has been conducted in a rigorous manner and that linguistic validation interviews have been conducted in the target country. The objective of this study was to ascertain whether there are particular areas of concern with respect to using these PROs outside of North America and Western Europe. METHODS: Specialists in outcomes research from five centers in Eastern Europe, Asia, and Africa completed a questionnaire and interview about difficulties which occur with the cultural relevance of concepts included in PROs and other health questionnaires. RESULTS: Numerous cultural and linguistic issues became apparent, including: 1) The concept of witchcraft is particularly important in many places in Africa; 2) Japanese people have a tendency to be more positive about their disease or emotional health which may affect their responses to measures; 3) the concept of family is much more important in some countries, e.g., Malaysia and Ukraine; 4) the idea of ‘God’s will’ is particularly important to the way people think, although practiced by three clinicians in Saudi Arabia and Sudan; 5) graffiti in our language玩图画 in Islamic countries. CONCLUSIONS: A number of issues should be considered during the sequential development of PRO measures. This can be achieved using an extended translatability check which would include representatives from countries outside of North America and Western Europe to help bridge the gap between the cultural specificity of a sequentially developed measure and a cross-culturally developed measure.

**PMCC65**

**QUALITATIVE METHODS IN PRO RESEARCH: DEVELOPMENT OF A METHODS MATRIX**

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OBJECTIVES: Qualitative research methods are pivotal to PRO research and the importance of these methods has been highlighted by the FDA draft guidance. The objective of this study was to conduct a review of qualitative methods used in health and social research, to evaluate the methods for application in PRO research, and to develop a methods matrix to enable the selection of the most appropriate methods in a given situation. METHODS: A search was conducted in Medline to identify methods of importance. A data collection and analysis in general, and to identify those methods applied to PRO research since the publication of the FDA draft guidance in February 2006. Qualitative research methods falling were evaluated according to the requirements for valid and reliable PRO research and a methods matrix was prepared. RESULTS: There were a wide variety of methods utilised in health and social research of which are in the broad category of qualitative methods for data collection and analysis. With some approaches, e.g., thematic analysis and grounded theory, there is a need for a tightening of definition in order to reduce some of the ambiguity around methods. In PRO research qualitative methods are used in concept exploration, selection of PROs, translation of PROs, migration from paper to ePRO, and development/modification of PROs (content validity evidence) among other areas. The results matrix identifies which qualitative methods are the most appropriate for use in specific areas of PRO research. CONCLUSIONS: The ways in which qualitative research methods are applied in PRO research are varied, with some emergence in recent years of alternative theoretical approaches. The results matrix provides a useful and practical reference to enable selection of a range of qualitative methods for application to solve specific PRO research requirements.

**PMCC66**

**THE ADVANTAGES OF A CENTRALIZED DISSEMINATION STRATEGY FOR HEALTH OUTCOMES INSTRUMENTS AND THEIR TRANSLATIONS: A CASE EXAMPLE WITH THE ZARIT BURDEN INTERVIEW (ZBI)**

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OBJECTIVES: The study was conducted to pool the correlation coefficients using random-effect model. The literature search resulted in 106 articles of which 15 concerned ZBI derivatives, and 9 the original US version. Of the remaining papers, we identified 59 local scales corresponding to 20 countries and 12 languages. Only 9 articles concerned the psychometric validation of the ZBI in different countries. For most countries, there was no way to check item correspondence across translations or to identify whether one version was the same one used across all countries, increasing the doubt of having multiple translations for one country and language (e.g., Spain — n = 9 teams). There was no clear information about the translations’ validation status. Contrarily, the information provided through the distribution center led to the quick identification of 33 translations, certified by the developer. Information about copyright, conditions of use and methodology of translation was provided. CONCLUSIONS: Findings indicate that information about the translation’s validation status is important. The information provided through a centralized distribution is more reliable than the data consumed than a search using classical tools. Promoting a controlled centralized system with instrument developers’ input will facilitate access to comprehensive information, and will contribute to meet health authorities’ requirements of evidence-based information.

**PMCC67**

**LINGUISTIC ADAPTATION OF THE TREATMENT SATISFACTION WITH MEDICINES QUESTIONNAIRE (SATMED-Q) INTO ENGLISH**

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OBJECTIVES: Treatment Satisfaction (SATMED-Q) is a generic PRO instrument measuring Treatment satisfaction with medicines in chronic health conditions, origi-
nally developed in Spanish, with known good psychometric properties. A new English version has been produced and linguistically tested. METHODS: The original version was translated into English by the Spanish speaking authors and used as reference for further versions. Two independent English native translators created two trans-
lated versions and a harmonised version was produced. The harmonized version was then compared with those obtained through the distribution centre.

RESULTS: The correlation between the two translations, especially when referring to undesirable effects, medication-treatment, disease-illness-medical condition, leisure and labour. Slight differ-
ences were also found on the words used to anchor the Likert response scales. Suggestions from the pilot sample advised to introduce examples accompanying ques-
tions about physical activity, free time activities, daily activities and personal hygiene, in order to illustrate questions. Nevertheless, the questionnaire was found easy to answer and to understand, and completion times were similar to those found with the original instrument. CONCLUSIONS: An English version of the SATMED-Q questionnaire is now available with linguistic validity ensured. Although psychometric properties should now be assessed, this new version allows beginning the cultural validation process and can be safely used as a bridge instrument towards other languages.

**PMCC68**

**CORRELATION BETWEEN ADHERENCE RATES MEASURED BY MEDICATION EVENT MANAGEMENT SYSTEM AND SELF-REPORTED QUESTIONNAIRES: A META-ANALYSIS**

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OBJECTIVES: This study performed meta-analysis examining the correlations of measurements of medication adherence (medication event monitoring system (MEMS) and self-reported questionnaires) using published study reports. METHODS: The liter-
ature search was performed from 1980–2009 using PubMed, PubMed In Process and Non-Indexed, OVID MEDLINE, PsycINFO (EBSCO), CINAHL (EBSCO), OVID Medline, Embase (Elsevier), and Cochrane Databanks. Adherence measurements were used: patient compliance, medication adherence, treatment compliance, drug monitoring, drug therapy, electronic, digital, computer, monitor, monitoring, drug, drugs, pharmaceutical preparations, compensation, and medications. Studies were included when the correlation coefficients [Pearson correlation coefficient (r), or Spearman rank correlation coefficient (rs)] between adherences measured by both MEMS and self-reported questionnaires were available or could be calculated. A meta-analysis was conducted to pool the correlation coefficients using random-effect model. RESULTS: A total of 11 studies (N = 1684 patients) met the inclusion criteria. The mean adherence measured by MEMS was 74.9%, ranging from 66.6% to 84.0% by self-reported questionnaire, from 76.5% to 93.5%. The correlation between adherence measured by MEMS and self-report questionnaires ranged from 0.24 to 0.87. Seven (63.6%) articles reported r values whereas 4 studies (36.4%) had rs values. The combined effect size for 11 studies was 0.45 (p < 0.001, 95% CI: 0.34–0.56). The subgroup meta-analysis on the studies reporting r and rs, correlation revealed the effect size 0.46 (p < 0.001, 95% CE: 0.33–0.59) and 0.43 (p < 0.001, 95% CE: 0.23–0.64), respectively. CONCLUSIONS: The correlation between adherence measured by MEMS and self-reported questionnaires tends to be moderate. Therefore, self-reported questionnaires give good estimate of patient mediation adherence. However, MEMS and self-reported questionnaire should be used complementary to get accurate measure for patient adherence.

**PMCC69**

**EXAMINING MASLOW’S HIERARCHICAL THEORY OF NEEDS BY USING THE ITEMS OF THE WHOQOL-BREF**

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OBJECTIVES: Over the last few decades, many theories have been developed for the basic needs of human beings. Specifically, Maslow’s hierarchical model offered a sounder theoretical basis for theory of needs. The aim of this research was to examine whether the items of quality of life (based on the WHOQOL-BREF Taiwan version) fit with the framework of Maslow’s hierarchy of needs. METHODS: This study used 13,008 participants aged from 20 to 65 from the 2001 National Health Interview Survey (NHIS) in Taiwan. The items of the WHOQOL-BREF were categorized accord-
ing to Maslow’s five hierarchical levels of needs: physiological needs, safety needs, love and belonging needs, esteem needs and self-actualization needs. Structural equa-
tion modeling (SEM) was conducted to test the hierarchical model. RESULTS: The results showed that the model of Maslow’s hierarchy of needs did not fit the real data well if all of the items of the WHOQOL-BREF Taiwan version were used. However, after deleting several misfit items, the model can be fitted well. In general, the deleted items were comparatively far from the definition of Maslow’s hierarchical model. CONCLUSIONS: The study showed that partial items from the WHOQOL-BREF