

# Is any particular aspect of perceived quality associated with patients tending to promote a dental practice to their friends and colleagues?

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## VERIFIABLE CPD PAPER

### IN BRIEF

- Explores the origins of the NHS Friends and Family Test in the Reichheld Net Promoter Score (NPS).
- Indicates that perceived value for money is the perceived quality most highly correlated to the likelihood of patients recommending a practice.
- Suggests that the Friends and Family Test might be a reasonable indicator of perceived quality.

**Aims** To investigate the relationship between perceived quality and patients' tendencies to recommend a practice to friends and colleagues. **Methods** Data from 64 practices using the Denplan Excel Patient Survey (DEPS) were analysed. The Net Promoter Score (NPS max score 100), developed by Reichheld, is reported to each practice using DEPS. It is claimed that the NPS measures the likelihood that patients will recommend the practice to friends and colleagues. A Patient Perception Index (PPI max score 100) is also reported to practices. The PPI is calculated from the responses to the ten core questions of DEPS on perceived quality. The 64 practices were placed into three groups for data analysis according to their NPS result: group one practices receiving an NPS of less than 80, group two practices receiving an NPS of 80–89 and group three practices receiving an NPS of greater than 89. These groups represented practices scoring statistically significantly (to 90% confidence) below the mean NPS (group one), practices close to the mean NPS (group two) and practices statistically significantly (to 90% confidence) above the mean NPS. **Results** Group one practices scored a mean PPI of 73, group two scored a mean PPI of 76 and group three a mean PPI of 80. These differences in values of PPI between the groups are statistically significant (to 90% confidence). Of the ten constituent issues which contribute to PPI, the greatest difference in scoring between group one and group three was found to be around perceived value for money. **Conclusion** The probability of patients recommending a dental practice seems to rise in direct proportion to favourable perceptions of quality. A perception of 'ideal' value for money is the most highly correlated aspect with a high NPS.

## BACKGROUND

With the National Health Service now adopting the Friends and Family Test as a measure of patient satisfaction, it may be timely to explore the relationship of scores measuring the likelihood of patients recommending services with their perceptions of the quality of that service.

### The Reichheld net promoter score

In 2006, Reichheld<sup>1</sup> proposed a measurement of customer loyalty which he called the Net Promoter Score (NPS). Reichheld considered that many companies had become addicted to 'bad profits'. He describes 'bad profits' as those attained by extracting value

from customers, whereas 'good profits' are attained by giving value to customers. Value can be extracted by unfair or misleading pricing, or saving money by delivering a poor customer experience, for example. Conversely, 'good profits' can be achieved with fair and transparent pricing and excellent customer care.

Reichheld explained that companies who rely on 'bad profits' find that they are alienating customers, many of whom become 'detractors', while companies who focus on 'good profits' tend to generate 'promoters'. Customers who become promoters can reduce organisations' marketing budgets. These customers remain loyal and recommend others, meaning the company has no need to indulge in the counter-productive recruitment drives often seen when new customers are offered better 'deals' than existing loyal customers.

Reichheld searched for a metric to measure this vital loyalty until he claimed that a rather simple solution was validated. Customers were asked the following question on a scale of 0–10, where ten was most likely:

'How likely is it that you would recommend this organisation to a friend or colleague?'

Reichheld proposed that customers scoring nine or ten were promoters. Those scoring below seven were detractors. The Net Promoter Score (NPS) was calculated by subtracting the percentage of detractors from the percentage of promoters. Customers scoring seven or eight were referred to as 'passives'. This means that the range of possible scores for any organisation is from -100, where all surveyed customers are detractors to 100 and where all customers are promoters.

The NPS as a reliable predictor of business growth has its critics,<sup>2</sup> nevertheless this metric has been used extensively in many different commercial sectors. The Satmetrix European Net Promoter Industry Benchmark Report<sup>3</sup> surveyed nearly 11,000 UK customers in 2014 and revealed that Apple achieved the top NPS, with a score of 69. The NPS may be measuring the likelihood of customers to recommend an organisation, even if this does not always translate into business growth?

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**THE NHS FRIENDS AND FAMILY TEST**

In 2012 it was announced by the British Prime Minister that the NHS would be adopting a system similar to NPS. He said: *‘With the Friends and Family Test, we now have a single measure that looks at the quality of care across the country.’*

Use of the metric for NHS dental practices is due to commence in April 2015.<sup>4</sup> The NHS version does not use a numeric scale. The Friends and Family Test question for NHS hospitals is:

‘How likely are you to recommend our ward/A&E department to friends and family if they need similar care or treatment?’

Patients are offered the following response options:

- 1. Extremely likely
- 2. Likely
- 3. Neither likely or unlikely
- 4. Unlikely
- 5. Extremely unlikely
- 6. Don’t know.

Patients must be surveyed at or within 48 hours of discharge. The Friends and Family Test NHS score is then calculated by subtracting the percentage of patients responding with statements three, four and five, from those responding with statement one. Extensive guidance has been issued on the operation and publication of the Friends and Family Test score by NHS England. However the method of data collection is not specified. Tablet devices, text messaging and paper based versions are all in use. NHS England does concede that these variations in collection might lead to a ‘mode effect’ making comparison less reliable. The data were published on 31 July 2014, for the month of June 2014.<sup>5</sup> One hundred and fifty-six acute NHS trusts all submitted data from a total of 123,444 inpatient responses (response rate 38%). The average Friends and Family Test score was 73. Accident and Emergency departments were also surveyed (149,887 responses with a response rate of 21%) and their Friends and Family Test score was found to average 53.

It is interesting to note that NHS England have chosen not to use the numerical scale which has been adopted in the commercial world. In their words this is to ‘clarify and simplify the response scale’. Public services are clearly different to commercial organisations in that ‘good profits’ *versus* ‘bad profits’ (the core driver for Reichheld to develop the NPS) are not the issue. However similar concepts such as provider-centred care *versus* patient-centred care could be highly relevant in public services such as the NHS in this regard.

Fig. 1 The Denplan Excel Patient Survey survey document

Table 1 Mean PPI for each of groups one, two and three

NPS Group	Mean PPI	Average number of responses per practice
Less than 80 (n = 13)	73 (range 68–76)	173 (range 52–570)
80–89 (n = 28)	76 (range 71–83)	184 (range 54–922)
More than 89 (n = 23)	80 (range 64–87)	150 (range 50–365)

The mean PPI for all 64 practices was 76; the mean NPS for all 64 practices was 85; the range of NPS for all 64 practices was 64–98; the average number of responses across all 64 practices was 170. PPI: Patient perception index.

The independent contractors in the UK who own dental practices more closely resemble commercial organisations, even within the NHS, partly because of patient charges. The majority of dental practices also offer some private care and a proportion of dental practices are wholly private, without any NHS contract.

**THE DENPLAN EXCEL PATIENT SURVEY**

Denplan Excel<sup>6</sup> is a voluntary practice certification scheme based around five patient centred practice commitments one of which is:

‘We care what our patients feel and think about the practice and will listen and act upon their views and opinions.’

Certification is open to any UK practice, irrespective of the mix of NHS and private practice. At the time of writing just under 1,000 dentists are certified. From its launch in 2000, the scheme has operated a patient

survey to support the commitment quoted above. The first version of this survey included the question:

‘Would you recommend your dentist to a friend?’

The following response options were offered:

- Definitely not
- Unlikely
- Probably
- Definitely
- Already have.

This was prior to Reichheld’s publication and therefore no net promoter score could be calculated. In fact, this scale would not lend itself easily to such a calculation.

In 2010, Busby<sup>7</sup> published work entitled ‘Measuring practice success’ using a concise patient survey of ten questions, which focused on those aspects of care found to be (in a literature review) most important to patients.

Table 2 Patients in each 'contract' group for all respondents

	Denplan	FPI Private	NHS	Not stated
Total number	6635	2579	1074	513
% of whole sample	61.4	23.9	9.9	4.7

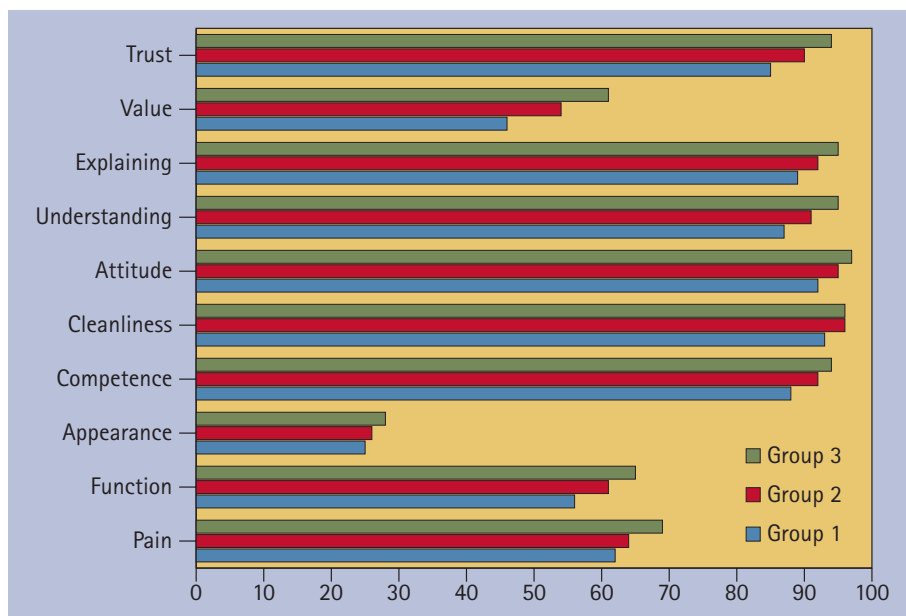


Fig. 2 Mean result for each of ten core questions for each of groups one, two and three

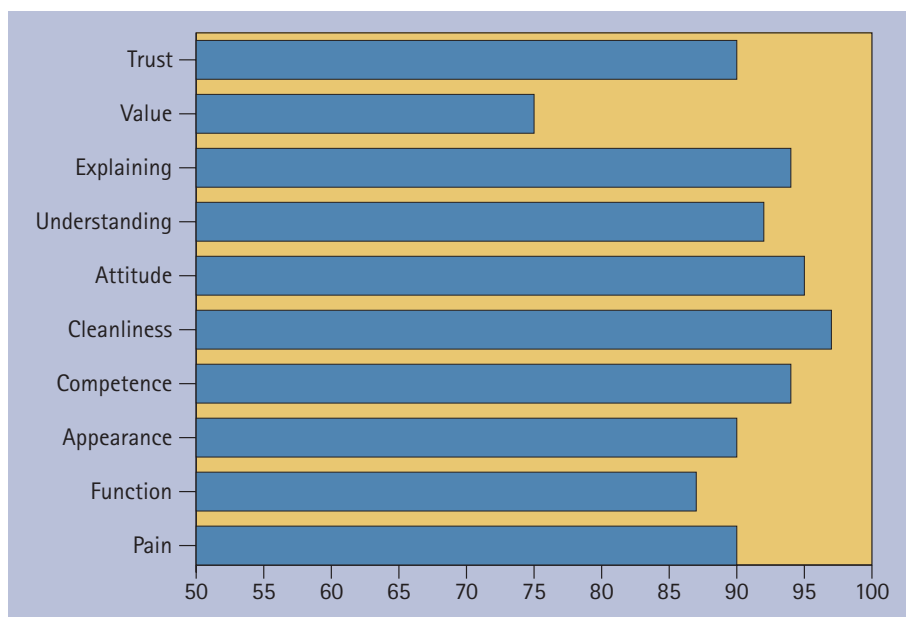


Fig. 3 The average results on 'ideal' grading for group one expressed as a percentage of the average results on 'ideal' grading achieved by group three for each question

These core questions were adopted into a revision of the Denplan Excel patient survey (DEPS) at the end of 2010. Busby *et al.*<sup>8</sup> published results from the early use of this instrument by 61 practices, who achieved a total of 7,381 responses. The Reichheld NPS was discussed by Busby *et al.*<sup>8</sup> Indeed, an authentic version of the 'ultimate question' was adopted into the revised DEPS as question 12 (Fig. 1): 'How likely is it that you would recommend your dental practice to a friend or colleague?'

In response a numeric scale of 0–10 was used, where zero is not at all likely and ten, extremely likely, is used. The average NPS for this group was reported as 76.

Busby *et al.*<sup>8</sup> discussed, at length, the results in respect of the ten core questions focusing on those aspects of care shown to be most important to patients. Three grades of scoring options are offered to patients on these ten questions (Fig. 1): ideal, acceptable or unacceptable. The logic for this grading,

the evidence for it and its value in actual survey operation are also discussed in the 2012 paper.<sup>8</sup> The proportion of ideal grades achieved across all ten questions is known as the Patient Perception Index (PPI). The mean result from these first 61 practices to use DEPS was reported as 74.

Since 2010, around 600 practices have used DEPS giving a data base now of well over 100,000 patient responses. Many practices have now conducted their second DEPS, as they are repeated on a three year cycle.

The aim of this paper is to investigate the relationship of the scores received for the ten core questions with the level of NPS achieved to establish whether:

- The general level of perceived quality (as measured by the PPI) is associated with a tendency to promote a practice as measured by NPS
- Any specific aspect of perceived quality (measured by each of the ten core questions) is associated with a high NPS.

## METHODS

The methodology used for data collection in DEPS has been previously reported by Busby *et al.*<sup>8</sup> In the first six months of 2014 64 practices completed their DEPS and achieved more than 50 responses. Practices with less than 50 responses were not included in the study. A total of 10,810 patients responded. These data were analysed by grouping the 64 practices as follows:

- Group one practices receiving an NPS of less than 80. This group represents practices scoring statistically significantly (tested to 90% confidence) below the mean NPS score.
- Group two practices receiving an NPS of 80–89. This group represents practices scoring close to the mean NPS.
- Group three practices receiving an NPS of greater than 89. This group represents practices scoring significantly (tested to 90% confidence) above the mean NPS.

## RESULTS

The results of this study are summarised in Tables 1 and 2 and Figures 2 and 3.

## DISCUSSION

The practices included in this study have volunteered to participate in a certification programme and therefore could not be held to represent a typical cross-section of UK general dental practitioners. The NPS has been taken by the authors as a valid and reliable measurement of the likelihood of patients to recommend friends and colleagues to a practice. The PPI and core questions from DEPS have been taken as a valid and reliable measurement of patient perceived quality of

care. Walonick,<sup>9</sup> for example, points out the challenges around proving the validity and reliability of customer survey instruments. Despite both Reichheld<sup>1</sup> and Busby *et al.*<sup>8</sup> addressing the validity and reliability of their instruments, it has to be accepted that customer surveys are perhaps not precise science. Nevertheless, the authors believe that such instruments give us broad but valuable insights into the perceptions of patients.

With an average NPS of 85, this group of 64 practices studied for this paper can be congratulated as they clearly do not have many detractors. If they could be benchmarked with an organisation like Apple in the UK, who are achieving an NPS of 69, this would be a very pleasing result. However, this is not an entirely equitable comparison as data collection is different in DEPS when compared to Satmetrix. Further, it is generally held that benchmarking is at its most useful when conducted within a particular sector. Therefore, in the absence of directly comparable benchmarks in oral health care in the UK, benchmarking within the group is highly valuable. There is a range of scores across the 64 practices from 64–98. As NHS England chose not to use the numerical scale, direct comparisons with these results and benchmarking from April 2015 will not be possible.

Table 1 illustrates, as we might expect, that the higher the general perception of quality, as measured by the mean PPI, the higher the NPS tends to be. This is based on the mean scores for each group. There are clearly occasional exceptions to this rule however, as illustrated by one practice scoring a very low par 64 on PPI, but achieving a NPS above 89. The differences between each group's mean PPI are statistically significant to 90% certainty.

Figure 2 illustrates a progressive relationship on all ten key aspects of perceived quality covered by DEPS, whereby group one with the lower NPSs receive on average the lowest percentage of 'ideal' grades, group three with the higher NPSs receive the highest percentage of 'ideal' grades and group two sits more or less at the mid-point on most issues. The differences between the

scores for group one and group three are all statistically significant to 90% certainty on all issues apart from 'cleanliness'.

Figures 2 and 3 demonstrate that perceived value for money is the most highly correlated issue with the NPS. This result is statistically significant to 90% certainty. Figure 3 takes the average result on the 'ideal' grade for group one (those with the lower average NPS) and plots this result as a percentage of the result on the 'ideal' grade for group three (those with the highest NPS). Those in the lowest NPS group only record 75% of the 'ideal' scores on this issue that are achieved by the top NPS scorers. It is interesting to note that more than 50% of patients grade their perceptions of value for money as 'ideal' in this whole sample (of nearly 11,000 patients). A total of only 1.3% of patients grade their perceptions of value for money as 'unacceptable'. The remainder grade this aspect 'acceptable'.

Table 2 confirms that the vast majority of patients surveyed using this instrument will be directly funding the practice. Even a proportion of the 10% who are NHS patients in this group will be paying NHS charges to the practice. It could be held therefore that this group of patients might tend to view their relationship with their practice in a similar manner to the way they view their relationship more generally with the commercial world. However, the authors do understand and acknowledge the reluctance of many patients and clinicians to think openly of healthcare from a commercial perspective.

Earlier, it was discussed that the NPS was, in effect, designed to measure perceived value given to customers by a commercial organisation. Perhaps it is no surprise then that perceived value for money is the most correlated issue of the ten measured by DEPS with NPS. This would suggest that, in order to remain successful, these practices need to continuously strive to offer good value for money through their care and services.

The new Friends and Family Test for NHS practices is a similar measurement to the NPS, and it may be expected that similar relationships might exist between the Friends and Family Test scores and the

perceptions of the quality of care delivered. It may be prudent for any practice scoring significantly below their Friends and Family Test benchmark result to investigate which particular perceptions might be causing this, and to develop their practice accordingly.

It will be interesting in future work to investigate the issues most correlated with a perception of good value for money in oral health care services. Figure 3 gives a few clues that these might be around favourable self-perceptions of oral health and a feeling of trusting the dental practice. Indeed, it is interesting to note that Scott<sup>10</sup> found that 'trusting the dentist' and 'ensuring healthy teeth and gums' were the two most important things to patients.

## CONCLUSION

The probability of patients recommending a dental practice seems to rise in direct proportion to favourable perceptions of quality. A perception of 'ideal' value for money is the most highly correlated aspect with a high NPS.

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