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研究生(中)	張雪會
研究生(英)	Chang, Hsueh-Hui
論	老人視力障礙與視覺功能生活品質之流行病學研究

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摘要	<p>中文摘要 老人視力障礙與視覺功能生活品質之流行病學研究 (全部頁數：178) 研究生：張雪會 指導教授：李中一 博士學位：理學碩士 輔仁大學公共衛生學研究所 關鍵字：老人、視力、視覺功能、篩檢、生活品質、橫斷性研究、流行病學 背景和目的：視力障礙盛行率隨著人口老化與疾病型態改變而增加，其中許多患者並沒有接受適當之檢查而錯失了及時矯正治療的機會。本研究旨在了解並比較新竹縣不同地區型態老人之視力障礙盛行率及視覺功能生活品質現況，並進一步探討影響社區老人視力障礙與視覺功能生活品質之人口學與疾病史預測因子，以提供為老人視力照護、社區衛生研究及政策研擬的參考資料。 方法：本研究採橫斷性研究設計，以分層隨機抽樣，選取(包括新竹縣四個鄉鎮市(竹北市、關西鎮、峨眉鄉及五峰鄉)，共 2,006 位 65 歲以上的老人為研究對象，進行視力篩檢及視覺功能生活品質問卷之評估調查，並成功訪視其中之 1,392 位，完成率 69.4%。研究工具包括 E 字視力表、簡易視力篩檢表、及視覺功能問卷-25 (The 25-item Visual Function Questionnaire (VFQ-25))，本研究以雙眼表現視力優眼視力在 6/12(不含)以下者作為視力障礙之指標，同時計算 VFQ-25 總分及各個次項目之得分用以評估視覺功能生活品質。所得類別與連續資料分別計算其百分比與平均值；並以卡方檢定、單維變異數分析、邏輯斯迴歸(計算勝算比)、及線性迴歸(計算分數差異)等方法進行統計檢定。 結果：65 歲以上老人視力障礙盛行率在四個鄉鎮市樣本中，以峨眉鄉最高(42.5%)、關西鎮最低(20.2%)；VFQ-25 所有</p>

次項目得分中，四個鄉鎮市老人皆以彩色視覺為最高(平均得分為 93.1 分，其中以竹北市老人得分最高(97.4 分)、五峰鄉老人得分最低(82.8 分))，得分最低之次項目則為整體健康(平均得分為 33.0 分，而以關西鎮老人得分最高(37.6 分)、竹北市老人得分最低(30.4 分))。複迴歸分析結果顯示：視力障礙盛行率與地區別、年齡、糖尿病及眼科疾病史有顯著相關，而與性別、教育程度、婚姻、居住狀況、身體質量指數(Body Mass Index, BMI)、高血壓及高血脂症疾病史則是無顯著相關；其次，VFQ-25 得分高低與視力障礙、地區別、年齡、性別、教育程度、婚姻、BMI、高血壓、糖尿病及眼科疾病史為顯著相關，而與居住狀況、高血脂症疾病史則無顯著相關；顯著影響 VFQ-25 所有次項目得分的因素包括視力障礙、地區別及眼科疾病史；而年齡也顯著影響除了開車次項目以外之所有 VFQ-25 次項目得分；VFQ-25 總分以及各個次項目得分情形顯示，視力障礙者之平均分數均顯著低於視力正常者，其中總分的差異為 10.9 分，分數差異最大與最小的次項目分別為開車(14.4 分)與整體健康(5.5 分)；整體來看，不同鄉鎮市老人在 VFQ-25 得分上有顯著差異，其中以五峰鄉老人的得分最低，其 VFQ-25 得分除整體健康次項目得分略高於竹北市老人外，其餘各個次項目以及總分平均分數均低於其他三個鄉鎮市老人。結論：本研究發現影響視力障礙盛行率之重要因素為地區別、年齡、糖尿病及眼科疾病史，而影響 VFQ-25 得分之重要相關因素為視力障礙、地區別、年齡及眼科疾病史。將來社區視力保健工作應特別針對年齡較大、居住較為偏遠、有糖尿病病史、以及有眼科疾病史之老人進行視力篩檢，並加強視力健康照護以及視力保健教育的宣導。此外，本研究也顯示在控制了人口學、疾病史及視力障礙等因素後，不同城鄉地區老人之視覺功能生活品質得分仍有顯著差異，未來研究亦應針對不同城鄉地區進一步調查其影響視覺功能生活品質之因素。關鍵詞：老人、視力、視覺功能、篩檢、生活品質、橫斷性研究、流行病學

摘要
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Abstract An Epidemiological Study of Visual Impairment and Visual Function Related Quality of Life among The Elderly. (Total Pages 178) AUTHOR : Chang, Hsueh-Hui SUPERVISOR : Dr. Li, Chung-Yi DEGREE : Master of Science in Public Health Dept of Public Health, College of Medicine, Fu-Jen Catholic University KEY WORD : elderly, vision, visual function, screening, quality of life, cross-sectional study, epidemiology BACKGROUND AND PURPOSE: The prevalence of visual impairment increases as a result of the growth of elderly population and changes of disease pattern. Many elderly people do not receive timely and appropriate eye treatment since they are not examined. This study was conducted to characterize and compare the prevalence rates of visual impairment and scores of visual function related quality of life (VFRQOL) among the elderly people living in four districts with different ways of living in Hsin-Chu County. Further analyses were also performed to explore demographic characteristics and disease histories that could significantly predict visual capability and VFRQOL. Results from this study may be of help to the health policy toward eye care of the elderly, community health research, and policy formulation. METHODS: This study used a cross-sectional design. Using a stratified random sampling technique, we selected a total of 2,006 elderly participants aged 65 and more and lived in four townships (Jhubei, Guansi, Emei, and Wufong) of Hsin-Chu County. Each study participant received an eye screening for visual impairment and

was administered a questionnaire for VFRQOL. A total of 1,392 study participants completed the interview, representing a response rate of 69.4%. Instrument used in this study included the Snellen E chart, the simplified visual acuity card, and the 25-item Visual Function Questionnaire (VFQ-25). The study participants whose presenting visual acuity of the better eye was worse than 6/12 were classified as subjects with visual impairment. The study also calculated the total score and sub-scale scores of VFQ-25 to indicate an individual's VFRQOL. Percentage and mean were calculated for description of categorical and continuous variables, respectively. Statistical testing was performed with various techniques including Chi-square test, One-way analysis of variance, logistic regression (calculation of odds ratios), and linear regression (calculation of the difference in score).

RESULTS: The highest and lowest prevalence rate of visual impairment was observed in Emei and Guansi, respectively. Among the VFQ-25 sub-scales, the highest score was noted for "color vision" irrespective of the study township (average score was 93.1, the highest and lowest township-specific score was noted for Jhubei (97.4) and Wufong (82.8), respectively). The lowest sub-scale specific score was observed for "general health" (average score of 33.0) with the highest and lowest township-specific score noted for Guansi (37.6) and Jhubei (30.4). Results from multivariate analyses indicated that prevalence of visual impairment was significantly associated with township of living, age, diabetes, and eye disorder, but not with gender, education, marital status, living condition, body mass index (BMI), and histories of hypertension and hyperlipidemia. Additionally, the total score of VFQ-25 can be significantly predicted by the factors including visual impairment, township of living, age, gender, education, marital status, BMI, and disease histories of hypertension, diabetes, and eye disorders, but was unrelated to living condition and hyperlipidemia. Moreover, visual impairment, township of living, and eye disorders were factors that can significantly predict scores of all VFQ-25 sub-scales; and age was also a significant predictor for all VFQ-25 sub-scales except "driving". As compared to the healthy subjects, the study participants with visual impairment tended to experience a significantly reduced VFQ-25 total score and scores of all sub-scales. The largest and smallest difference associated with visual impairment was "driving" (14.4) and "general health" (5.5). Overall, there was a significant difference in VFQ-25 score between four townships, and the elderly in Wefong township had the least total score and scores of nearly all sub-scales except for "general health" for which the elderly in Jhubei township experienced the least score.

CONCLUSION: We found that the prevalence of visual impairment was significantly associated with township of living, age, diabetes, and eye disorder. Additionally, visual impairment, township of living, and eye disorders were factors that can significantly predict scores of all VFQ-25 sub-scales. In the future, community visual health care should deliver its visual screen program to the elderly people who are older, living in rural, with the history of diabetes, and eye disorder. Moreover, visual health care and visual health education should also be further enforced. Besides, after adjustment for the demographic characteristics, the history of disease, and visual impairment, we still noted a significant geographic variation in the score of VFRQOL. Future studies should aim to explore the specific factors that may be responsible for

such geographic variation. KEY WORDS: elderly, vision, visual function, screening, quality of life, cross-sectional study, epidemiology

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