100 in two groups: local residents and refugees that just moved into camp within the last 6 months. A questionnaire was administered and venous blood was collected from each volunteer, centrifuged and stored at -20°C until analysis at the chemical pathology departmental laboratory of Ambrose Alli University, Ekpoma. Mean values of albumin in refugees and residents are respectively; 34 ± 3.5 Vs 36g/L . Refugees have lower albumin level. It is recommended that protein rich foods should be provided at refugee camps.

Keywords: Refugees, Nutrition, Protein, Camp, Nigeria.

1. INTRODUCTION

The first and second world wars of 1914-1918, 1939-1945 respectively brought untold hardship to the entire human kind with millions of deaths left in the throes of the wars directly and several millions indirectly. Many more millions were displaced within (internally displaced person, IDPs) and or without national borders (refugees) primarily all over Europe with extensions or ripples in the colonies of European nations.

Thus in 1949, the United Nations, the agency that replaced the league of nations officially recognized refugee status and put in place measures aimed at ameliorating the problem faced by these groups of individuals. Much later, another group the internally displaced peoples (IDPs) were recognized (Korn DA, 1988).

Much have been said and done about these two groups concerning social, economic, health, etc. There is an increasing interest in what happens to the nutritional status of these refugees in flight and at the camp.

This work is therefore aimed at studying the effects of forced migration/displacements on the nutritional status of such individual refugees or IDPs.

2. SUBJECTS AND METHOD

2.1: Background: Refugee status is riddled with many uncertainties. One of them is the problem of food supply. Food is usually quantitatively and qualitatively in short supply. Food shortage from famine and drought are often times cause for flight. This study is therefore aimed at assessing the nutritional status of the refugees at Oru refugee camp.

2.2: Sampling: The nominal list of the population revealed a total of three thousand adults above 18 years of age. Out of these, only three hundred moved in within the last six months. The list consists of all nationalities one after the other showing lists of families as well as that of unaccompanied young children. Housing is on household basis and singles as well as unaccompanied children are housed in dormitories depending on the sex. Only those refugees that came in within the last six months were studied because those that have stayed longer might have adjusted to the environment. Simple random sampling method was used by employing use of ballot papers for the study population (300) out of which 100 were sampled (ie 200 'no' and 100 'yes'), the ballot box was taken to their residences as identified from above. Controls were drawn from the host community of Oru made up of a population of about fifty thousand (50,000) people by multistage sampling and of same size as the subjects. From the five wards in the town, one was chosen for study by random sampling (1 'Yes', 4 'No') and within the ward odd numbered houses on each street were approached for sampling. In each house, a male and a female were studied by simply finding out the total number of eligible adults and writing out 'NO' for all but one 'YES'. This was continued until the total numbers of samples (100) were obtained.

2.3: Ethical consideration: Ethical clearance was obtained from appropriate authorities; written and oral consent were obtained from subjects. Subjects were adults (18-55years) males and females, 100 in each group. These were initially contacted through their representatives and the camp commandant.

2.4: Data collection, sample collection and analysis: Questionnaire on demography and refugee status was administered by the investigator (interviewer administered). Venous blood (5mls) was collected in fasting state and emptied into the heparinised bottle. Centrifugation was done within an hour at 3000rpm for 5minutes and plasma thus collected was stored at -20°C until all the samples were collected. Analysis was done at the Ambrose Alli University Chemical Pathology department Laboratory, Ekpoma. Statistical analysis was by Microsoft Excel software package.

2.5: Limitation of study: The study would be best suited for displaced persons and refugees in flight or refugees just arriving at the camp. The subjects here are camp based and had to be limited to periods not more than six months stay in the camp.

3. RESULT

See tables and figures below

4. DISCUSSION

The studied populations are comparable since the respondents are from the same locality while the difference is only in the circumstances warranting each population's presence, nationalities and their life experience (Table 3) Albumin levels in both populations also agree with those of rcpa (RCPA, 2014) 35-47g/L and rcp 30-50g/L. There is a significant difference between the mean values of albumin in both populations, $p > 0.05$ (Table 4). When compared with those of Baron, the mean values of Albumin in refugees population is much less than the lower reference range (RCP, 2013, Baron DN, 1988) (Table 1, 2). Albumin level is a measure of the nutritional status of an individual or a population, the result here shows that compared with the local residents, refugees are less nourished at least in the protein(amino acid) content of their meal. Since immunoglobulins (immunity) derive from proteins, this explains why infections are commoner among refugees. There is an association between age and albumin level of the local Oru residents whereas there is none in the refugee population (fig2,3).

There is evident stability in the local residents while that of the refugees is disturbed most likely because of hormonal imbalance from flight and settlement.

Albumin levels in the refugee population (Table 2) had the highest frequency between 30-34g/L (56%) and 30-39g/L (87%) while the local resident population had 43% each in 30-34g/L and 35g/L of albumin. Significant enough is the finding of hypoalbuminaemia of 29.29g/L in 3 refugees. It is important to note that some of the refugees fled because of famine and drought (Table 5).

The age distribution of the two populations is similar (Tables 3). It is however disturbing that 79% of the refugee population are active adults between 20-39years, and 95% between 20-49years. This shows how devastating the effect of forced migration can be on the community (Odiaka P, 2005, WHO, 1995). This population can grow crops like their host community or rear animals rich in protein if they were not displaced (fig 1).

The finding here is in agreement with that of Collins et al while assessing adult nutritional status in emergency affected populations (Collins S, Duffield A, Myatt M, 2000). Schofield and Mason in 1994 delivered a paper in Geneva about evaluating energy adequacy of rations provided to refugees and displaced persons in Africa (Schofield C Mason J, 1994). This stresses the need for continued interest in what refugees and IDPs are fed.

Vesga and Watson, in their paper titled "who is nutritionally vulnerable in Bosnia-Herzegovina?" found out the vulnerable group (Vesga J, Watson F, 1995). It is however known that the very young, aged, the infirm and females especially when pregnant or nursing are particularly vulnerable in all ramifications of conflict and displacement (Adebayo KJ, 2014).

This study investigated the supposedly advantaged group in conflict and the finding here may be a tip of the iceberg of what the derangement in the vulnerable group will be.

5. CONCLUSION

This study has shown how Albumin is affected in conflict situations. Since Albumin is much affected, efforts should be geared towards fortification of the meals and rations being provided at refugee camps. Towards this end too, there should be in place some schemes that can be implemented in the camp to provide food nutritional supplement. These include agriculture particularly planting of legumes, poultry, snail and rabbit rearing.

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Table 1. The distribution of Albumin in the local Oru resident population.

Albumin level	Frequency	Cum. Frequency	Percentage
30-34	42	42	43
35-39	42	84	43
40-44	14	98	14
45-49	0	0	0

From the table above, 86% of local residents have albumin levels of 30-39g/L with only 14% being within 40-44g/L.

Table 2. The distribution of albumin in the refugee population of Oru.

Albumin level	Frequency	Cum. Frequency	%
25-29	3	3	3
30-34	52	55	56
35-39	29	84	31
40-44	8	92	9
45-49	1	93	1

56% of the refugee population had albumin level between 30-34g/L with 3% falling in the 25-29g/L range.

Table 3. Age distribution of the refugee population at Oru.

Age	Frequency	Cum. Frequency	Percentage
10-19	1	1	1
20-29	33	34	36
30-39	40	74	43
40-49	15	89	16
50-59	4	93	4

This table shows that the vast majority (79%) of the refugee population are under 40years of age and 95% of them being under 50years of age.

Table 4. The distribution of age and Albumin in the refugees and local Oru residents.

Population	No	M/F	Age	2SD	Alb	2SD
Refugees	93	56/37	32.9	8.5	33.9	3.5
Residents	98	50/48	32.8	6.4	35.5	3.4

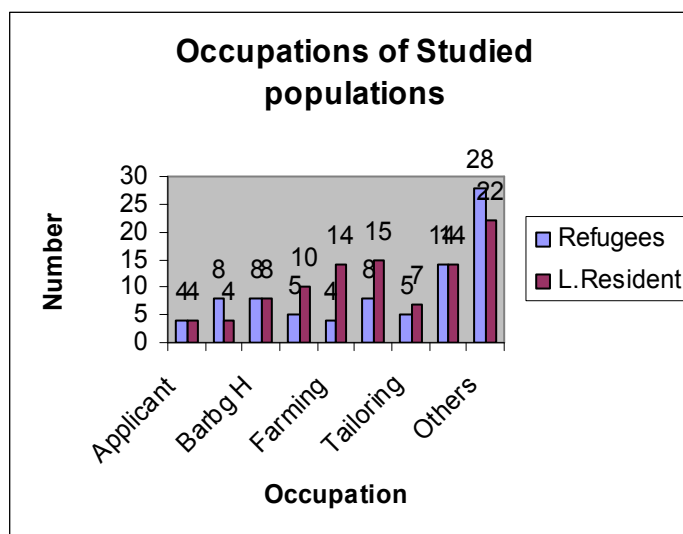
Key: M = males, F = females, SD = standard deviation,

Table 5. shows the reason/cause of displacement of the refugees from their individual countries places of abode.

Reason for flight	Frequency	Percentage
War	80	86
Famine	9	10
Drought	1	1
Persecution	2	2
Genocide	1	1
Economics/voluntary	0	0

This table shows that 86% of the studied refugee population was displaced by war, 10% by famine and none voluntarily or for economic reason.

Fig.1: The histogram showing the occupations of the studied populations.



Farming is the predominant occupation of both populations. Included in others here are occupations like clergy, banking, footballing, athletics, catering, painting and nursing. Barbing included hairdressing and beautician.

Fig.2: Association of age and Albumin in refugee population.

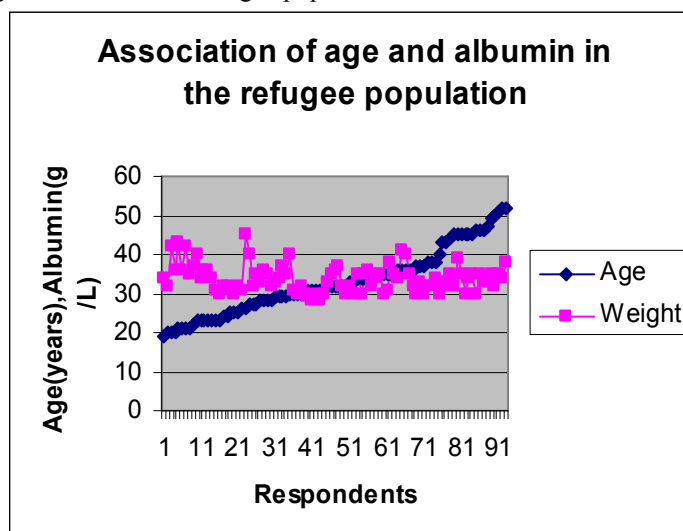
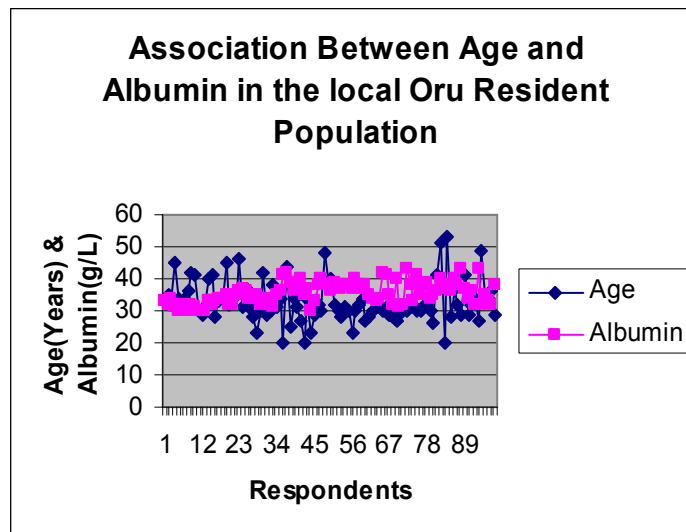


Fig.3: Association between age and albumin in the local Oru residents.



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