

CONSTRUCT VALIDITY OF THE HOUSEHOLD FOOD INSECURITY ACCESS SCALE AMONG FINNISH PRIVATE SECTOR SERVICE WORKERS

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INTRODUCTION

Food insecurity data has been regularly published in the USA by USDA since 1995, but data in Europe is limited. Earlier Finnish study found that 11% of participants in a nationally representative sample had experiences of running out of money to buy food. According to FAO 2019 report, the prevalence of moderate and severe food insecurity in Finland is higher than in other Nordic countries. Charitable food aid has become entrenched in Finland, yet, no national monitoring of food insecurity levels exists, and no food insecurity measurement tools have been validated for use in Finland.

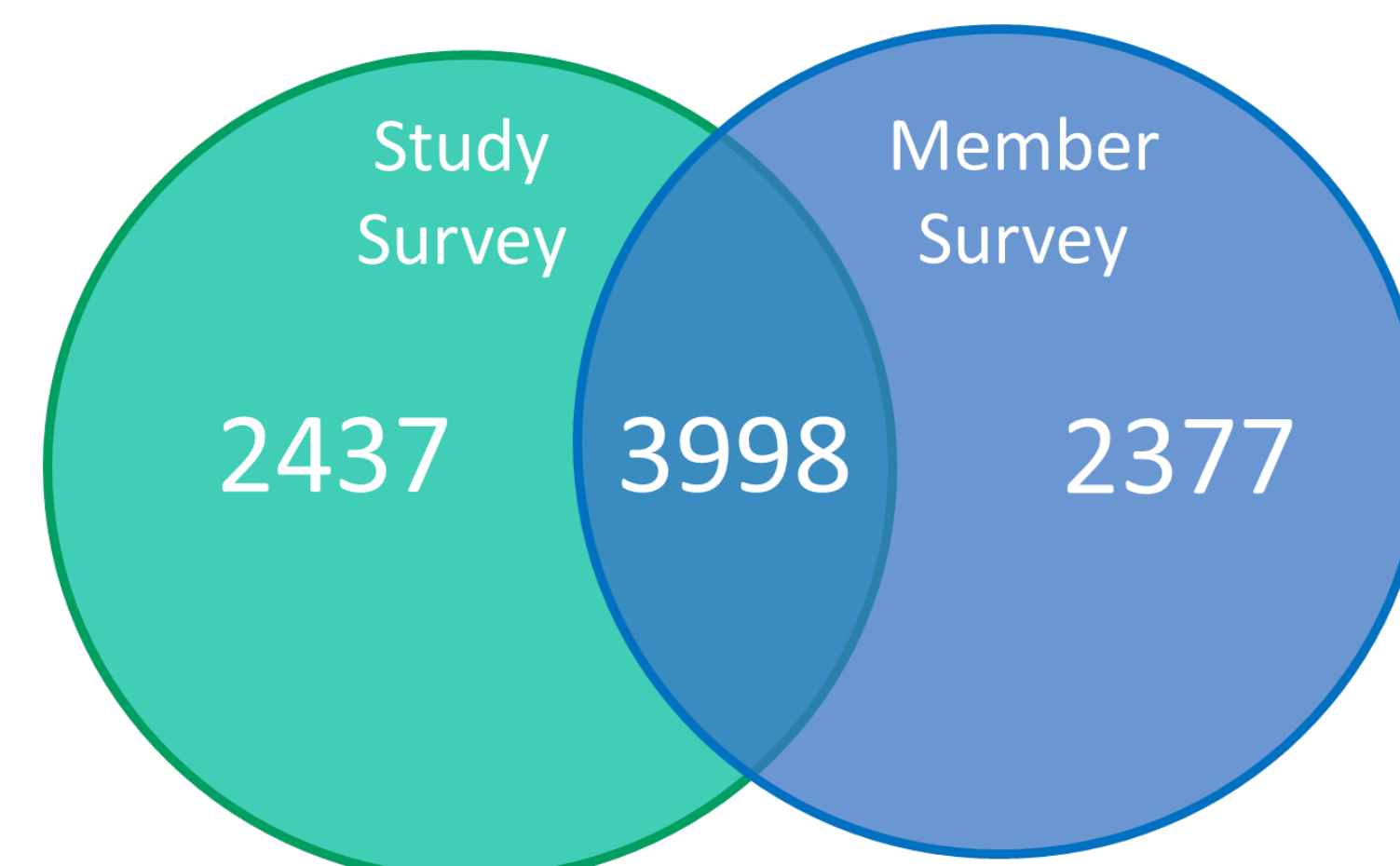
AIM

In the PAMEL study, we aimed to investigate **whether the Household Food Insecurity Access Scale (HFIAS) could be used in assessing food insecurity among the Finnish Service Union United PAM members**; female-dominated, low-income employees of the private service sector in Finland.

METHODS

PAM has almost 210,000 members, 76% of them women, working in retail trade, property services, security services as well as tourism, restaurant and leisure services. Data was collected in 2019 via the online Study Survey. Additional data was collected via the PAM Member Survey and from the national register data from Statistics Finland. Food insecurity was calculated using the Household Food Insecurity Access Scale (HFIAS) as described by Coates et al. (1). Study Survey answers were obtained for 6,435 participants (6% of those invited via email), of which 3,998 also completed the Member Survey (Fig. 1). Missing data from the Member Survey was filled in with National Statistics data from 2019 & 2018 (n=6,421 and n=6,429). The associations between the food insecurity levels and sociodemographic determinants was assessed with chi-square tests and logistic regression representing criterion validity. Internal consistency was measured by Cronbach's alpha and construct validity was evaluated by factor analysis.

Figure 1. Number of participants from Study Survey and PAM Member Survey



RESULTS

Among the PAM participants, 35% were food secure, 29% mildly or moderately food insecure and 36% severely food insecure. **Sex, age, education level, marital status, household size, number of children under 18, type of housing, employment status, monthly income, received transfer payments, receiving income assistance, self-reported adequacy of financial resources, and self-reported health** were associated with food insecurity (χ^2 -test, $p < 0.01$ for all). BMI, job industry, the size of municipality and municipality type were not significantly associated with food insecurity. A logistic regression (Figure 2) was performed to ascertain the effects of sociodemographic predictors (multivariate model with all variables included). The model explained 22% (Nagelkerke R^2) of the variance in severe food insecurity and correctly classified 70.9% of cases. ($p < 0.03$ for all). The factor analysis of HFIAS revealed two factors explaining 68.8% of the variance in total. Chronbach's alpha for the HFIAS tool was 0.899.

CONCLUSION

The majority of participants demonstrated some degree of food insecurity, with a considerable proportion being severely food insecure. Being male, being young, having lower education, being single, living in rented housing, working in hospitality, receiving income assistance and having difficulties in covering household expenses with income, all significantly increased the risk of severe food insecurity. HFIAS shows potential for measuring food insecurity in the predominantly low-income group strongly affected by the rapid changes in the labour market and social security systems.

Variables

- Sex**
 - Female
 - Male
- Age**
 - 18-29 years
 - 30-44 years
 - 45-59 years
 - 60 years or more
- Education**
 - Obligatory education or less
 - Upper secondary or vocational school
 - Undergraduate
 - Postgraduate
- Marital status**
 - Married or registered partnership
 - Cohabitation
 - Divorced or separated
 - Widow
 - Single
- Type of housing**
 - Self-owned dwelling
 - Right of occupancy dwelling
 - Rented municipal housing
 - Other rented housing, company dwelling, supported housing or homeless
- Job industry**
 - Retail
 - Hospitality
 - Property maintenance
 - Other
- Missing data
- Does somebody in your household receive income support?**
 - No
 - Myself or another person in the household
 - Not sure/missing data
- How well can your household cover its expenses with your income?**
 - With great difficulty
 - With difficulty
 - With small difficulties
 - Quite easily
 - Easily
 - Very easily

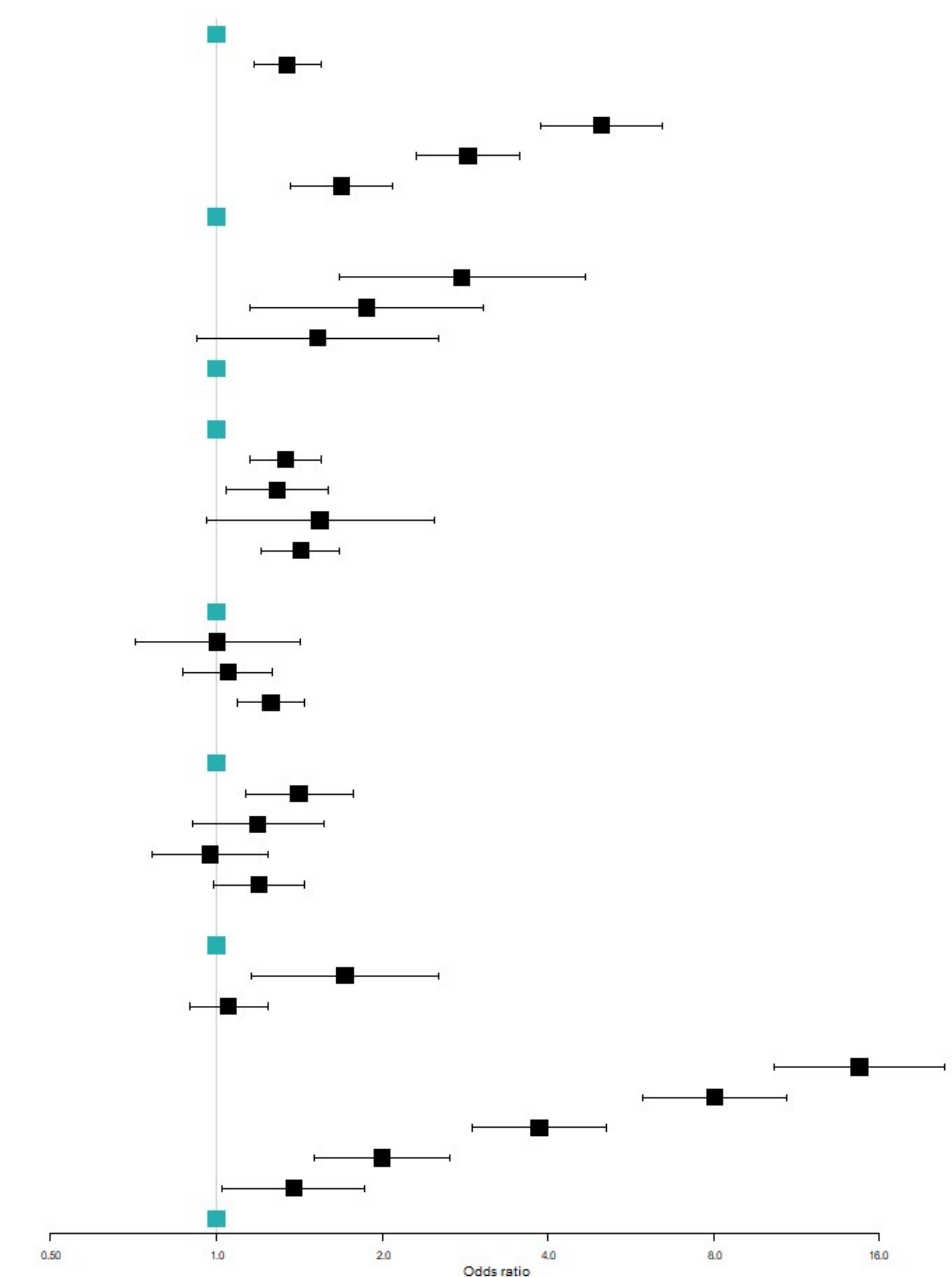


Figure 2. Sociodemographic determinants' odds ratios (OR) and confidence intervals for severe food insecurity (n=6,407).

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