



Development of nutritional studies in China

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Driven by rapid economic growth and drastic shifts in diets, China has experienced an increased burden of nutrition-related diseases. Take the commonly reported diseases-like type 2 diabetes mellitus, cardiovascular disease, and hypertension for example, their prevalence increased approximately 4–12-folds in the past decades and account for 70% of disability-adjusted life-years lost and 80% of deaths in China [1–4]. Along with these changes, the focus of nutritional researches has transformed from food security and availability to better nutrition and health. Consider the significant growth in nutritional researches that investigate dietary transitions and diseases burdens; or nutritional risks in vulnerable populations; or changes in dietary intakes and food environment between urban and rural areas; or the development of nutrition policies, the aim of this special issue is to include representative studies that provide a timely discussion on important topics in nutrition, especially those with direct translation to public health and disease prevention.

Due to urbanization, nutrition transition in China has been substantial. Dietary pattern has undergone rapid westernization that changes the traditional dietary pattern, characterized as high carbohydrates and low protein and fat intakes, to the western dietary pattern by increasing consumption of animal proteins, dairy products, refined grains [5], and sugar sweetened beverages [6]. Similar to Western countries, the available evidence indicated that the increased consumption of red meat, processed meat, and sugar sweetened beverage associated with increased cardiometabolic disease burdens in China [7].

Although urbanization in the rural areas has improved individuals' living standards, most studies have shown that rural–urban discrepancies of dietary patterns still exist and are associated disease burden [8, 9]. All these changes have come along with new health problems, such as overweight and obesity [10, 11], which merits more attention on nutrition researches to address the concerns related to dietary transition.

Another important dieting trend that cannot be ignored is the booming online-to-offline (O2O) food delivery industry. While the development of food delivery makes foods so convenient and accessible for people, it has a significant impact on individual's eating behavior. Consumption of take-out foods tends to have higher oil, salt, unhealthy fat, and sugars compared to the home-made foods [12]. In addition, there is also potential food safety risks, which might cause food-borne illness [13]. The current issue reports a review that updates the impact of O2O food delivery on health outcomes.

Finally, we include discussions on nutrition policies in the current issue to demonstrate the development of policies in China. The government has issued several nutrition policies to achieve specific goals during different times [14, 15]. Accordingly, the nutrition guidelines for Chinese populations have been updated nearly every 10 years [16]. All these policies and guidelines successfully reduce the prevalence of malnutrition decreases from 6.0 to 2.5% in China [9]. However, we are confronting a new challenging as the prevalence of obesity increase from 5.6 to 11.9% [17]. The latest version of nutrition guidelines came out in 2016 with a renewed emphasis on improving food diversity and quality of diet, which calls for fewer sugar intake and highlights the importance of balanced diet [16]. This is not the end. We need to put effect into generating more scientific evidence to specify and improve current nutrition policies and guidelines in order to prevent chronic diseases along with the rising obesity and chronic disease rates.

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