

The rapid change in the double burden of malnutrition in a protracted refugee context: Comparison of two cross-sectional nutrition surveys of Saharawi refugees living in camps in Algeria

Introduction

Vulnerable households experiencing epidemiological transitions are often concomitantly affected by under-nutrition and overweight. This double burden was shown to affect refugee populations. Yet, it is unknown how rapidly this double burden can change in a humanitarian context. This study aimed to assess the change in the double burden of malnutrition among Saharawi refugees living in a protracted emergency.

Methods

Two stratified, cluster nutrition surveys were implemented between Oct-Nov in 2010 and 2016 in the Saharawi refugee camps, located near Tindouf, southwest Algeria. The 2010 survey had four strata, but given population growth and movement, the 2016 survey had five strata. We surveyed 2,041 households in 2010 and 2,100 in 2016.

For children aged 6-59 months we obtained weight, length/height, and oedema data. Anthropometric data were transformed to anthropometric indicators weight-for-length/height (WHZ), weight-for-age (WAZ) and height-for-age (HAZ) z-scores using the 2006 WHO growth standards. We defined acute malnutrition as WHZ<-2 and/or oedema, stunting as HAZ<-2, underweight as WAZ<-2, and overweight as WHZ>2.

For women of childbearing age (15-49 years), who reported not been pregnant or lactating children aged <6 months, we obtained weight and height data. We calculated body mass index (BMI). We estimated HAZ using the 2007 WHO growth references assuming a maximum age of 19 years. We defined stunting as HAZ<-2, underweight as BMI<18.5, and overweight as BMI≥25.

To quantify the proportion of households with a double burden of malnutrition, we selected households that have at least two members surveyed. Households were classified as (1) undernourished if they contained under-nutrition cases in women (stunting or underweight) or children (acute malnutrition, stunting, underweight); (2) overweight if they contained overweight cases in women or children; and (3) double burden if they contained both cases.

Results

The table shows the individual and household prevalences of different nutrition indicators. The main change observed between 2010 and 2016 was that in children all under-nutrition indicators decreased significantly except overweight; in women, under-nutrition indicators decreased significantly, whilst overweight increased significantly.

For households, the prevalence of households with members suffering under-nutrition decreased significantly whilst households with overweight members increased significantly. Overall, the proportion of households suffering the double burden of malnutrition increased significantly. In 2010, 49.4% of households with an undernourished member had also an overweight member. In 2016, this proportion has increased to 78.5%. Conversely, in 2010 and 2016, 45.0% and 42.5% of households with an overweight member had also an under-nourished member.

Conclusions

The Saharawi refugee camps have experienced a significant change in their nutrition profile in six years, and now most households are affected by overweight, almost half are still affected by under-nutrition and one third experience a double burden. Our results highlight how rapidly an overweight prevalence can increase in a protracted refugee context. Research is needed to understand the drivers behind these changes to enact adequate interventions.

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