Public Health Nutrition: 16(4), 571–572 doi:10.1017/S1368980013000372

Editorial

The nutrition transition: the same, but different

Whether it is due to the invisible hand of commodity markets extending the reach of multinational food corporations or the downstream determinants of food availability and accessibility at the household level, the global nutrition transition is being fuelled by a number of common factors[1,2].

Truly disturbing, increasing rates of obesity and diabetes, not to mention a host of other nutrition-related non-communicable diseases (NR-NCD), are universal and stem largely from the transition from traditional to contemporary patterns of food consumption and physical activity[3,4]. While the economic burden and human cost of these illnesses can hardly be overstated[5,6], little has been done to address the fundamental factors that drive population changes in diet. The 'Western diet' has moved also into the North, South and East. NR-NCD, once seen as a burden of the affluent classes, now impact every socio-economic group at every level of macro-economic development. Disparities within groups, of course, present their own inherent challenges. Indeed, in many parts of the world, the nutrition transition seems to disproportionately impact the poorest segments of society[1,7]. Economic policies, industry interests and entrenched lifestyle patterns keep the 'behavioural change' pattern of the nutrition transition (the change from the processed food/non-traditional diet to a healthier diet such as that of some in industrialized countries with higher socio-economic status) out of reach for many in society[8,9]. Newer and better scientific paradigms to understand the drivers of the nutrition transition in the context of public health are urgently needed.

In this issue of *Public Health Nutrition*, we offer five articles that implicate the nutrition transition as a fundamental determinant of public health change across the world. Although these papers examine data from several regions, common threads appear throughout. Van Hook and colleagues analyse ninety-five nationally representative health and nutrition surveys between 1990 and 2008 from thirty-three less-developed countries[10]. They examine the associations of socio-economic status and country-level factors with obesity among more than a quarter of a million children and their mothers. Finding that maternal obesity is positively associated with economic development, they write that the 'benefits of increased income … may be offset by reduced access to locally produced nutrition food', positing that 'income increases at the national level may be associated with worse child nutrition'. We encourage you to contemplate this idea while reading the other four articles in this section. The nutrition transition, driven by powerful economic and political interests worldwide, manifests itself distinctly in each region it touches. The less powerful, but no less significant, forces of micro-economics and local culture shape the outcomes of the transition in unique ways, as the other four articles in this section aptly describe.

Belfki and colleagues examine data from the Transition and Health Impact in North Africa (TAHINA) project, highlighting the prevalence of metabolic syndrome as a growing problem in Tunisia, especially in urban areas[11]. In stratified analyses, the odds for metabolic syndrome in the most educated group are higher for men but lower for women. Pereko and colleagues describe the prevalence of overweight and obesity in the urban Cape Coast Metropolis of Ghana[12]. In high- and low-education groups, they show a prevalence of overweight and obesity of 35·9% and 22·1%, respectively. Somewhat paradoxically to that finding, even though females earn about one-third less in monthly income than males, they have 7·7 higher odds (95% CI 3·6, 16·4) for overweight/obesity. Zaghloul and colleagues find evidence for the continuing impact of the nutrition transition in a nationally representative sample of Kuwait[13]. Their findings that the great majority of Kuwaiti adults are overweight (33·1%) or obese (43·1%) are shocking, but not surprising, given that men and women aged 19–50 years consume about 30% more energy relative to their estimated energy requirements. The prevalence of obesity in adult women is almost double that found in adult men. Lastly, in a thought-provoking qualitative study by Banwell and colleagues, the evolving food retail environment in Thailand is examined[14]. They compare traditional 'fresh markets' in four Thai regions with the newer 'supermarkets' that have begun to spring up, even in more rural, agriculturally rich regions. This hallmark of the nutrition transition brings with it benefits related to diversity of foods available, but tends to have consequences related to the larger context of local food availability and access, in addition to a host of other factors. For example, the authors astutely describe the impact of encroaching 'supermarkets' in terms of loss of livelihood, especially for women, who tend to be stallholders of the 'fresh markets' or wholesalers. Moreover, the authors point to greater implications for loss of social capital related to social networks rooted in traditional rituals and relationships. These characteristics

are clearly context-specific and are difficult to measure using conventional analytical methods.

These studies reveal several common, perhaps universal, threads in the complex tapestry that is the nutrition transition. Notably, sex disparities in NR-NCD outcomes feature prominently. This seems to suggest that men and women respond differently to the same nutritional environments. It may also imply that body size and shape have gender-specific symbolic meanings in different contexts, which influence societal preferences for relative thinness or fatness. Research into socio-cultural traditions, beliefs or values that dictate eating behaviour and body morphology, and how these change with social and economic transitions, would be a welcome addition to the literature.

In addition, these studies bring micro-economics to the forefront, but in the framework of macro-economic development, confirming that context really is everything. As such, we also welcome studies contextualizing socio-economic status of households in the larger sphere of regional or national development. Examinations of food industry practices vis-à-vis their influence on food environments and availability or accessibility of energy-dense and ultra-processed foods are currently lacking[15,16]. This line of research, focusing on the socio-economic dynamics of the nutrition transition within middle- and lower-income countries, would help to clarify the impact of household-level economics on food access within the higher levels of economic change and food availability[7,17]. Finally, we suggest that researchers would do well to take advantage of natural experiments within changing political and economic climates that might impact public health nutrition, such as new food or agricultural policies[18,19].

In sum, the fundamental elements of the nutrition transition are similar across the globe. We seek to understand its impacts and intend to intervene against its negative consequences in the manners most consistent with the public and social good. We call for new and creative paradigms of thinking that will help advance the field of public health nutrition as the nutrition transition pushes forward. New research, more international collaborations and fresh thinking: the same, but different.

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