

were gradients in dental caries, periodontal status and retaining more than 20 teeth according to job classification.

7, Social capital and oral health

Oral health, such as the dental caries free rate and the DMFT Index, relates to social capital which is defined as a 'feature of social organization, such as civic participation, norms of reciprocity and trust in others that facilitate cooperation of mutual benefit' (Putnam, 2000). Adopting integrated and sociological approaches to the promotion of oral health are important in the formulation of prevention policy and strategies managing oral diseases in Japan.

Symposium 9- Social Determinants of Health I

SY9-01

Genetic and Environmental Determinants of Diabetes Dorman, Janice S.

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Diabetes mellitus is a heterogeneous group of disorders characterized by persistent hyperglycemia. The two most common forms of the disease are type 1 diabetes (T1D, previously known as insulin-dependent diabetes or IDDM) and type 2 diabetes (T2D, previously known as noninsulin-dependent diabetes or NIDDM). Both are caused by a combination of genetic and environmental risk factors. However, there are other rare forms of diabetes that are directly inherited. These include maturity onset diabetes of the young (MODY) and diabetes due to mutations in mitochondrial DNA. At the present time, the only form of diabetes that can be prevented is T2D. Although environmental factors such as viruses, infant nutrition and hygiene are known to play a role in the development of T1D, they are, in general, non-modifiable, even among individuals at high genetic risk based polymorphisms in the HLA region of chromosome 6, the insulin gene or CTLA-4. In contrast, the major environmental risk factors for T2D are obesity ($\geq 120\%$ ideal body weight or a body mass index ≥ 30 kg/m³) and a sedentary lifestyle. Therefore, T2D can typically be prevented by maintaining an age-appropriate body weight and engaging in physical activity. Although public health messages that emphasize a nutritious diet and regular exercise are now common place, they have not been effective in terms of disease prevention. Given the recent obesity epidemic, it is obvious that current intervention strategies are being ignored by a significant portion of the general population. Leaders in the Human Genome Project predict that genetic tests will soon be available for disorders such as T2D, permitting persons to 'learn their individual susceptibilities and to take steps to reduce their risk by increased medical surveillance, lifestyle modifications, diet or drug therapy'. T2D does have a strong genetic component. Studies of monozygotic twins revealed concordance rates that range from 60% to 90%, which

are significantly higher than those for dizygotic twins. Whether or not predictive genetic testing will provide the necessary incentive to make changes in one's lifestyle is unclear, and there are several reasons to be pessimistic, such as the limited utility of genetic tests, inappropriate interpretation of the results, potential distress and insurance and employment discrimination. This presentation will include an update on the genetic and environmental determinants of diabetes and address current and future challenges for patients and clinicians.

SY9-02

Changes in Work Conditions and Social Inequalities in Stress-related Health Problems: Empirical Evidences from Taiwan

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Objectives: Epidemiologic evidences from Western countries indicate that psychosocial risk factors at work play an important role in contributing to the social gradient in ill health. A number of diseases or illnesses have been related to work stress, most notably cardiovascular diseases, musculoskeletal disorders, burnout, fatigue syndromes and mental illnesses. In Taiwan, due to economic downturn and labor restructuring, the overall work conditions have been deteriorating and workers' perceived levels of job stress and job insecurity have increased substantially. Stress-related health problems have become a major public health concern, and issues on the recognition, compensation, and prevention of stress-related health problems have also been the center of controversy in labor affairs. In this report, we summarize empirical evidences from a series of epidemiologic surveys, and present the social distributions of major job stressors and stress-related health outcomes, as well as the associations of psychosocial job stressors with health outcomes. **Methods:** A series of national surveys of representative paid employees were conducted every 3 years since 1994 by the Council of Labor Affairs, and information on occupational status, working hours, psychosocial risk factors, burnout status, and self-rated health status was obtained by standardized questionnaires. **Results:** Despite that employees with higher employment grades perceived a higher level of job stress, unfavorable work conditions, including long working hours, lower job control, poor employment security and lower workplace justice, were more prevalent among those with lower employment grades. Employees with lower employment grades also reported poor health and lower job satisfaction. Perceived importance of major job stressors and their associations with health outcomes also differed substantially across employment grades and gender. **Conclusions:** This study indicated that there were social inequalities in work quality and health, and the patterns