Acceptance of seasonal influenza vaccination among nurses in a general hospital with Health Belief Model

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Introduction
Vaccination is an important cost-effective measure for preparing against the influenza, but the acceptance of influenza vaccination was low among nurses. 25-30% of flu vaccination rate were reported among nurses in Hong Kong. It was much lower than the World Health Organization target vaccination rate 75%. Little is known about factors related with intention to obtain vaccination among nurses. The aim of this study is to identify factors influencing the acceptance of influenza vaccination among nurses in Hong Kong.

Objectives
1. To investigate the stated acceptability of influenza vaccination and its associated factors among nurses in a general hospital. 2. To examine risk perception regarding influenza vaccination and seasonal influenza among nurses in a general hospital.

Methodology
A cross-sectional questionnaire survey will be conducted in mid January 2018 to early Feb 2018. A convenience sample around 300 nurses who currently work in TKOH will be used. An instrument, which based on the concept of Health Belief Model (HBM), will be adopted for measurement. Descriptive statistics will be utilized to summarize participant characteristics, history of vaccination in the past 3 years, health beliefs on influenza vaccination, and health perceptions. Multivariable logistic regression analysis and Chi-square tests will be performed to determine factors that affected beliefs and intention to obtain influenza vaccination. All statistical analysis will be performed with SPSS version 22.0 with the level of significance set at 5%. A statistical test with p-value < 0.05 will be considered as statistically significant.

Result
Demographics and vaccination status a total of 300 questionnaires were distributed over 3 weeks in January and February 2018. There were 275 (91.6%) responded. 7 questionnaires were excluded due to inappropriate or partial responses. The majority of participants were female (82.1%). Most participants were in the 18-30 age group
More than 10 departments participated in this survey. Majority of respondents were from Department of Medicine (30.2%), Ambulatory (13.1%) and Orthopedics/O&G (11.2%). With respect to their influenza vaccination status, 88 (32.8%) reported they had received influenza vaccination in previous year. One hundred and forty-six participants (54.5%) reported that they had not been vaccinated for influenza during the past 3 years. Only 36 (13.5%) reported they had had influenza vaccination annually for the past 3 years. The results of the chi-square tests indicate that more than 8 variables were related to vaccination intention at p<.1, that is, Age, gender, education level, workplace in healthcare organization, years of work in healthcare service, previous vaccination experience, perceived susceptibility, perceived benefits and perceived severity of flu were candidate predictors. These variables were entered into the logistic regression model, which significantly predicted the intention for future vaccination (omnibus test of model coefficients, p<.001). After controlling for the confounding effects, previous vaccination experience (OR=98.79, 95%CI [19.38-498.53]), perceived susceptibility (OR=4.23, 95%CI [1.36-13.09]), and perceived benefits (OR=40.64, 95%CI [11.92-232.41]) were positively associated with intention to be vaccinated.

The main reasons of having flu shot in previous year were for family safety (20.9%), better to be protected against flu now (19.7%) and for patients’ safety (15.2%). The major information sources of flu vaccination were Hospital Infection Control information by HA (29%), colleagues (16.7%) and internet website (16.3%). Among those refused to have flu vaccination in the past 12 months, more than half showed positive attitude (agree and strongly agree) to “fear of side effects” (60.4%), “dislike injections” (60.4%) and “vaccine is not effective” (52.2%)