

Patient Experience of Primary Health Care in Malta: A Quantitative Study

Jacob Vella, Liberato Camilleri, Philip Sciortino

Abstract

Background: Patient experience is an important factor in needs assessment in primary care provision.

Aim: The aim of the study was to assess patient experience of the Maltese primary health care (PC) and compare the public with the private sector.

Design and Setting: A quantitative, cross-sectional (observational) retrospective study was carried out. 240 participants were randomly selected from all 3 Maltese primary care department catchment areas. Participants were allocated into two equal groups: public and private groups according to their PC provider sector.

Method: Data was collected via telephone interviews using the Primary Care Assessment Tool (PCAT). PCAT computes 2 summative scores: the primary care score (PCS) and primary care extended score (PCES) with maximum score of 32 and 44, respectively. An adjustment model inferred predictors of higher quality primary care.

Results: Overall ($n=240$), PCS and PCES registered 23.15 (72.34%) and 30.54 (69.40%), respectively, with a slight significant intersectoral difference in mean PCS with the public sector scoring the highest score (23.15 vs 22.99, $p=0.045$). No overall statistical difference is registered for the overall PCES. Better perceived health and the public care sector were the most significant predictors of better primary care scores.

Conclusion: The public sector scored higher than the private sector in patient-reported primary care experience. The most significant predictor of a higher score was good perceived health followed by having the public sector as main primary care provider. Both sectors equally showed low sensitivity to the cultural and cultural dimensions of primary care.

Further research, improved continuity of care and comprehensiveness of services would further improve the experience of the patient in a better coordinated system.

Keywords

primary care, primary care assessment tool, patient experience, patient satisfaction

Introduction

Primary health care is the first level of care and most individuals in Europe satisfy their health needs with its services.¹

Primary care (PC) in Malta is a dual system between the public and the private sector.² The public sector is run through walk in, 24-hour health centres.² The private sector is mostly offered by solo family doctors through community pharmacies or own clinics with varying services and availability.²

The aim of the study was to compare patient experience in both sectors and identify the factors and PC domains which lead to better perceived care through the Primary Care Assessment tool (PCAT).³

Jacob Vella M.D.; M.Sc. Family Medicine (Melit.)*

GP trainee

Primary Health Care Department,
Malta

jacob.vella@gmail.com

Liberato Camilleri M.Sc.; Ph.D.(Lanc.)

Associate Professor

Statistics and Operations Research

University of Malta

Msida, Malta

Philip Sciortino M.D.; M.Sc.Public Health (Melit.)

Head of Department

Department of Family Medicine

Medical School

University of Malta

Msida, Malta

*Corresponding Author

Methods

Research setting

Experience of primary care was analysed among members of the general public coming from the 3 geographical catchment areas designated by the Department of Health: the North, Central and South regions.⁴

Design and method

A quantitative, cross-sectional (observational) retrospective study was carried out. This format was deemed as mostly fitting the aim of the study that is to provide a picture of the current overall primary care experience in Malta.

Data was collected retrospectively via telephone interviews among participants from the 3 main catchment areas via the English (EN) and Maltese (MT) versions of the Expanded Version of the Adult Primary Care Assessment Tool (AE-PCAT). Participants who verbally consented to participate were given the choice of continuing the structured interview in either English or Maltese.

Research Tool

PCAT was developed⁵ and validated⁶ by the John Hopkins Primary Care Policy Center and it was concluded that it can be used as a quality measurement tool that assesses the adequacy of primary care experience. Azzopardi translated and validated AE-PCAT in Maltese.⁷

AE-PCAT computes the primary care score (PCS) and the primary care extended score (PCES). PCS, with a maximum score of 32, is summative of 8 core domains while PCES, with a maximum score of 44, includes an additional 3 derivative domains. The domains are the following:

Core Domains (8)

- A) Extent of affiliation with a Place / Doctor
- B) First Contact in terms of Utilisation
- C) First Contact care in terms of Access
- D) Ongoing Care
- E) Coordination of Care
- F) Coordination of Information Systems
- G) Comprehensiveness of Services Available
- H) Comprehensiveness of Services Provided

Derivative Domains (3)

- I) Family Centeredness
- J) Community Orientation
- K) Culturally Competent Care

Study population and sampling

The study population, 240 in total, was randomly selected between June and July 2015 from the 2014 Malta electoral register⁸ and stratified according to geographical area, sex, and put into either the public or private sector group (depending on their main primary care provider) as follows:

- o Public sector $n=120$
predominantly/exclusively using public service
 - Northern
 - Central 40 participants / region
 - Southern
- o Private sector $n=120$
predominantly/exclusively using private service
 - Northern
 - Central 40 participants / region
 - Southern

Individuals under 30 years of age were excluded in order to make sure that participants had enough PC experience and had seen a PC provider for at least 3 episodes of care. Gozo was also excluded.

Sample size was calculated via an online sample size estimator⁹ based on differences of 2 reference intersectoral proportions for primary care experience from the 2008 National Health Interview Survey (NHIS).¹⁰ A minimum of 100 participants per group were estimated to be needed to guarantee a satisfactory margin of error, assuming a 95% confidence level. Augmenting the sample size to 120 participants per group increased statistical power of the tests.

Ethical considerations and approval

Permission from authors to utilise the Maltese and English versions of the AE-PCAT was kindly granted by both.

The study was approved from the University Research Ethics Committee (UREC).

Verbal informed consent, anonymity and withdrawal at any time from the study were incorporated in the tool by its original author (Starfield et al., 2005) so that all potential participants are clearly informed of their rights.

Data Analysis

Raw data collection and descriptive statistics

were computed using Microsoft® Excel® while the Statistical Package for Social Sciences® (SPSS®) was used for inferential statistics.

Both overall PCS and PCES scores manifested right-skewed distribution and both the Kolmogorow-Smirnov and Shapiro-Wilk tests yielded p-values less than 0.001 indicating non-normal distributions. The Mann-Whitney U test was used to compare mean PCS and PCES scores between public and private sectors, where a 0.05 level of significance was adopted.

To accommodate the right skewed distribution of PCS and PCES, two generalised linear models (GLMs) were fitted to relate PCS and PCES to ten predictors which included geographical area, PC sector, sex, perceived health, chronic illness, employment status and sector, education level, number of breadwinners and age. Both models

assumed a Gamma distribution and an identity link function.

Results

The overall reponse rate was 80% (n=240) with 55.4% female participants. Participant age ranged from 30 to 89 years and the overall mean age was 56 ± 16.3 years. There were no significant intersectoral differences for both sex and age.

Figures 1 and 2 show regional and national mean PCS and PCES, respectively, with univariate testing for significant differences between mean scores of both sectors. Overall (n=240), PCS scored higher as percentage of the full score when compared to PCES in all regions; overall mean PCS score was 72.34% (23 out of 32) while PCES scored lower with a mean of 69.48% (31 out of 44). Similar discrepancies were seen regionally.

Figure 1: Mean Primary Care Scores (PCS). Maximum score for PCS is 32. Column length represents percentage score from the respective group. Overall (n=240) scores are represented in a darker shade. Statistically significant intersectoral p-values are in bold.

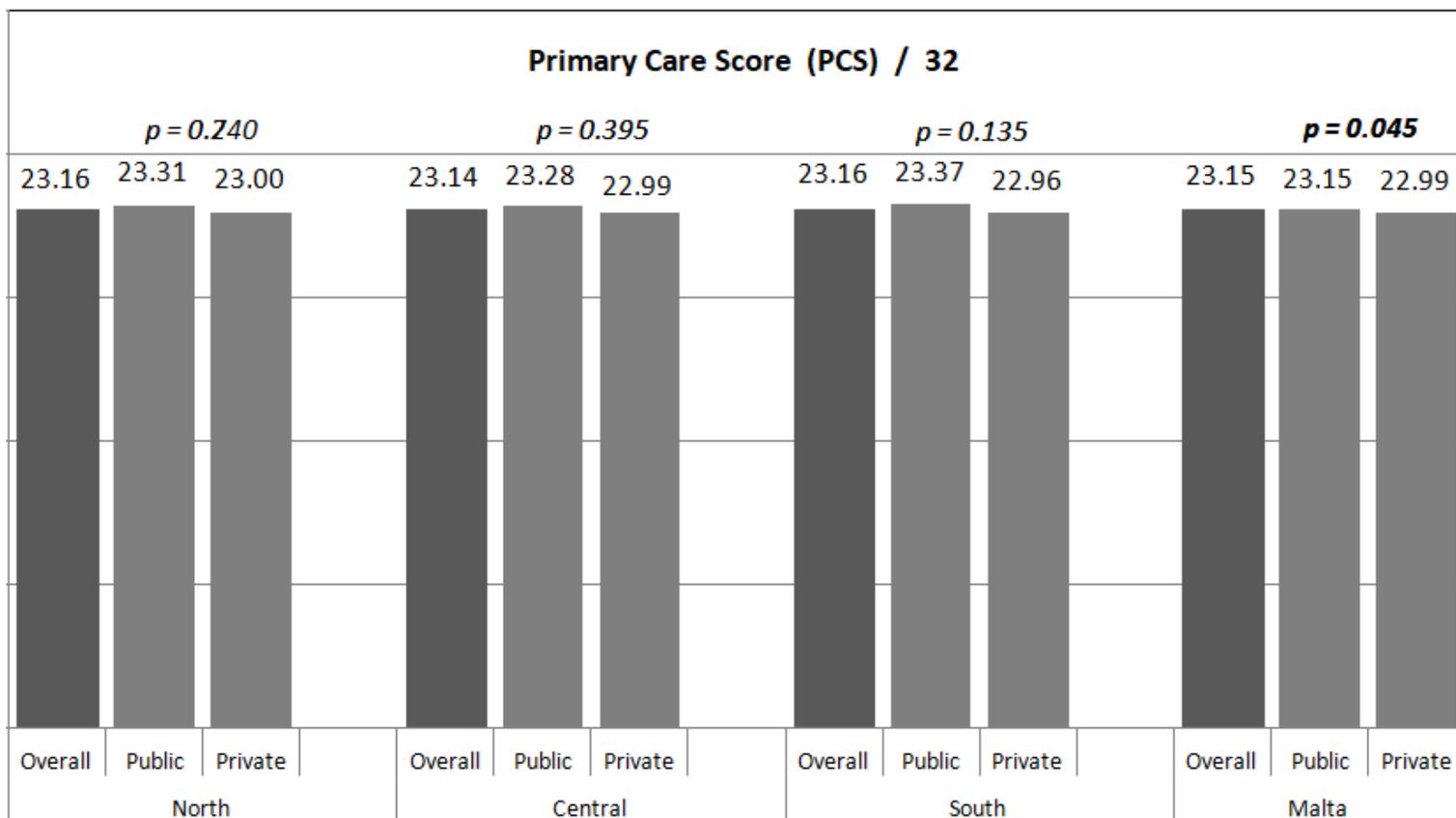


Figure 2: Mean Primary Care Extended Scores (PCES). Maximum score for PCES is 44. Column length represents percentage score from the respective group. Overall (n=240) scores are represented in a darker shade.

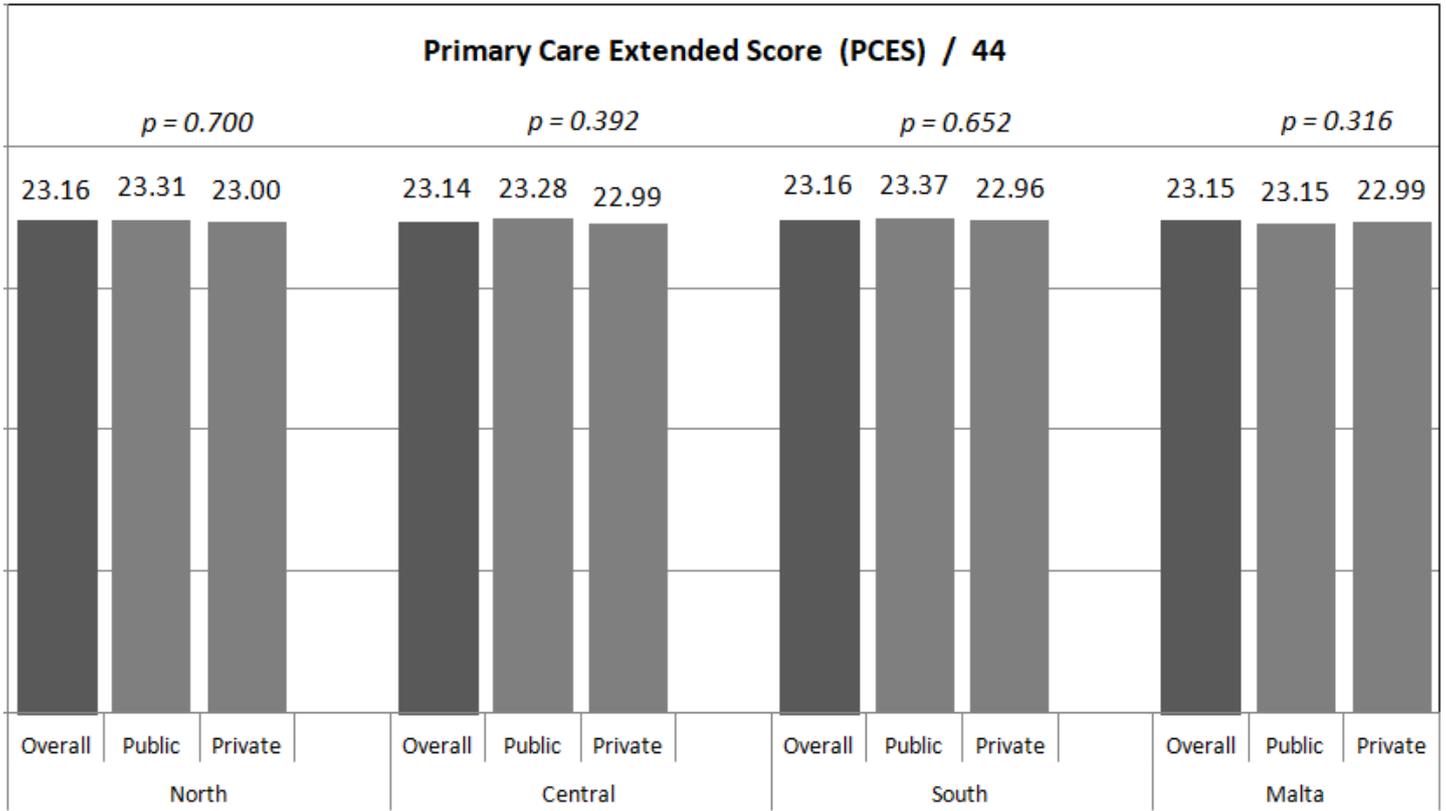


Table 1: The test of model effects relating the national (n=240) Primary Care Score (PCS) to 10 demographic and socioeconomic predictors. Predictors are arranged in order of significance and statistically significant ones and their respective P-values are in bold for both initial and parsimonious models

Predictors	Tests of Model Effects (Gamma distribution)		Parsimonious model	
	Chi-Square	df	P-value	P-Value
Intercept	1885.361	1	0.000	
Perceived Health	7.459	2	0.024	0.040
Primary Care Sector	3.782	1	0.052	0.015
Age	0.557	1	0.456	
Chronic Illness	0.349	1	0.555	
Employment Sector	3.771	5	0.583	
Employment Status	1.423	3	0.700	
Sex	0.068	1	0.795	
Education	0.618	3	0.892	
Geographical Area	0.400	2	0.819	
Breadwinners	0.145	2	0.930	

Table 2: Parameter estimates for the mean national ($n=240$) Primary Care Score (PCS) for perceived health and sector predictors identified as significant in the parsimonious model.

Predictor	Parameter Estimates	Hypothesis Test	
		Chi-Square	P-value
Intercept	22.519	15622.262	0.000
Primary Care Sector (Public) Primary Care Sector (Private)	0.399 0	5.921 .	0.015 .
Perceived Health (Excellent) Perceived Health (Good) Perceived Health (Poor)	0.722 0.478 0	10.488 5.929 .	0.001 0.015 .

Both unadjusted PCS and PCES registered similar results in all regions leading to insignificant differences between the public and private sector. However, when summing all regions together ($n=240$) PCS registered a statistical difference ($p=0.045$) with the public sector having the higher (23.15 vs 22.99) mean score. No overall statistical intersectoral difference was registered for the overall mean PCES.

Table 1 shows the results of the tests of model effects, where the 10-predictor model yielded one significant predictor of PCS. However, by using a backward procedure, the parsimonious model identified two significant predictors of PCS, which included perceived health ($p=0.004$) and PC sector ($p=0.015$).

Table 2 shows the parameter estimates and their corresponding p-values. The mean PCS for the public PC provider was 0.399 higher compared to the private counterpart and the difference was significant ($p=0.015$). Similarly, the mean PCS for an excellent and good perceived health rating were respectively 0.722 and 0.478 higher than a poor perceived health rating and both differences were significant ($p=0.001$ and $p=0.015$, respectively).

The generalised linear model relating PCES to the 10 predictors identified no significant predictors.

Discussion

Strengths and limitations

A response rate of 80% indicates good representation of the general population and it can be confidently assumed that results can be generalised to the island of Malta. The researcher

attempted to minimise overrepresentation of housewives, unemployed and the elderly by conducting telephone interviews between 1330 and 2100h during weekdays and between 0900 and 2100h during weekends.

The study carried a number of limitations which need to be taken into consideration when interpreting and correlating data.

Recall bias could have both occurred in the study. Moreover, most Maltese citizens utilise both public and private sectors¹¹ especially due to the absence of a registration system with a PC provider². The interviewers could have been perceived as public service officials leading to considerable Hawthorne effect and desirability bias especially when reporting experience in the public sector.

There might have been an overrepresentation of housewives and elderly who invariably tend to respond to telephone calls since they would not be at home and the latter might also be less pressed for time. Mainly due to time and resource constraints, the island of Gozo was excluded from this study. No students participated and the study was limited to adults over 30 years of age; this excluded the paediatric and adolescent populations which make up a considerable proportion of primary care encounters. No foreigners and refugees were included.

There is no data on the details of the primary care provider (PCP), for example the age of the clinician, year of graduation and whether the clinician underwent vocation training.

Summary

Both Primary Care Score (PCS) and Extended Score (PCES) scored similar results in all three regions. However, when combining data from all regions, PCS registered a slight statistical difference with the public sector having the higher mean score. PCES was lower than PCS in all regions and in both sectors with no significant difference in intersectoral and interregional mean score comparisons.

Perceived health was the strongest predictor of high PC scores. PC sector was the only other significant predictor – this confirmed the result of unadjusted scores which showed better overall scores in the public sector. The reason behind having excellent or good perceived health as main predictor of a high PCS could be that people who truly are in good health tend to require less encounters with the healthcare system. Additionally, when they do, they would tend to have their demands met and achieve good outcomes with respect to individuals with multiple comorbidities and complex management.¹²

The small dimensions of the Maltese island could be the main factor leading to similar scores in all three regions.

Public sector users registered a slightly higher PCS when compared to private users possibly due to, as also suggested through national data², round the clock availability, better documentation and comprehensiveness of services in the public sector. A lack of services provided is one of the challenges in the private sector – most patients are referred to public PCPs or secondary care when it comes to blood investigations, suturing, plaster immobilisation and other services dependent on the availability of equipment. The private sector is mostly run by a solo general practitioner without nursing and reception staff, thus again limiting communication, logistics, and extent of services available.²

A low overall PCES suggests that the national PC service needs to address shortcomings in both sectors with regards to sensitivity to the cultural and community dimensions of PC. Despite no mention in local literature about this, it could be that such considerations might improve through the relatively recent introduction of the Specialisation Training Programme in Family Medicine and the concept of the biopsychosocial model of medicine in undergraduate medical education.

Comparison with existing literature

Both mean PC score (PCS) and extended score (PCES) were below 75%, which are in line with results from a European comparative study suggesting relatively weak PC economic conditions, workforce development, continuity of care and comprehensiveness in Malta leading to an overall relatively weak score.¹³

Overseas studies vary considerably with regards to national health care systems, methodologies and primary care service structure. Despite similar methodologies, the complex cultural and geographical differences between Malta and other health care systems make any comparison doubtful with regards to validity.

Wong and colleagues compared public and private PCPs in Hong Kong among 1,000 adults using a modified version of the Chinese AE-PCAT via telephone interviews.¹⁴ As most previous local studies^{10,15}, and contrary to this study, results showed that private PCP patients reported a better experience of primary care. Conclusively though, as in most Maltese adults, most patients in Hong Kong resorted to both public and private sectors and therefore the results might not be reflecting a true difference between both sectors.¹⁴

The European Health Interview Surveys (EHIS) conducted in Malta^{10,15} and a recent study by Pullicino¹¹ are similar local studies regarding patient experience in primary care. None of them utilised the PCAT questionnaire. The 2002 EHIC showed that 83.1% of public sector patients, compared with 96.1% from the private sector, were satisfied with the care received.¹⁵ The 2008 EHIC showed a lower proportion (78.3%) of public sector patients who were satisfied whereas a similar proportion (96.0%) of private sector patients expressed satisfaction of care experienced.¹⁰ Similarly to this study, Pullicino, who interviewed 624 patients in 2014, found no significant intersectoral difference in patient experience.¹¹

A steady improvement in the public sector, especially from the start of this decade, can be observed. Currently, the public and private sectors seem to equilibrate in terms of overall perceived quality.

Implications for research and practice

This study, when compared to other studies, showed a steady trend of improvement in the public sector. Despite the relatively good primary care

scores (PCS and PCES) in both sectors there are still large lacunae which are deterring holistic and appropriate primary care. It is therefore of no revelation that most adults resort to both sectors since none of them offer what patients expect.

Indeed the Maltese 2014 – 2020 National Health Systems Strategy (NHSS) is the document encompassing the ongoing health system reform in Malta.¹⁵ The study goes in line with what the authorities are trying to foster, that is having primary care as the foundation for better health, increase trust in the public primary care system, having the family doctor acting as gatekeeper for secondary and tertiary care, and better communication between primary and acute care.¹⁶

The same document mentions the development of appropriate legal and regulatory framework to encourage the setting up of more group practices with financial and other incentives to support capital and other investments in the private sector.

The NHSS also mentions that patients will be encouraged to be affiliated with a regular primary care provider although there is no mention of how this will be implemented.¹⁶

Conclusion

The public sector scored higher than the private sector in patient-reported primary care experience. The most significant predictor of a higher score was good perceived health followed by having the public sector as main primary care provider. Both sectors equally showed low sensitivity to the cultural and cultural dimensions of primary care.

Further research, improved continuity of care and comprehensiveness of services would further improve the experience of the patient in a better coordinated system.

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