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What nutrition-related research is being conducted in Cambodia? Two reviews of nutrition interventions and dietary assessment studies with the Khmer population

J.L. Windus[1], K. Duncanson[2], T.L. Burrows[1], C.E. Collins[1] and M.E. Rollo[3]
[1]*School of Health Sciences, University of Newcastle, Newcastle, NSW, Australia,*
[2]*School of Medicine and Public Health College of Health, Medicine and Wellbeing, University of Newcastle, Newcastle, NSW, Australia and*
[3]*School of Population Health, Faculty of Health Sciences, Curtin University, Perth, WA, Australia*

High rates of under- and over-nutrition, anaemia and nutrition-related deficiencies persist in Cambodia despite recent economic growth in this low–middle-income country.(1) While the Cambodian government promotes nutrition strategies and programs to meet global Sustainable Development Goals, their effectiveness remains unclear.(2) Cambodian's communal eating style makes dietary assessment challenging. This review set included an initial scoping review to characterise nutrition interventions and dietary assessment studies conducted in Cambodia since 1993, followed by a systematic review of individual studies evaluating whole diet intake. Both reviews followed PRISMA guidelines. Five databases and grey literature from government, non-government and global health websites were searched for the scoping review. Eligible studies involved Cambodian people living in Cambodia of any age, gender or province, reported on nutritional interventions and/or used dietary assessment methods of any kind. One hundred studies were included; 76 reported on dietary assessment methods, 42 were nutrition interventions, and 18 assessed intakes within a nutrition intervention. The most reported nutrition variables were iron status ($n = 27$), malnutrition ($n = 26$), and anaemia ($n = 17$). All interventions involved women and/or children, largely evaluating supplements ($n = 19$) or fortification ($n = 6$). Most common dietary assessments methods were 24-hour recalls ($n = 40$) and food frequency questionnaires ($n = 34$), with over 80% collecting intake of selected food items only. Dietary assessment studies focused on infant feeding ($n = 16$), nutrient deficiencies ($n = 8$) or food security ($n = 8$). From the 100 papers in the scoping review, we then screened for studies that collected individual-level, complete dietary intakes. Fifteen studies were included; nine with children under five years and six with women. Six studies collected nutrient intake and eleven collected food intakes. Pooling nutrient and/or food group intakes was not possible due to the small representation within each subgroup and variability in reporting. All but one study used 24-hour recalls, mostly utilising pen-and-paper methods administered by local Khmer fieldworkers. Only two studies reported using a validated tool to assess dietary intakes. Food composition databases used for nutrient analysis were not tailored to the Cambodian food supply. Both reviews reflect the strong focus of nutrition studies towards addressing Cambodia's poor maternal and child health status. These reviews confirmed the absence of research addressing emerging needs of non-communicable diseases, ageing population groups and non-iron deficiency anaemia. Improvements to dietary assessment studies in Cambodia requires a best-practice protocol, a Cambodia-specific food composition database and a trained nutrition local Khmer workforce. Regular national nutrition surveys could facilitate monitoring of national dietary nutritional adequacy and nutritional status to better inform future nutrition policies and track progress in Cambodia.

References

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