社區民眾的活動時間分析

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目的：曝露評估主要是探討人體之曝露量及其重要因子。測定個人空氣污染物的曝露量可以用個人採樣器在微環境(例如:房間、教室等)中所得濃度及個人在微環境中的活動時間來推估可能的曝露量。本研究是分析社區民眾的活動時間表，來看不同職業族群是否有不同的曝露型態。

方法：收集 1997 年及 1998 年社區民眾個人採樣活動時間表(24 小時)共 113 人，並且以職業分組(4 組)-沒職業者、工業、商業(室內工作者)及商業(室外工作者)。以 Ktustal-Wallis 法、薛佛事後比較法及卡方分佈分析。

結果：商業-室內工作者在室內時間平均為 20.5 小時，顯著大於商業室外工作者(平均 16 小時)；而沒職業者平均待在室內 19.5 小時，從事工業者平均待在室內 18.6 小時。商業-室外工作者在馬路上之時間平均為 6.7 小時，顯著大於從事工業者(平均 1.8 小時)，沒職業者(平均 1.5 小時)及商業-室內工作者(平均 1.4 小時)。商業-室外工作者使用小客車時間平均為 1.2 小時略高於沒職業者（平均 0.2 小時)、工業從事者（平均 1.1 小時）及商業室外工作者（平均 0.1 小時)。

結論：結果顯示不同職業其曝露型態的確有所不同，此資料可用以建立曝露型態的資料庫，日後可加上各微環境中之濃度資料，進而推估民眾之曝露量。除了以職業分組外，將來亦可以年齡、性別等分組，來分析其曝露型態。

關鍵字：曝露評估、曝露型態、活動時間分析、職業。

TIME-ACTIVITY ANALYSIS OF CITIZENS

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Objective：The exposure assessment does describe human exposure to the major factors can be obtained from exposure assessment。Time-activity data along with measurements from different micro-environments ，can be used to evaluate the levels of personal exposure to air pollutants。In this study，Time-activity data were analyzed to evaluate different exposure patterns of different occupation。

Method：Time-activity questionnaire were collected in 1997 and 1998 from citizens of Taipei，Taiching and Kaohsiung。There were 113 subjects participated。Their occupations were divided as the unemployed，the blue-collar ，businessman and verdurous。Participants were asked to record their time-activity patterns for 24 hours。Those data were analyzed by Ktustal –Wallis test、Scheff'e test and X^2 test。

Results：Businessman spent on average 20.5 hours indoors；it was significantly high than verdurous (16 hours on average)。The unemployed spent about 19.5 hours and the blue-collar spent approximately 18.6 hours。verdurous spent on average 6.67hours on the street ；it were significant high than the blue-collar (1.8 hours)，the unemployed (1.5hours) and businessman (1.40 hours)。verdurous spent on average 1.2hours in car；it were more than the unemployed (average of 0.2hours)，the blue-collar (1.1 hours) and verdurous (0.1 hours)。

Conclusion：subjects with different occupation did had different exposure patterns。There results can be used to build a database for exposure analysis。in addition，exposure patterns of different age and sex groups can be further explored。

Key word：exposure assessment，exposure pattern，Time-activity analysis，occupation。