



Title	Sociodemographic and behavioral factors related to obesity among adults in the Republic of Palau based on the WHO STEPwise approach to NCD risk factor surveillance 2011-2013: A cross-sectional study
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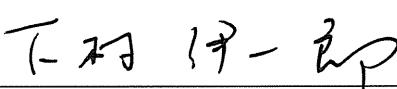
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論 文 内 容 の 要 旨
Synopsis of Thesis

氏 名 Name	長谷川 みゆき
論文題名 Title	Sociodemographic and behavioral factors related to obesity among adults in the Republic of Palau based on the WHO STEPwise approach to NCD risk factor surveillance 2011–2013: A cross-sectional study (パラオ共和国における肥満に関する社会人口統計学的および行動因子の横断研究)
論文内容の要旨	
〔目的(Purpose)〕	
<p>Pacific islanders face serious health challenge in increase of obesity for the several past decades after Western contact. The Republic of Palau is a middle-income Micronesian country with tropical marine climate consisted of 386 islands in Western Pacific. The prevalence of obesity in Palau was reported to be one of the top-10 highest in the world, and has been continuously increasing over a last decade. Previous reports also suggested high prevalence and mortality of obesity-related noncommunicable diseases (NCD). e.g., diabetes in this country. The aim of this study, therefore, was to investigate nationwide and country-specific sociodemographic and behavioral factors related to obesity nationwide for NCD early prevention and control.</p>	
〔方法ならびに成績(Methods/Results)〕	
<p>This is a cross-sectional population-based study analyzing the data collected from 2011 to 2013 in WHO STEPwise approach to NCD risk factor surveillance (STEPS) which is a global standardized method for the NCD risk factor for developing countries. Based on the 2009 Household Survey, one resident aged 25 to 64 years from 2807 households (of the total 3976 households nationwide) were extracted by two-stage cluster random sampling across the entire 16 states (the response rate was 79%). The trained Ministry of Health (MOH) staffs visited participants residences for face to face interviews and physical measurements. Data analysis was a part of joint research between Palau MOH and a Japanese research team of Osaka and Nagoya Universities. Obesity was defined as general (body mass index $\geq 30.0 \text{ kg/m}^2$) and central obesity (waist circumference $\geq 90 \text{ cm}$ for men and $\geq 80 \text{ cm}$ for women). Logistic regression analysis was used to estimate sex-specific multivariate odds ratio (OR) with 95% confidence intervals (CIs) of general and central obesities by sociodemographic (ethnicity; residence; education attainment; employment type; marital status and household income) and behavioral factors (current smoking; betel nut chewing; frequencies of alcohol intake, eating out and vegetable/fruit intake).</p>	
<p>2133 participants (1016 men and 1117 women) were used for this analysis. Mean age was 45 years old, and approximately 70% were native Palauan (Filipinos who comprised majority of non-Palauan). More than half had a betel nut chewing behavior, especially higher at 61% of women. Means of body mass index, prevalence of general and central obesities were higher in women (29.9 kg/m^2, 45.5% and 85.4%) than in men (29.3 kg/m^2, 40.4% and 67.6%). Among the sociodemographic factors, native Palauan had the highest ORs of general obesity in men (OR 4.4, 95% CI, 2.7–7.0) and women (3.6, 2.3–5.6) compared with non-Palauan. Men who worked at government office (1.6, 1.2–2.1) and women with higher household income (1.4, 1.0–1.8) had also the higher ORs of general obesity than men who worked at the other occupations and women with lower income, respectively. Among the behavioral factors, betel nut chewers had the higher ORs of general obesity in both men (1.5, 95% CI, 1.1–2.1) and women (1.6, 1.2–2.3) than non-chewers. In contrast, the ORs of general obesity for women with frequent vegetable (seven days per week) were lower (OR 0.71, 95% CI, 0.54–0.93) compared with those with less intake. Similar associations were observed between the aforementioned factors and central obesity; however, betel nut chewing was more strongly associated with central obesity (OR 2.7, 95% CI, 1.6–4.7) compared to general obesity among women.</p>	
〔総 括(Conclusion)〕	
<p>This was the first to clarify characteristics of sociodemographic and behavioral factors related to obesity using the national level data among Micronesian islanders. Native Palauan, having betel nut chewing behavior were positively associated with obesity, as were men with government employment and women with higher household income. In contrast, frequent vegetable intake was inversely associated with obesity among women. The prevalence of obesity has been increasing for the past decades in Palau. Further interventions for prevention and control of obesity are necessary through the enhancing public relation activities to understand harmful health effects on betel nuts chewing and recommending domestic production of vegetables.</p>	

論文審査の結果の要旨及び担当者

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論文審査の結果の要旨			
<p>本研究ではパラオ共和国において行われた非感染性疾患 (non-communicable disease, NCD) に関するWHO STEPs調査をもとに、肥満に関連する社会人口学的および行動要因を明らかにした研究である。2011～2013年に行われた断面調査において、全国16州から25～64歳の住民2807名が無作為抽出され、パラオ保健省職員の協力を得て訪問面接・身体測定を実施した。肥満は body mass index (BMI) $\geq 30.0 \text{ kg/m}^2$、または腹囲 (男性90cm・女性80cm以上) と定義し、ロジスティック回帰分析で関連要因を検討した。解析の結果、女性の肥満、中心肥満が男性よりも高いこと、そして、肥満有病に関連する因子としてパラオ先住民、政府職員の男性、高所得世帯の女性、喫煙タバコ常習者の肥満リスクが高い事を明らかにした。一方、野菜を毎日摂取する女性では肥満リスクが低いことも明らかにした。本研究は、パラオにおける肥満の社会人口学的・行動要因を全国規模で分析した初の研究であり、この結果をもとに同国の肥満対策立案に寄与するもので、疫学調査としての学術的価値に加え、国際協力の活動として公衆衛生学的な価値もあり、学位の授与に値すると考えられる。</p>			