

# BIBLIOGRAFÍA DEL INSTRUMENTO

## Perfil de Salud de Nottingham (PSN)

Versión española del Nottingham Health Profile  
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## Bibliografía de la adaptación española del PSN

- 1.- Alonso J; Antó JM; Moreno C. Spanish Version of the Nottingham Health Profile: translation and preliminary validity. **Am J Public Health**. 1990;80(6):704-708.
- 2.- Alonso J; Prieto L; Antó JM The Spanish version of the Nottingham Health Profile: a review of adaptation and instrument characteristics. **Qual Life Res**. 1994;3:385-393
- 3.- Prieto L; Alonso J; Viladrich MC; Antó JM. Scaling the Spanish Version of the Nottingham Health Profile: Evidence of limited value of item weights. **J Clin Epidemiol**. 1996;49(1):31-38
- 4.- Lamarca R, Alonso J, Santed R, Prieto L. Performance of a perceived health measure in different groups of the population: a comprehensive study in Spain. **J Clin Epidemiol** 2001; 54(2):127-135.

## Bibliografía del desarrollo del cuestionario original

- 1.- Hunt SM, McEwen J, McKenna SP: Measuring Health Status. London: Croom Helm, 1986.
- 2.- Hunt SM, McKenna SP, McEwen J, Backett EM, Williams J, Papp E: A quantitative approach to perceived health status: A validation study. **J Epidemiol Community Health** 1980; 34:281-286.
- 3.- Hunt SM, McKenna SP, McEwen J, Williams J, Papp E: The Nottingham Health Profile: Subjective health status and medical consultations. **Sco Sci Med** 1981; 15A:221-229.
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## Bibliografía relacionada con la versión española del NHP

- (1) Agra Y, Badia X. Spanish version of the Rotterdam Symptom Check List: cross-cultural adaptation and preliminary validity in a sample of terminal cancer patients. *Psychooncology* 1998; 7(3):229-239.  
Abstract: We report on the process of adaptation into Spanish of the Rotterdam Symptom Check List (RSCL). The original version was translated and back-translated by professional bilingual translators. A quantitative rating method was used to select the items to include in the final Spanish version. Validity (discriminant and construction) and reliability were test in 118 terminal cancer patients. In addition to the RSCL the Nottingham Health Profile (NHP) and the Karnofsky Performance Status (KPS) were used. The RSCL showed different ratings on all scales according to the functional level of the patients. The scales were moderately to highly correlated with the NHP (from 0.48 to 0.71). Internal consistency, measured by Cronbach's alpha coefficient ranged from 0.74 (physical) to 0.90 (activity). Twenty-four hours test-retest intraclass correlation coefficient ranged from 0.71 to 0.88. The results of this study suggest that the Spanish version of the RSCL is conceptually equivalent to the original. More research is needed to assess the responsiveness of the version before using it in clinical trials
- (2) Alonso J, Anto JM, Gonzalez M, Fiz JA, Izquierdo J, Morera J. Measurement of general health status of non-oxygen-dependent chronic obstructive pulmonary disease patients. *Med Care* 1992; 30(5 Suppl):MS125-MS135.  
Abstract: Chronic obstructive pulmonary disease is a prevalent condition causing a high level of disability, and it is one of the leading causes of death. To assess the general health status of moderate to severe Chronic obstructive pulmonary disease patients, we studied 76 male patients attending an outpatient hospital clinic who were not dependent on oxygen and who did not present bronchial obstruction reversibility. We assessed clinical status (dyspnea, six-minute walking distance) and functional respiratory impairment (spirometry, and blood gas analysis) of the patients and also asked them to respond to the Spanish version of the Nottingham Health Profile, a multi-dimensional generic health status measure. Patients scored especially higher than the general population (denoting more level of distress) in energy, physical mobility and sleep Nottingham Health Profile dimensions. The former two dimensions scores had a high correlation with dyspnea (respectively Spearman Rs = 0.60, and Rs = 0.64; P less than 0.01). High levels of sleep disturbances were found for patients reporting low or very low dyspnea level. Health status measurement (Nottingham Health Profile dimension scores) and functional respiratory impairment were not correlated. Results underscore the importance of measuring symptoms carefully when assessing these patients, whose health status is substantially affected by the Chronic obstructive pulmonary disease. They also suggest that it is relevant to assess sleep disturbances in these patients
- (3) Alonso J, Anto JM, Moreno C. Spanish version of the Nottingham Health Profile: translation and preliminary validity. *Am J Public Health* 1990; 80(6):704-708.  
Abstract: We report the transfer into Spanish of a multi-dimensional measure of perceived health originally developed in Great Britain, the Nottingham Health Profile (NHP), and an assessment of the preliminary validity of the version is presented. Translation of the questionnaire was obtained from experts and from a Spanish monolingual lay group. Construct validity of the version was assessed in two studies: testing relationship of NHP scores to other self-reported measures of health in a general population survey; and comparing NHP scores for a group of frequent users and for a group of non-users of primary health services. Mean scores of NHP dimensions were higher for people with poorer self-reported health and higher for the frequent health services users than for the non-users. Findings suggest that the Spanish version of the NHP is culturally equivalent to the original questionnaire, and has a similar level of construct validity. Nevertheless, further research on reliability and on the weighting system is required to establish the equivalence of the Spanish version definitively
- (4) Alonso J, Prieto L, Anto JM. The Spanish version of the Nottingham Health Profile: a review of adaptation and instrument characteristics. *Qual Life Res* 1994; 3(6):385-393.  
Abstract: The increased interest in measuring health status implies a need for instruments that are appropriate and valid. Adaptation of existing instruments may be a cost-effective strategy. In this paper we describe the adaptation into Spanish of the Nottingham Health Profile (NHP), a self-administered perceived health questionnaire developed in the UK. The characteristics of the adapted questionnaire (validity, reliability, and sensitivity to change), as well as current and purposed applications, are discussed. Some of the principles that were applied in the described adaptation process may be useful for similar future research: involving the investigators that developed the original instrument; using a panel of lay individuals in the translation process; testing the characteristics of the adapted instrument by replicating previous studies with the original instrument, and organizing an international group for the development and use of the European versions of the NHP. Adaptation of health status measures is an opportunity for gaining comparability when measuring health, and for learning about cross-cultural differences in health-related quality of life



- (5) Azpiazu GM, Cruz JA, Villagrasa F, Jr., Abanades Herranz JC, Garcia MN, Alvarez De Mon RC. [Quality of life in noninstitutionalized persons older than 65 years in two health care districts in Madrid]. *Aten Primaria* 2003; 31(5):285-292.  
 Abstract: AIM: To describe self-perceived health status and quality of life in noninstitutionalized persons older than 65 years in two health care districts in Madrid (central Spain). DESIGN: Descriptive study based on home interviews by investigators trained in the administration of the questionnaires. SETTING: Health care districts 2 and 4 in Madrid; community level. PARTICIPANTS: Of a sample of 2002 persons older than 65 years residing in private homes, we obtained 911 valid questionnaires. MAIN MEASURES: Description and stratification by age group and sex, for sociodemographic variables, economic resources, social and familial support, physical and mental health, functional capacity and results on the EuroQol and Nottingham Health Profile (NHP) questionnaires. RESULTS: Mean age, 74.7 years (95% CI, 74.3%-75.1%); women, 59.7% (95% CI, 56.4%-62.9%); no formal education, 41% (95% CI, 37.7%-44.2%); social classes I and II, 38.3% (95% CI, 35.1%-41.6%). Self-perceived health status good or very good, 52.1% (95% CI, 48.8%-55.4%), 57.5% (95% CI, 52.2%-62.6%) in men and 48.4% (95% CI, 44.2%-52.7%) in women. Mean scores on the NHP were: energy, 21.1 (95% CI, 18.9%-23.2%); pain, 25.6 (95% CI, 23.6%-27.6%); physical mobility, 28 (95% CI, 26.4%-29.7%); sleep, 31.8 (95% CI, 29.4%-34.1%); emotional reaction, 24.5 (95% CI, 22.8%-26.3%); social isolation, 10.9 (95% CI, 9.6%-12.1%). The percentages of persons with problems according to the EuroQol instrument were: mobility, 21.3% (95% CI, 18.7%-24.1%); self-care, 7.7% (95% CI, 6.1%-9.7%); usual activities, 19.9% (95% CI, 17.4%-22.7%); pain/discomfort, 38.2% (95% CI, 35%-41.4%); anxiety/depression, 27% (95% CI, 24.1%-30%). Both the NHP and the EuroQol instrument identified more problems in women than in men, and in persons older than 80 years compared to persons younger than 80 years. CONCLUSIONS: Women had a worse perceived health status and quality of life than men. Persons older than 80 years scored worse on the NHP and the EuroQol, but did not perceive their health status to be worse
- (6) Badia X, Alonso J, Brosa M, Lock P. Reliability of the Spanish version of the Nottingham Health Profile in patients with stable end-stage renal disease. *Soc Sci Med* 1994; 38(1):153-158.  
 Abstract: OBJECTIVE: Since reproducibility of results is a basic prerequisite of health status measures for its use in prospective and evaluative studies, the reliability of the Spanish version of the Nottingham Health Profile (NHP), a multi-dimensional perceived health status measure, was assessed in a sample of stable end-stage renal disease (ESRD) patients. METHODS: The NHP was administered on two occasions four weeks apart to a group of hospital hemodialysis program patients who were clinically stable according to their physicians. Correlations of scores and agreement of first and second administrations were assessed together with internal consistency. Afterwards, analyses were repeated taking into account the time (before, during or after the dialysis) and the method of administration (self vs interviewer), and the interviewer. RESULTS: Spearman correlation coefficients (rs) between responses to the first and to the second administration were > 0.6 for all of the six dimensions of the NHP (range = 0.69-0.85) and in every sub-group analyzed (P < 0.01). Agreement percent (AP) between items was > 0.4 (0.48-0.65). Internal consistency was 0.91 for the whole profile and > 0.5 (0.58-0.86) when analyzed by individual dimensions. Reliability did not vary significantly with the time nor the method of administration (self or interviewer). CONCLUSIONS: Overall, results suggest that the Spanish version of NHP is sufficiently reliable to be used in ESRD patients. While a higher reliability would have been achieved by a shorter retest period, the study provides a realistic approximation to the reliability of the questionnaire in actual research and clinical applications
- (7) Barajas Gutierrez MA, Robledo ME, Tomas GN, Sanz CT, Garcia MP, Cerrada S, I. [Quality of life in relation to health and obesity in a primary care center]. *Rev Esp Salud Publica* 1998; 72(3):221-231.  
 Abstract: BACKGROUND: To evaluate the association between obesity and two aspects of health-related quality of life: self-perception of health status and psychological well-being in patients assigned to a primary care center. METHODS: 167 patients between 20 and 70 years old with a body mass index > or = were included in the study. A clinical interview was carried out to get sociodemographic and clinical data and to administer two questionnaires: 1) Nottingham Health Profile (NHP) and 2) Psychological General Well-being (PGWB) index. RESULTS: The mean scores of the NHP indicated a moderate overall impairment of perceived health in females. Pain, emotional reactions and physical mobility were the affected dimensions. Females, age group over 50, low level of education and the presence of psychiatric pathology or osteoarthritis were significantly associated with worse scores. The mean scores of PGWB indicates a small impairment of psychological well-being. In this case, worse scores were associated with females, anxiety and low level of education. CONCLUSIONS: In the study population, we identify a profile of obese patients with worse quality of life: women with age over 50, low level of education and the presence of psychiatric pathology or osteoarthritis. We think it would be a good idea to achieve a prior performance towards them
- (8) Bonfill X, Montes J, Roque M, Nogue M, Saigi E, Seguí MA et al. [Prospective assessment of clinical outcomes in patients with lung cancer]. *Med Clin (Barc)* 2000; 114 Suppl 3:104-111.  
 Abstract: BACKGROUND: The aim of this study was to assess the outcome in patients with lung cancer. PATIENTS AND METHODS: Prospective study in 93 patients with lung cancer in 3 community hospitals. In each evaluation (4-6 weeks) the following results were obtained: a) questionnaire on the quality of life or performance status (QoL/PS), based on different instruments (Karnofsky Performance Scale [KPS], ECOG, QLQ-C30, and the Nottingham Health Profile [NHP], and b) a clinical questionnaire. Active follow-up was for 18 months and survival tracking was to five years. A descriptive analysis of the outcome variables and a survival analysis (Kaplan-Meier) were done. The prognostic value of each instrument (Cox) and the correlation between the instruments (Spearman) were also evaluated. RESULTS: The mean values recorded at the time of diagnosis between 60% and 70% of the maximum value possible. Mean survival was 12.4 months; accumulated survival was 30% to one year and 4% to 55 months. Only 17% of patients presented any disease-free period. Toxicity of treatment was almost always irrelevant. The correlation between the KPS, the QLQ-C30 and the NHP was acceptable and their initial values were important prognostic factors. The QoL/PS scores for the survivors were similar to their initial values, but the global values were 11%. CONCLUSIONS: The outcomes measures used in this study provide very useful information, although registration and analysis of the necessary data should be systematic. The KPS was comparable to the other QoL/PS indicators used, but it is shorter, more acceptable and easier to use. Better QoL/PS measurement instruments are needed to evaluate outcomes in the practice of clinical oncology



- (9) Cervera-Enguix S, Ramirez N, Giralá N, McKenna SP. The development and validation of a Spanish version of the quality of life in depression scale (QLDS). *Eur Psychiatry* 1999; 14(7):392-398.

Abstract: OBJECTIVE: The adaptation of the Quality of Life in Depression Scale, the QLDS, into Spanish. METHODS: The original UK version of the QLDS was considered by two translation panels, who produced a Spanish translation. Priority was given to conceptual rather than semantic equivalence. This version was then field-tested with 15 depressed patients. The final stage of the research involved a postal survey of 62 patients, who were asked to complete the measure on two occasions. RESULTS: The Spanish QLDS was found to be appropriate and acceptable by depressed patients. The questionnaire's test-retest reliability and internal consistency were both high, and QLDS scores correlated as predicted with scores on sections of the Nottingham Health Profile. The measure was sensitive to different levels of depression as assessed by the Hospital Anxiety and Depression Scale. CONCLUSION: The Spanish version of the QLDS is suitable for use in clinical trials and for monitoring individual patients in routine clinical practice
  
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Abstract: All medical specialties interested in improving facial appearance need to measure the face to quantify the desired facial changes. The purpose of this investigation was to obtain objective average measurements of the soft tissue facial profile to use them as a guide for aesthetic treatment goals. The analysis of the soft tissue facial profile from photographic records provides information on the morphology of the profile and its relationship with the underlying dentoskeletal tissues. In this investigation the soft tissue facial profile of a young adult European Caucasian population (212 individual, 50 males and 162 females, 18-20 years of age) was studied by means of standardized photographic records taken in the natural head position (NHP). Angular measurements were analysed digitally. Sexual dimorphism was found for several angles: nasofrontal (G-N-Prn:  $P < 0.01$ ), vertical nasal (Cm-Sn/N-Prn:  $P < 0.01$ ), nasal (N-Prn/TV:  $P < 0.01$ ), nasal dorsum (N-Mn-Prn:  $P < 0.05$ ), and mandibular contour (C-Me/G-Pg:  $P < 0.01$ ). Wide individual variations in nasolabial and mentolabial angles were also observed
  
- (11) Ferrer M, Alonso J, Prieto L, Plaza V, Monso E, Marrades R et al. Validity and reliability of the St George's Respiratory Questionnaire after adaptation to a different language and culture: the Spanish example. *Eur Respir J* 1996; 9(6):1160-1166.

Abstract: We describe the adaptation into Spanish of the St George's Respiratory Questionnaire (SGRQ), a self-administered questionnaire developed by Jones et al. (1991) covering three domains of health in airways disease patients: symptoms, activity and impacts. For the adaptation, the forward and back-translation method by bilinguals was used, together with professional committee and lay panel. Once tested for feasibility and comprehension, 318 male chronic obstructive pulmonary disease (COPD) patients with a wide range of disease severity completed the Spanish version of the SGRQ. The clinical status of the patients was evaluated concurrently with the measurement of health status. Lung function was assessed in the 2 months before or after the questionnaire administration. The Spanish version of the SGRQ was acceptable and easy to understand. Cronbach's alpha reliability coefficient was 0.94 for the overall scale and 0.72 for "Symptoms", 0.89 for "Activity", and 0.89 for "Impacts" subscales. Correlation coefficients between the overall score and dyspnoea and % forced expiratory volume in one second (FEV1) were 0.59 and -0.45, respectively, and these correlations were higher than those observed between the clinical variables and the Nottingham Health Profile, a generic measure of health-related quality of life. Results of the study suggest that the Spanish version of the SGRQ is conceptually equivalent to the original, and similarly reliable and valid. Although further studies should complete the adaptation work, results suggest that the SGRQ may already be used in Spain and in international studies involving Spanish respiratory patients. According to the present approach, it appears to be feasible to adapt a specific questionnaire on health-related quality of life in respiratory disease to another language and culture
  
- (12) Gomez dIC, Posada dIP, Abaitua B, I, Barainca Oyague MT, Abairra S, V, Ruiz-Navarro MD et al. Health status measurement in Toxic Oil Syndrome. *J Clin Epidemiol* 1998; 51(10):867-873.

Abstract: Toxic Oil Syndrome (TOS) is a previously unreported condition which affected more than 20,000 people in Spain in 1981 and whose natural history is unknown. In 1993-94, a stratified random sample of 1400 survivors was drawn to measure their health status through clinical examination and their self-perception of well-being through the Nottingham Health Profile Questionnaire (NHPQ). Two-thirds of the sample population responded; indirect estimates suggest that selection bias was limited. Clear and intermediate signs of neuropathy were found in one-fifth and one-half of the patients, respectively. One-fourth and one-sixth showed some degree of scleroderma and contractures. All conditions were more frequent in women than in men and in age >50 than in younger ages. Although no concurrent control group was included in the study, prevalences of these conditions are well above expectations and are largely attributable to TOS. NHPQ scores increased with age in both sexes up to age 50, after which they reached a plateau (with values around 48 in men and 62 in women). Scores were associated to the occurrence of peripheral neurological changes, contractures, and scleroderma-like conditions. A multivariate analysis indicated age, sex, and severity of neurological conditions as major determinants of the NHPQ scores. This overall pattern of findings is peculiar to TOS and differs from the typical post-disaster nonspecific syndrome



- (13) Hernandez MR, Fernandez Lopez JA, Rancano G, I, Cueto EA. [Quality of life and neurologic diseases]. *Neurologia* 2001; 16(1):30-37.  
Abstract: BACKGROUND: The development reached by many countries of our planet has allowed that in them most of the infectious diseases have diminished and that the life expectancy is over the 75 years of life. As a result of this, degenerative and chronic diseases are every day more prevalent and their treatments are longer and complex. To value quality of life in these patients and the effect of the therapy on health is at the moment a main goal of public health. OBJECTIVES: To know the origin, the evolution, and the theoretical foundation of the concept of the quality of life, as well as their measurement methods. On the other hand, to describe the characteristics of the different available questionnaires in Spain to measure the quality of life, either of generic or specific for neurologic illness. MATERIAL AND METHODS: The most important questionnaires which have been adapted and validated into Spanish have been revised. An exhaustive revision of the bibliography related with quality of life and neurology was carried out, and all the questionnaires described in these processes were revised. RESULTS: We describe the philosophy and concepts of health, quality of life (QOL) and health related quality of life (HRQL). The following generic questionnaires are described: the Nottingham Health Profile (NHP), the Sickness Impact Profile (SIP), the Medical Outcomes Study Short Form (SF-36), the European Profile of Quality of Life (EuroQoL), the Questionnaire of Quality of Life (CCV) and the Profile of Life quality in the Chronically ill (PLC). In an exhaustive bibliographical revision on quality of life and neurology, 52 indexed papers appeared, of those which only twelve were related with those subject. The following specific questionnaires are described: Qualite de Vie et Migraine (QVM), the Parkinson's Disease Questionnaire (PDQ-39), the Functional Status Questionnaire (FSQ), the Quality of Life in Epilepsy Inventory (QOLIE-89) and their variant of 31 items. Finally two questionnaires ad hoc are described to study migraine and epilepsy. CONCLUSIONS: The incorporation of HRQL measures in patients with neurological illnesses is an increasing and valued practice by its specialists. We observe that the availability of generic tools to measure the HRQL in Spanish is wider every day, although most of these come from other cultures. The process continued in their transcultural adaptation and validation allows us to have some tools of great reliability and effectiveness that facilitate its use. In relation to the specific questionnaires on neurologic process, the supply is considerably smaller due to the recent appearance of these methods in this clinic area
- (14) Lamarca R, Alonso J, Santed R, Prieto L. Performance of a perceived health measure in different groups of the population: a comprehensive study in Spain. *J Clin Epidemiol* 2001; 54(2):127-135.  
Abstract: The metric properties of health-related quality of life measures are typically evaluated on selected samples and assumed to hold across different population groups. We assessed the extent to which the measurement properties of the Spanish version of the Nottingham Health Profile (NHP) were stable across sociodemographic, clinical and geographical characteristics. We collected information from all available studies using the NHP in Spain (1986-1995), and obtained data from 9419 individuals. We examined data completeness and distribution, as well as reliability and construct validity. The percentage of missing dimensions was lower than 5%, but increased with age and poor health status. Large ceiling effects in scores were observed for social isolation and energy dimensions, being largest for younger ages and individuals reporting "very good/good" health. Reliability was higher than 0.7 in all population groups considered, except for social isolation and energy dimensions in some subgroups. Mean NHP scores correlated with self-rated overall health ( $r = 0.48$ ), but they varied substantially by age among those rating their health as "very good/good." We conclude that NHP is adequate for all Spanish populations. Nevertheless, some caution is needed because the reliability of dimension scores is not sufficient for individual purposes. And also, because a non-negligible high ceiling effect renders the instrument inefficient to measure changes over time among healthy populations
- (15) Marti-Valls J, Alonso J, Lamarca R, Pinto JL, Auleda J, Girvent R et al. [Effectiveness and cost of total hip replacement in seven hospitals in Catalonia, Spain]. *Med Clin (Barc)* 2000; 114 Suppl 2:34-39.  
Abstract: BACKGROUND: To quantify short-term benefits of total hip replacement, prognostic factors of the outcome, and to assess hospital costs of this surgical procedure in Catalonia, Spain. PATIENTS AND METHODS: Multicentric prospective study in seven hospitals in Catalonia. All patients undergoing this procedure in one year were included. They were evaluated prior to the operation, and six months later. This evaluation involved: clinical assessment, the Hip Pain and Function Scale, the Nottingham Health Profile (NHP), and the EuroQoL (EQ-5D), in order to measure cost-utility. Hospital costs were estimated by means of a specific questionnaire. RESULTS: Information was obtained for 332 patients. The mean age was 65 years (range: 27-89 years); 58% were women; the most common diagnosis was arthritis; 59% of patients had associated pathology and 13% presented some type of postoperative complication. The improvement in health status was important according to all instruments. An outcome of "excellent" or "good" was achieved by 70.8% of the patients, in terms of hip function and pain. The factors associated with not achieving an outcome of this level were: associated pathology, complications, diagnoses other than arthritis, and operation carried out in a tertiary hospital. The total cost of the procedure was 838,480 pesetas. This average varied significantly with the cost of the prosthesis, and as a function of the length of stay. The three-year cost-utility of the procedure was estimated as 507,500 pesetas. CONCLUSIONS: Total hip replacement greatly improves the pain, hip function and overall perceived health of the patient. This improvement is greater among patients with a diagnosis of arthritis, with good overall health, operated on by a surgeon experienced in this procedure. The benefit is high in relation to the cost, although there is a margin for improvement, reducing complications, shortening length of stay, and controlling the price of implants





- (16) Palomo L, Gervas J. [The mortality at 2 years in chronic patients confined to home]. *Aten Primaria* 2000; 25(3):176-180.  
Abstract: OBJECTIVE: To analyse the relationship between the mortality of the chronically ill confined to their homes and the risk of death predicted by the doctor and other variables. DESIGN: Longitudinal descriptive study. PATIENTS: 223 patients were studied over 2 years. MEASUREMENTS AND MAIN RESULTS: Survival was related to the variables measured at the beginning of the follow-up: age, sex, social class, time of confinement, number of diagnoses, hours in bed, evaluation with the Katz index and the Nottingham health profile, number of medicines, family help available, and doctor's opinion on the risk of death. 67% of the patients considered at very serious risk of death died within 6 months, as against 6.91 who died in the same period but had a different prognosis. 40.6% at serious risk died within a year, against 12.4% with a different prognosis. The variables independently associated with higher mortality are: the doctor considering that the risk of death is serious/very serious, OR and 95% CI; 2.57 (1.64-4.03); remaining over 16 hours a day in bed, OR 2.39 (1.31-4.36); being over 80, OR 3.41 (1.74-6.66) and being male, OR 1.61 (1.11-2.33). CONCLUSIONS: The prognostic judgement of the general doctor behaved as a predictor of mortality, and may be an indirect indicator of his/her capacity to foresee the need for health services
- (17) Prieto L, Alonso J. Exploring health preferences in sociodemographic and health related groups through the paired comparison of the items of the Nottingham health profile. *J Epidemiol Community Health* 2000; 54(7):537-543.  
Abstract: BACKGROUND: Preference weighted measures of health related quality of life are necessary for cost effectiveness calculations involving quality of life adjustment. There are conflicting data about the influence of factors such as sociodemographic and health related variables on health preferences. STUDY OBJECTIVE: The relative values attached to the items of the Spanish version of the Nottingham Health Profile (NHP) were assessed to make comparisons across social and health subgroups. DESIGN AND PARTICIPANTS: Preference values were obtained in sets of 250 to 253 persons (total n=1258) using the method of paired comparisons after all possible pairs of NHP items had been presented to respondents for judgement of severity. chi(2) Tests and Spearman's correlations among item ranks were calculated. MAIN RESULTS: Findings show that preferences elicited with the method of paired comparisons are consistent and independent of the sample from which they are obtained (mean correlation coefficients across subgroups range from 0.87 to 0.96). Conclusion-The evaluation of health did not seem to be related to sociodemographic variables (gender, age, social class) or to the health status of the respondents, suggesting that health preferences are stable across different populations
- (18) Prieto L, Alonso J, Lamarca R, Wright BD. Rasch measurement for reducing the items of the Nottingham Health Profile. *J Outcome Meas* 1998; 2(4):285-301.  
Abstract: The present study aimed to develop a short form of the Spanish version of the Nottingham Health Profile (NHP) by means of Rasch analysis. Data from several Spanish studies that included the NHP since 1987 were collected in a common database. Forty-five different studies were included, covering a total of 9,419 subjects both from the general population and with different clinical pathologies. The overall questionnaire (38 items) was simultaneously analyzed using the dichotomous response model. Parameter estimates, model-data fit and separation statistics were computed. The items of the NHP were additionally regrouped into two different scales: Physical (19 items) and Psychological (19 items). Separated Physical and Psychological parameter estimates were produced using the simultaneous item calibrations as anchor values. Misfitting items were deleted, resulting in a 22 item final short form (NHP22)-11 Physical and 11 Psychological-. The evaluation of the item hierarchies confirmed the construct validity of the new questionnaire. To demonstrate the invariance of the NHP22 item calibrations, Rasch analyses were performed separately for each study included in the sample and for several sociodemographic and health status variables. Results confirmed the validity of using the NHP22 item calibrations to measure different groups of people categorized by gender, clinical and health status
- (19) Prieto L, Alonso J, Viladrich MC, Anto JM. Scaling the Spanish version of the Nottingham Health Profile: evidence of limited value of item weights. *J Clin Epidemiol* 1996; 49(1):31-38.  
Abstract: The Nottingham Health Profile (NHP) is a measure of health status developed in Great Britain and adapted into Spanish. the objective of the study was to obtain item weights for the Spanish version and to compare them with those of the original instrument, to further asses the cross-cultural equivalence of the new version. The usefulness of using weights in obtaining scores for the Spanish version was also evaluated. Weights for the Spanish items were obtained using Thurstone's method of paired comparisons in a sample of 1123 individuals. Correlations between Spanish and English weights ranged from 0.72 to 0.93. A comparison between unweighted, weighted, and randomly weighted NHP scores was also performed. Results showed extremely high correlations between these scoring strategies, and a similar consistently satisfied using unweighted scores. Item weights comparison provided evidence of the cross-cultural equivalence of the adapted version. Nevertheless, the unweighted NHP scoring is recommended because weighted NHP items do not improve the psychometric properties of the instrument
- (20) Puigdollers E, Cots F, Brugal MT, Torralba L, Domingo-Salvany A, Costas F. [Methadone maintenance programs with supplementary services: a cost-effectiveness study]. *Gac Sanit* 2003; 17(2):123-130.  
Abstract: OBJECTIVE: Methadone maintenance programs (MMP) currently offer the best treatment for opioid-addicted patients. The aim of this study was to examine the cost-effectiveness of three MMPs that offered varying levels of supplementary services. Health-related quality of life was used as a measure of effectiveness. METHODS: A 12-month follow-up study of 586 patients beginning methadone treatment in Drug Care Centers in Barcelona was performed. The Nottingham Health Profile was used to measure quality of life. Standard unit costs and total cost per patient were calculated from activity registries. Sociodemographic, health-related and toxicological data were collected through a semi-structured interview. A cost-effectiveness analysis was performed through two multiple linear regressions with the same adjusting variables. RESULTS: The greater the number of supplementary services involved, the higher the costs. The adjusted models revealed a significant increase in health-related quality of life (an increase of 8% in the Nottingham Health Profile) and in costs (17%) between low- and medium-intensity programs. CONCLUSION: The medium-intensity program showed the best cost-effectiveness ratio. However, the study's limitations preclude categoric generalization of the data



- (21) Torres X, Arroyo S, Araya S, de Pablo J. The Spanish Version of the Quality-of-Life in Epilepsy Inventory (QOLIE-31): translation, validity, and reliability. *Epilepsia* 1999; 40(9):1299-1304.
- Abstract: PURPOSE: Spanish adaptation of the Quality of Life in Epilepsy Inventory (QOLIE-31). METHODS: Internal consistency and construct validity of the Spanish translation of the QOLIE-31 were tested in 252 patients with epilepsy. Patients also were administered the General Health Questionnaire (GHQ-28), and the Nottingham Health Profile (NHP). Two weeks after the first test, a subgroup of randomly selected patients were readministered the QOLIE-31 along with a new five-option question about change in health status. Patients reporting no change in health status were included in the study of temporal stability. Sensitivity to clinical change was assessed in 31 additional patients who had successfully undergone epilepsy surgery. RESULTS: The QOLIE-31 was highly correlated with the GHQ-28 ( $r = -0.63$ ) and the NHP ( $r = -0.69$ ), demonstrating construct validity. Cronbach's alpha coefficient was 0.92, showing the items of the QOLIE-31 to be interdependent and homogeneous. For a 2-week test retest, both Pearson product-moment correlation and intraclass correlation coefficients were 0.90, indicating temporal stability. Sensitivity to clinical change was suggested by a significant mean difference between the global scores both before and after epilepsy surgery ( $-21.87$ ,  $p < 0.0001$ ; 95% CI,  $-28.08$  to  $-15.66$ ). The standardized response mean of the global score was 1.67, and the effect size was 1.35, both indicating large clinical change as a result of seizure relief. CONCLUSIONS: The similarity of psychometric properties between the English and the Spanish versions of the QOLIE-31 supports their conceptual equivalence. The questionnaire's responsiveness to clinical change suggests its utility in outcome assessment of drug trials and epilepsy surgery