Validation of the Maltese version of the EUROPEP instrument for patient evaluation of general practice care.

**Author:** Dr. Christopher Deguara M.D, MSc FP, DFP.

**Thesis Supervisor:** Dr. Philip Sciortino MD, MSc, MRCGP (UK), MMCFD.
Aim of the thesis:

- To establish a reliable, verifiable and unambiguous Maltese text of the 23-item questionnaire of the EUROPEP instrument.

- To establish the validity of the translation and the reliability of the EUROPEP questionnaire when applied to Maltese patients by conducting a pilot study for this purpose.

- To validate the Maltese version of the EUROPEP.

- Finally it will attempt to prove the reliability and consistency of the Maltese version of the EUROPEP instrument by comparing the results obtained from its application in Malta with those obtained from EUROPEP's application in other European countries. This comparison is extended to the results obtained by the European Health Interview Survey carried out in Malta in 2008.
The debate on the reform of the primary health care system in Malta has been going on for some time. Recently various proposals on reforming primary care came from both the medical profession, in particular the Malta College of Family Doctors, and the Department of Primary Health Care and in particular the Patient Registration Task Force that has been set up by government in August 2008. However, patients have also been contributing substantially to this debate.

As patients become more educated, and quite knowledgeable in managerial skills, they do not hesitate to voice their opinion on how the primary health care sector can be better managed in order to increase efficiency and patient satisfaction.
Comments from patients and laymen are sometimes spurious and may result from a lack of knowledge of medical exigencies; however, they also indicate the areas of the general practice where patients and the general public express most dissatisfaction, and which are those in the most urgent need of reform. The objective of this thesis is the validation of the Maltese version of the EUROPEP which is an instrument to measure patient evaluation of general practice care.

The medical profession and the government providing the service should not take this criticism too badly and interpret it as a sign of lack of gratitude or understanding from the recipients of care. One should look positively at these signs of dissatisfaction and try to identify their causes.
This is the first study that looks at patient evaluation into general practice in Malta, using an internationally validated and standardised instrument – The EUROPEP.
The EUROPEP instrument is a 23-item validated and internationally standardized measure of patient evaluations of general practice care. An international consortium of researchers and general practitioners developed the EUROPEP instrument in the years 1995 - 1998.

It was developed from the beginning as an international instrument for patient evaluations, using rigorous translation and validation procedures. It was aimed at use for educational purposes in practices and regions as well as nationwide surveys and international comparisons. The questionnaire is focused on evaluations of specific aspects of care not priorities, wishes, reports, experiences, satisfaction, utilities, etc...

Since its development, the EUROPEP instrument has been used in many local, regional and national projects. It was also part of new international projects, such as the EPA project on practice management (2002 - 2005). The instrument has been used in about 20 countries.
Each EUROPEP question has its own specific content and is not just an indicator of an underlying dimension of general practice care.

While developing the instrument the researchers took care that questions that are indicators of the same dimension would be consistent, and that the dimension could be empirically confirmed. This made possible an assessment of the psychometric characteristics of the instrument as seen below –

Question 1 - 6  Doctor- patient- relationship
Question 7 - 11  Medical care
Question 12 - 15  Information and support
Question 16 - 17  Organization of care
Question 18 – 23  Accessibility
Why was EUROPEP chosen?

- Since its introduction in 2000, it has been used in many local, regional and national surveys on patient satisfaction throughout Europe.

- It was developed over a four year period (1995 – 1998) during which extensive research was carried out to test its reliability, consistency and validity.

- Rigorous translation procedures were adopted which made it a valid international instrument. By following these translation procedures it has been possible to develop a validated Maltese version of the instrument.

- Following the revision of EUROPEP in 2006, its authors also developed a user manual. By following this manual, the Maltese version of EUROPEP could be applied to the Maltese Islands with the assurance that its reliability and validity will still stand.

- In a review conducted by Richard G Evans, Adrian Edwards et al in 2007, the authors identified EUROPEP, together with only five other instruments, as having been used for individual performance feedback.
Translation of the EUROPEP into the Maltese language

Permission was sought from the EUROPEP Group Coordination, Dr. Michael Wensing.

Two professional translators, who were totally independent from each other, were brought on board to carry out such a task. Initially the English version of the EUROPEP questionnaire was translated by one of the translators into the Maltese language. Afterwards the Maltese version of the EUROPEP was translated back into the English language by the other translator who was not aware of the English version. This back translation was done in order to ascertain that no alteration was done to the initial EUROPEP version. The go ahead to use the Maltese version of the EUROPEP was given once a consensus was reached between the two translators.
Pilot testing and validity testing

- A group of fifteen individuals made up of lay people varying in age, gender and different educational background, were selected.

- Each individual was contacted and interviewed via telephone and a run through of the Maltese version of the EUROPEP was carried out. During each and every phone interview, notes were taken regarding any queries, misunderstandings or any difficulty these individuals were having in understanding the questions they were being asked.

- Once all the interviews were carried out, the professional translators were once again approached and those questions which were proving problematic to people, were reworded such that they could be easily understood by laymen.

- Once the Maltese EUROPEP instrument had been corrected and validity testing carried out, it was ready to be used on a large scale.
Testing for reliability

- Twenty three individual were selected for such a process. These participants included family members and friends.

- Each individual was called via telephone and the new Maltese EUROPEP questionnaire was carried out and each response was noted and corresponded.

- After four weeks each and every individual was recalled. They were asked the Maltese EUROPEP questionnaire. The results obtained from each individual was inputted, cleaned, cross checked, and analysed by means of SPSS with the corresponding individual’s previous results.

- This laborious process was carried out in order to be able to test the questionnaire’s reliability.

- The term reliability implies "repeatability" and "consistency". A measure is considered reliable if it gives the same result over and over again assuming that what is being measured is constant.

- The intra class correlation coefficient test was the chosen test to check test re test reliability of the Maltese version of the EUROPEP questionnaire. In statistics, this is considered to be the gold standard since it is a descriptive statistic that can be used when quantitative measurements are made on units that are organized into groups.

- All the questions reached a score of \(0.8\) or higher. This meant that the questionnaire was reliable and could be used on a large scale.
Sample size estimation

- It was assumed that in a worse case scenario one can get 50% of respondents answering in one way as against another 50% in the opposite way. The confidence interval was assumed to be not more than 18%, and using the percentage of MISCO for response rate of telephone interviews was also taken into consideration. Taking account of these assumptions, it was calculated that the number of participants needed to satisfy the above criteria was 239.

- The electoral registry was approached and requested to help in generating a list of randomly selected individuals by using a computer programme the electoral registry has developed for random sample selection of the Maltese electorate.

- The use of the latest electoral register, reflecting the situation as on 1st October 2008, carried other advantages.
  
  ✓ It ensured that most of the phone numbers forwarded by the electoral registry were actually still in use,
    ✓ all participants were above eighteen years of age,
      ✓ they were Maltese citizens
      ✓ most individuals were still alive.
Method chosen to carry out the interview

- At the design phase it was decided that phone interviews were the chosen method to carry out the Maltese EUROPEP questionnaire.

- One had to consider the specific attitude of most Maltese towards questionnaires. Most Maltese do not usually follow up written requests to complete written questionnaires, and many would be reluctant to speak openly during personal interviews, especially if it concerns their doctor.

- A group of five highly skilled persons, who are all experienced in telephone based interviews, were selected and trained for three consecutive weeks on how to carry out the telephone interviews.

- During the interviewing period, meetings were regularly held with the team conducting the interviews in order to check whether everything was running smoothly and if any problems arose, it were tackled there and then.

- All the above lead to the satisfactory response rate of 74.45%.
Inclusion / exclusion criteria for the interview

- The sample population was eighteen years of age or older and had to be fluent in the Maltese language. To ensure these criteria, the randomly selected sample of 239 phone numbers was obtained from the last electoral register (2008). This ensured that most of the phone numbers forwarded was actually still in use, and that all participants were above eighteen years of age, were Maltese citizens and that most of them were still living in Malta and were still alive.

- Anyone who did not fit these selection criteria was excluded from the sample list and replaced by eligible participant selected from a reserve list.
A consent form was drawn up.

This was read to each and every interviewed individual prior to the commencement of the EUROPEP questionnaire.

It was simple to read and follow. It explained the aim of study and highlighted the benefits to general practice care in Malta that could be gained from the results of this research. The approximate duration of the interview was explained to the participants prior to its commencement so that if they were not ready to participate or if this was not a good time, they could stop the interview and could be contacted later at a more convenient time.

People were reassured that their participation was on a voluntary basis and that the phone interview was strictly confidential and their replies were untraceable.
Questionnaire and testing for internal consistency

- The duration of the questionnaire was approximately ten minutes.

- The interview consisted of the 23 EUROPEP questions and a further nine questions were added to obtain additional information about the participants and help in the analysis of the results.

- These additional questions dealt with gender, age, educational level, perceived health status, chronic illness, number of chronic illnesses, and location from where the participants obtained their primary health care and the number of times they visited their general practitioner over the past four months.

- Once all the interviews were carried out, the results of the EUROPEP were pooled together and compared using the Cronbach $\alpha$ (alpha). This revealed internal consistency of the scales.
The total number of calls made was 239.

22 individuals were not interested in participating.

38 never picked up the phone or had changed their phone line.

1 individual had an automated answering machine.

Overall response rate of 74.45% which satisfied the purpose for this study. This response rate compared well with that obtained by most patient evaluation surveys. When one considers the general mistrust towards questionnaires prevalent among the Maltese population, such a high participation rate could only be obtained by the highly professional approach of the interviewers and by the clear and unambiguous nature of the questionnaire itself.
Most telephone based surveys show a preponderance of female respondents. EUROPEP's results in ten European countries also showed that almost two-thirds of respondents were female.
This distribution according to educational attainment is nearly identical to that obtained by the HIS 2008 Survey. One can say that this distribution reflects that of the overall population in the Maltese Islands. (NSO Population Census 2005). Therefore it is not apparent that better educated patients responded more readily to the questionnaire.
This distribution by self-perceived health status is very close to that obtained by the HIS 2008 Survey, though the categories are named differently. The categories for the HIS 2008 Survey run from very bad to bad, fair, good and very good. The results of the two surveys with regard to the two lowest categories (very poor/very bad and poor/bad) are identical. The other categories roughly correspond. Once again this distribution is very close to that for the population as a whole, and therefore, one cannot conclude that people with a self-perceived health status of good or excellent are more willing than those with a self-perceived health status of poor or very poor to give their evaluation of the general practice care they receive.
Nearly 40% of respondents reported one or more chronic condition. It is probable that most, if not all, respondents reported their condition in accordance with the diagnosis they had received from their general practitioner. In other words it is unlikely that respondents would “invent” a chronic condition. Therefore, one should expect this result to tally with the rates for chronic diseases given in other sources. In fact it tallies with figures for chronic conditions given in the HIS 2008 Survey and NSO survey. Once again this distribution reflects the normal distribution across the whole population, and one cannot conclude from this result that this variable influenced response rate.
This result is consistent with the findings of the HIS 2008 Survey, which concludes that the private sector roughly accounts for two-thirds of primary health care provision. It also shows the readiness of patients to avail themselves of both sectors. It is important to keep this result in mind when one comes to consider patient evaluation of general practice care. Nearly 60% of respondents would be reporting on their experience with private general practice care.
Respondents who said they had visited a private family doctor outnumber those who visited a public family doctor by 3:1. However, there is an important conclusion to be drawn from comparing these two figures. It shows that most of the respondents, who say that they may consult both private and public general practitioners, are the ones who reported not having seen a family doctor during the previous four months.
Global mean satisfaction score and 95% confidence interval for the five dimensions of the general practitioner service that are covered by the 23-items in the EUROPEP questionnaire.

Highest overall score was in doctor – patient relationship; medical care and organisation of care are level at 4.30; information and support scored 4.00 and the lowest score was in accessibility.

The most negative judgements concern waiting time and getting through to the practice, which are aspects related to accessibility.
This chart shows the total scores for the five dimensions of care and their distribution by gender. It shows that the mean score for all dimensions, with the exception of information and support, where the scores are nearly level, women expressed a more positive evaluation of primary health care than men. The difference is most marked in the dimension for doctor – patient relationship, followed by the dimension on organisation of care, then that on access to care and that on medical care.
This chart represents the distribution of scores for the evaluation of general practice care according to service provider. In all five dimensions the private general practice care scored higher, with the most significant difference in the dimension for accessibility. It is followed by that of doctor–patient relationship and that of medical care. The differences for the dimensions of information and support and organisation of care are less pronounced. This clear result in favour of the private general care needs an explanation.
This table shows the internal consistency in all dimensions of general practice except for Organisation of care, which is covered by questions 16 and 17. This can probably be explained by the fact that only 2 items are tested.

<table>
<thead>
<tr>
<th>Dimension</th>
<th>No of Items in dimension</th>
<th>Chronbach Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Doctor patient relationship.</td>
<td>6</td>
<td>0.874</td>
</tr>
<tr>
<td>Medical Care</td>
<td>5</td>
<td>0.840</td>
</tr>
<tr>
<td>Information and support</td>
<td>4</td>
<td>0.732</td>
</tr>
<tr>
<td>Organisation of Care</td>
<td>2</td>
<td>0.601</td>
</tr>
<tr>
<td>Accessibility</td>
<td>6</td>
<td>0.748</td>
</tr>
</tbody>
</table>
### Correlation between dimension mean score and age.

<table>
<thead>
<tr>
<th>Dimension of care</th>
<th>Pearson Correlation</th>
<th>Sig. (2-tailed)</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Doctor Patient relationship (NS)</td>
<td>0.069</td>
<td>0.363</td>
<td>178</td>
</tr>
<tr>
<td>Medical care (NS)</td>
<td>0.016</td>
<td>0.828</td>
<td>178</td>
</tr>
<tr>
<td>Information and support (NS)</td>
<td>0.005</td>
<td>0.951</td>
<td>178</td>
</tr>
<tr>
<td>Organisation of care. (NS)</td>
<td>0.023</td>
<td>0.765</td>
<td>178</td>
</tr>
<tr>
<td>Accessibility (Sig)</td>
<td>.198(**)</td>
<td>0.008</td>
<td>178</td>
</tr>
</tbody>
</table>

(*. Correlation is significant at the 0.01 level (2-tailed).)

This table represents correlation between the mean scores for each dimension of general practice care and the age of respondents. The only statistically significant correlation appears in the last six questions which relate to accessibility. This may be due to the fact that since most general practitioners work solo, accessibility for younger and working patients may not be too good.
Conclusions

- The high response rate obtained from the application of the EUROPEP instrument in Malta points to a high level of interest on the part of patients to participate in the assessment of the health care they receive. Patient involvement in the formulation of health care reforms is nowadays being seriously considered because it is recognised that patients have an important contribution to make, and the readiness of patients to come forward with their evaluation of primary health care should be recommended.

- The Department of Primary Health Care and the medical profession should encourage patients to express their views on the various aspects of the care they receive and be prepared to make use of the feedback obtained.

- This higher female response rate, which is evident not only in the application of EUROPEP but also in other surveys, clearly points to a higher interest by females in the care they receive. This view is corroborated by the higher frequency of visits by females to their general practitioner. It provides sufficient proof that males show less interest in their health and are more reluctant to visit a doctor when they have a problem. This conclusion points to the urgent need for the Health authorities and the Medical profession to encourage male patients to look after their health better and to convince them of the value of regular check ups and of preventive medicine.
According to this study the level of education of respondents has influenced their evaluation of accessibility. One possible explanation is that better educated patients usually work and have more commitments than lesser educated people. They are likely to have less time to spend in the waiting room and become easily impatient when they have to wait. In such cases it is understandable that they would wish for improvements in accessibility.

The dimensions of doctor–patient relationship, and of information and support are the two dimensions shown to have been varied according to the perceived health status of respondents. A possible explanation is that respondents with poor health status are bound to visit their general practitioner more often and need much information and support from their general practitioner to deal with their illness. Respondent with a self-perceived good health status may not even bother to visit a general practitioner and feel that they do not need information and support. They will therefore show less appreciation for these two dimensions. This is in line with results of the use of EUROPEP in other European countries, where older and more vulnerable respondent were found to be more positive in their evaluation of general practice care.
Efforts should be made by the Health authorities and the medical profession to persuade that section of the population with a perceived good health status of the very important need of preventive care and regular monitoring of their health. People in good health need to visit their general practitioner as much as those with health problems. Regular check ups and advice on lifestyle and preventive medicine are not only advisable but essential to the maintenance of good health.

The presence of chronic disease did not have any impact on patients' evaluation of their general practice care. One possible explanation is that chronic disease is not being adequately addressed by general practitioners and as a consequence chronically ill patients are indifferent to the performance of their general practitioner and to the care they receive. If this explanation is correct the situation calls for improvement since it is the general practitioner who carries the responsibility to treat chronically ill patients on a day-to-day basis.
A possible tool to bring about the required improvement in the treatment of chronically ill patients could certainly be the introduction of registration. In the current primary health care system in Malta patients visiting Health Centres are not registered with a particular general practitioner and are seen by the doctor who happens to be on duty. Lack of registration is not conducive to adequate continuity of care, which is crucial to the treatment of chronic conditions.

The public primary health care service needs to be improved in order to provide the same level of satisfaction among patients as the private primary health service. This objective should be at the basis of any reform of the health sector that is envisaged.
It is clear that the issue of accessibility needs to be holistically addressed. Accessibility involves a number of ways through which a patient may seek to get in touch with his general practitioner.

Problems with accessibility seem to be related to the time constraints on the general practitioner. In Malta most general practitioners run a solo practice, without secretarial or nursing staff support. Home visits are frequent, resulting in time wastage on driving to reach the patient's residence.

Many of the younger general practitioners try to run a private practice in addition to their work in the public general practice in order to improve their income. All these circumstances impose severe time limitations on general practitioners who on many occasions find it difficult to cope with their private or public practice, or a combination of both.

Problems of accessibility can only be solved within the framework of a reform of the primary health sector, which will lead to a lighter workload and appropriate remuneration for general practitioners. This will allow general practitioners to manage their practice better, which will obviously ease problems of accessibility.

Group practice, which is only just beginning in Malta, may also lead to the development of practices that are better organised and within which the general practitioner is supported by secretarial and nursing staff.
The private sector is perceived as providing a better service. This indicates that in the Maltese Islands, in general, patients report that private general practice care is better than that provided by the public sector.

The HIS 2008 survey confirms this result where it compares the satisfaction rates for private and public practice across the whole health sector. It reports that 96% of patients are satisfied with the private GP, while only 78.3% express satisfaction with their public GP. This trend is confirmed by results on specialist care and on hospital care. In both instances the satisfaction rates are higher for private specialists and for private hospitals.
This situation can only be adequately addressed within the context of an overall reform of the public primary health sector, which would include, among other measures, a system of patient registration, better remuneration and working conditions to attract a sufficient number of general practitioners to the public sector, and an upgrading of the physical environment of public health centres and clinics.

The results of the study show that the highest satisfaction scores were obtained for the dimension of doctor–patient relationship. This is an encouraging result since the cornerstone of general practice care is a formal yet personal and sustained relationship between the GP and his/her patient.
Lets hope!
Do we ever win?

“I would have been here sooner, if not for a wonderful, caring, competent doctor.”