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Receptiveness of Cambodian women to modifying their traditional Khmer recipes for improving their nutritional intake

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Traditional Cambodian recipes have been prepared the same way over time, with their nutritional quality largely unknown. Poor nutritional status is common among Cambodian children with 22% experiencing stunting and 16% underweight[(1)], while Cambodian women exhibit the double burden of malnutrition with 44% having anaemia and 33% above the healthy weight range[(1)]. Most Cambodian women have inadequate intakes of key nutrients including vitamin A, thiamine, zinc and iron[(2)]. Recent Cambodian studies have focused on increasing nutrient intakes, with improved nutritional quality of mixed dish recipes a novel, potential approach[(3)]. However, the absence of a Cambodian-specific food composition database means nutrient information for common mixed dishes is unavailable. This study aimed to quantify the nutrient profile of traditional mixed dishes commonly consumed by Cambodian women and children. A secondary aim was to qualitatively explore Cambodian women's receptiveness to nutrient-enhanced traditional mixed dishes. A sequential mixed methods approach was used to collect traditional recipes and nutritionally analyse Khmer mixed dishes, then conduct qualitative focus groups to assess recipe acceptability. Over 900 recipes were collected by Cambodian women who had a child < 5 years via a custom-built smartphone app, as part of a dietary assessment study in Cambodia in 2019 and 2020. After grouping and counting recipes to determine consumption frequency, ingredients and quantities, these were consolidated into 27 commonly consumed recipes. The nutrient composition of consolidated recipes was determined using an INFOODS template[(4)]. Dietitians then created six nutritionally-enhanced versions of Khmer mixed dishes by switching or adding common high-nutritive ingredients. In Siem Reap province four 90-minute focus groups were conducted with Cambodian mothers (two rural, two urban). Three dishes per group were prepared and served with rice, and women's responses to each nutritionally-enhanced Khmer mixed dish were discussed. Nutrient analysis indicated that a median serve of traditional Khmer fish soup contributed 25% protein, < 10% iron and folate, and < 20% zinc and thiamine required daily for non-lactating women. Initially Cambodian women were sceptical about modifying traditional Khmer recipes, expressing resistance to change: '*They would wonder, where did you learn that?*'. Inspecting each dish, they discussed how strange the ingredients seemed, disbelieving their acceptability: '*It is weird […], never put other green leaves*'. After tasting, women expressed surprise they liked the flavour, describing these modified dishes as '*unique*' or '*creative*', recognising they would '*gain more nutrition*' with this enhanced recipe. Most women declared they would try this modified dish at home '*I would like to share it to my sister and my friends and family*'. Results highlight future interventions promoting nutritionally-enhanced recipes of commonly consumed meals need to support women to overcome initial resistance through trialling them to evaluate acceptability, prompting them to share with their household.

References

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