age-related cataracts. These reports have suggested that high and low BMIs can affect the onset or progression of age-related visual impairment. However, few prospective studies have examined this relationship in a general Asian population. Therefore, in this study, we investigated whether BMI was associated with increased risk of age-related cataracts by performing a 5-year prospective population-based study among a middle-aged Japanese population.

Methods This 5-year population-based study included 35 365 men and 40 825 women (aged 45–74), who were recruited onto the Japan Public Health Center-based Prospective Study (JPHC Study) and had not reported cataracts in baseline survey. The self-reported diagnosis of age-related cataracts was used in the analysis of this study.

Results At follow-up, 1004 men (2.84%) and 1807 women (4.43%) reported new diagnoses of age-related cataracts. The multivariate ORs for those in the lowest and the highest BMI category, compared with a BMI category of 21.0–22.9 as a reference point (OR, 1.00), were 1.29 (95% CI 0.93 to 1.79) and 1.15 (95% CI 0.96 to 1.39) in men, and 1.23 (95% CI 0.97 to 1.55) and 1.19 (95% CI 1.04 to 1.36) in women.

Conclusion High and low BMIs have been suggested previously as the risk of age-related cataracts for Caucasian population in developed countries and the population living in developing countries respectively. However, the present large-cohort study showed that a U-shaped association between BMI and incidence of cataracts in Japanese men and women.

P2-339 ROLE OF NEUROMUSCULAR FUNCTION IN PREDICTING THE OCCURRENCE OF DISABILITY: THE ROAD STUDY

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Introduction To assess the ability of neuromuscular functions to predict the occurrence of disability in Japanese general population.

Methods The large-scale population-based cohort study entitled research on osteoarthritis/osteoporosis against disability (ROAD) has established three cohorts, from an urban, a mountainous, and a coastal area. The first follow-up survey was performed after 3 years and was attended by 2479 of 3040 baseline participants (81.5%). From the entire ROAD data, we utilised the data of the elderly participants (≥65 years) from the mountainous and coastal cohorts. Disability was defined by a relevant certification committee comprising clinical experts and physicians from each municipality. To evaluate the predictive ability of the indices of neuromuscular function, logistic regression analysis was conducted using occurrence of disability as an objective factor and the grip strength and walking speed for 6 m as explanatory factors after adjustment for age, gender, and body mass index.

Results Of the 914 participants who completed both baseline and first follow-up surveys, 88 individuals (9.6%) were defined as new cases of disability over 3 years. Logistic regression analysis indicated that the higher the grip strength, the lower is the risk of disability (+1 kg; OR, 0.90; 95% CI 0.86 to 0.95), whereas the lesser the walking speed, the greater is the risk (+1 s; OR, 1.15; CI 1.07 to 1.23).

Conclusions The cumulative incidence of disability among the elderly was 9.6% over 3 years. The indices of neuromuscular function may be potential predictive factors of the occurrence of disability over 3 years.

P2-340 HARMONY IN FAMILY RELATIONS: EXPLORATORY ANALYSIS IN SEARCH OF A HARMONY SCALE

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Objective Relationship harmony is characteristic of Chinese values and has been increasingly identified as a factor that contributes to social stability. However, no existing survey instrument is available that assesses the concept of family harmony in a Chinese context. We aimed to develop an opinion scale that captures self-evaluated state of family harmony among Hong Kong Chinese.

Methods During June 2008–October 2008, we surveyed 587 Cantonese-speaking Hong Kong residents (aged 15 and above) randomly selected from a list of residential addresses. We collected demographic data and asked the participants how much they agree with a pool of 52 descriptive items on family relations, family functions, respect, loyalty, love and support, communications and conflict resolution. Most items were positively worded indicative good family relations except five reverse-coded items. Responses ranged from strongly agree (1) to strongly disagree (5). We used exploratory factor analysis with maximum likelihood extraction method.

Results Score distributions for all 52 items were similar, the majority of the participants "agreed" to most items. Mean score of the 52 items was 2.2 (SE=0.4). Exploratory factor analysis identified nine dimensions of the harmony construct with Eigen values above unity, which explained 59% of total variance, and two dimensions with Eigen values of at least two, which explained 48% of total variance.

Conclusion Small variation was found for each of the 52 opinion items on family relations harmony. After item reduction, more in-depth interviews are needed to examine whether these opinion items truly reflect the state of family harmony.

P2-341 THE PREVALENCE AND INFLUENCES ON AETIOLOGY OF ANGINA IN RURAL AND URBAN POPULATIONS IN A DEVELOPING COUNTRY: THE PERU MIGRANT STUDY

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Background Rural-to-urban migration in low- and middle-income countries causes an increase in individual cardiovascular risk. There are few data on prevalence of early stage coronary diseases such as angina in developing countries, while the understanding of the aetiology of angina is complicated by the difficulty in measuring it across differing populations.

Methods The PERU MIGRANT study was designed to investigate differences between rural-to-urban migrant and non-migrant groups in specific cardiovascular disease risk factors cross-sectionally. The Rose angina questionnaire was used to record chest pain, which was classified definite, possible and non-exertional. Mental health was measured using the General Health Questionnaire (GHQ-12). Mantel-Haenszel ORs (adjusted for age, sex, cardiovascular disease risk factors and mental health) were used to assess the risk of chest pain in the migrant and urban groups compared to the rural group, and further to assess the relationship (age and sex-adjusted) between risk factors, mental health and chest pain.