**Measuring the patient experience in community mental health services for older people: A study of the Net Promoter Score using the Friends and Family Test in England.**

**Running title:**

The Net Promoter Score

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**Abstract**

**Objectives**: The research aimed to explore the value of the Net Promoter Score as a service improvement tool and an outcome measure. The study objectives were to (i) explore associations between the Net Promoter Score with patient and service-receipt characteristics; (ii) evaluate the strength of association between the Net Promoter Score and a satisfaction score; and (iii) evaluate its test-retest reliability.

**Methods**: A postal survey was sent to service users on caseloads of community mental health teams for older people in four localities of England. The survey collected the Net Promoter Score, a single satisfaction question, and data on socio-demographics, clinical profile and service receipt. Analysis used non-parametric tests of association and exploratory least squares regression. A second survey was administered for test-retest reliability analysis. Fieldwork concluded in April 2016.

**Results**: For 352 respondents, the Net Promoter Score was negatively related to age and was lowest for those still within six months of their initial referral. Receiving support from a psychiatrist and/or support worker was linked to higher scores. A strong but imperfect correlation coefficient with the satisfaction score indicates they evaluate related but distinct constructs. It had a reasonable test-retest reliability, with a weighted kappa of 0.706.

**Conclusions**: Despite doubts over its validity in community mental health services, the Net Promoter Score may produce results of value to researchers, clinicians, service commissioners and managers, if part of wider data collection. However multi-item measures would provide greater breadth and improved reliability.

**Keywords**: patient satisfaction; Friends and Family Test; Net Promoter Score; psychometrics; community care; social care.

**Key points:**

* The Net Promoter Score (implemented as the Friends and Family Test in England) is internationally used as a measure for service improvement and as an outcome in research. Yet its value and properties have not been empirically inspected;
* The Net Promoter Score generated findings of value to those seeking to improve services: for example, the test was lowest for those still within six months of their initial referral, perhaps indicating need to improve care experiences early in the episode.
* The Net Promoter Score was highly but imperfectly correlated with the satisfaction score, suggesting they evaluate distinct but related constructs.
* The Net Promoter Score has reasonable test-retest reliability, but a multi-item measure of patient experience would be preferred for high-stakes use.

**Introduction**

Improving the care experience is prominent amongst the goals of modern health services. In England, patient reports of their experience sits alongside clinical effectiveness and safety as the legislated definition of healthcare quality1. Similar high billing is given to experiential quality across Europe, other Western countries, and farther afield2–5. This status is no accident. In addition to ethical arguments linking care experiences to patient rights6, a robust empirical association has been reported between the quality of experiences to health outcomes7. What precisely constitutes the patient experience is contested, but potentially includes an evaluation of their interactions with all parts of the care process, including the arrangement of care, its main features, and how it is delivered8.

There are reasons to suspect that older people receiving specialist community mental health services particularly value experiential aspects of care. For example, complaints are legion that mental health provision is poorly integrated with wider physical health and social care services, despite the frailty and multimorbidity common amongst this patient group9. At an interpersonal level it is known that communication with care workers has the potential to either reinforce or compromise an older person’s identity and selfhood, especially in the context of cognitive decline, depending on how it is delivered10–12. Indeed, for patients with dementia and their carers, preference studies have indicated that continuity of care is prioritised above other features13, supporting the argument that relational aspects of care are crucial to wellbeing in this population.

For researchers and service managers, how to measure patient experience is crucial. In recent decades, satisfaction metrics have fallen out of favour because of conceptual and empirical concerns over what they measure. Satisfaction may be regarded as too passive and lacking objectivity as a goal for evaluating health service quality, and driven more by expectations rather than actual experience14. One alternative receiving international attention is the Net Promoter Score (NPS) which uses a single question: "*how likely are you to recommend this service to your friends and family?*” By comparing the balance of those willing and unwilling to recommend the service, it is argued that NPS captures a stronger valuation of a service; such that it would (hypothetically) move a person to actively encourage or discourage others from using it. It was this argument that saw the NPS widely replace satisfaction measures in business research and related fields15.

The spread and influence of the NPS in healthcare has been substantial. The NPS question is a staple component of efforts to assess patient experiences in the Netherlands and the United States16, and is used as part of routine service evaluation in parts of Australia17. Further, it is increasingly used as a research tool across a range of specialties18–20 including psychiatry21,wider old-age care22 and care home quality. It has also been used as the closest ‘gold standard’ for convergent validity in the development of new measures of quality in the care of older people23; and is used alongside other outcome measures within RCTs24.

In England, the NPS question has been implemented as the ‘Friends and Family Test’. The question was introduced to the NHS in 2013 and has been administered 25 million times since its inception; the largest collection of ‘real-time’ patient experience data in the world25. NHS England require that local services collect and return monthly data, with this information published online. Although how the data is scored and presented has changed since it was first introduced, the NPS question remains the staple of efforts to assess patient experience in England26.

Despite its widespread use, there has been little examination of the results of the NPS. Several qualitative studies have identified semantic and conceptual challenges that relate to the application of the test20,27. Nevertheless, others have found that the NPS is positively associated with other health outcomes18,28, and its ease of application and potential for comparison across service settings and countries supports a case for further investigation.

This paper is the first to consider the application of the NPS in community mental health services for older people. The research aimed to explore the value of the NPS as a service improvement tool and an outcome measure. The study objectives were to:

1. Explore associations between the NPS score and patient and service-receipt characteristics;
2. Evaluate the strength of association between the NPS and a satisfaction score;
3. Evaluate its test-retest reliability relative to the satisfaction score.

**Methods**

A postal survey was conducted with service users on the caseloads of Community Mental Health Teams (CMHTs) for older people in four NHS Mental Health Trusts; two located in the North West of England, one in the North East, and one in London. All service users were invited where they had been seen by a member of the CMHT, except where their care coordinator indicated that they would be unable to consent to the research or if they were in hospital/care home or crisis at the time of the study. Questionnaires were dispatched from NHS Trusts between October 2015-April 2016, with a return freepost envelope addressed to the researchers. A reminder was sent to non-respondents 3-4 weeks after the first.

The questionnaire asked the NPS question using the Friends and Family Test phrasing with five possible response options: ‘extremely likely’, ‘likely’, ‘neither likely nor unlikely’, ‘unlikely’, ‘extremely unlikely’. A single-item satisfaction question asked for an equivalent rating on a five-point Likert scale (very satisfied – very dissatisfied). The questionnaire also collected information on mental health and social care practitioners seen in the past three months and whether an informal carer helped with its completion. To enable an analysis of test-retest reliability, a second identical questionnaire was mailed to respondents approximately three weeks after the first.

The questionnaire included a pre-printed study ID number so that additional information from NHS Trust administrative sources could be matched to the respondent. This matched data included basic patient characteristics (age, gender) and information related to service receipt (length of time the respondent had been on the CMHT caseload). It also included a trichotomous diagnostic grouping (based on the NHS Payment by Results classification) identifying patients whose primary mental health problem was organic in nature (predominantly dementia); those whose diagnosis included psychosis; and those with other functional mental health problems. The research received ethics permission from Greater Manchester South NRES ethics committee (Ref: 14/NW/0303).

*Analysis*

To address aim (1) above, the researchers used the traditional NPS process of partitioning responders into one of three categories: labelled as ‘promoters’, ‘passives’ and ‘detractors’. Unfortunately there is no agreed and standardised international NPS scoring system for use in health services. This paper uses the classification initially employed in the NHS, which closely matches other international variants, such that those ‘extremely likely’ to recommend the service were regarded as promoters; ‘likely’ as passives; and all other respondents were classified as detractors25. Following Sizmur et al29, to enable analysis of NPS results at an individual level the score was coded as +100 if the respondent was a promoter; 0 if passive; and -100 if a detractor. The NPS for any group of patients could therefore take any score from +100 (all respondents were promoters) to -100 (all respondents were detractors). At a score of zero, the proportion of promoters and detractors was equal. Data were analysed in Stata v14. Simple descriptive statistics were accompanied by non-parametric hypothesis testing of differences in the NPS between groups. Multivariate analysis was conducted using ordinary least squares and an ordered logistic model.

In relation to aims (2) and (3), two further sets of analyses involved comparing the NPS and a single satisfaction question. For these analyses, responses to both the NPS and satisfaction question were analysed using their original 5-point Likert response format (so as to compare like-with-like). The first analysis comprised a simple correlation used Spearman’s Rank. The second comprised a test-retest analysis for each measure by comparing the raw percentage agreement between the response to the questions at the two time points. The kappa statistic accounted for chance agreement, while linear weighted kappa was used to enable the extent of agreement between responses of different clinical meaning to be accounted for.30 Widely-used thresholds of acceptability were then used to interpret the outcomes of this analysis 31.

A final analysis tested the sensitivity of results to the scoring system used. In 2014 the NHS dropped the NPS scoring approach. Whilst the NPS score is driven by those extremely likely to recommend services (promoters), the NHS instead combines those ‘extremely likely’ with those ‘likely’ to recommend services as one category. It moves from the original three category (promoter, passive and detractor) category to a two category classification (recommend or not recommend). The implications are tested by replicating the above analysis with this alternative scoring approach.

**Results**

A response rate of 29 per cent was achieved. There was a relatively high response rate amongst those with non-psychotic functional disorders (32 per cent) and those who had been on the service caseload for over a year (33 per cent) relative to other respondents. Response rates varied significantly between the sites, from 32 per cent (Site A) to just 19 per cent (Site B). Of 377 respondents with a completed Friends and Family Test, at least one item of linked administrative data was available for 350 people from the four NHS Trusts, which formed the achieved sample for this study. Table 1 presents the respondent profile.

Table 2 presents the results of the NPS question. A clear majority of service users were likely or very likely to recommend the mental health service to their family and friends (79 per cent). Under the NPS classification, however, fewer than 40 per cent of respondents were designated as promoters (‘extremely likely’ to recommend the service), compared to just over 20 per cent being detractors. The overall net promoter score was 18.9. To compare the semantics of the NPS question and a satisfaction measure, the responses on each of these five-item Likert scale questions were correlated. The magnitude of the correlation coefficient (rho=0.708) was strong but imperfect.

[Table 1 about here]

[Table 2 about here]

The NPS calculation was repeated for sub-groups as shown in Table 3. A strong association was found between the NPS and age, indicating a lower willingness to recommend services amongst older age groups. A broad diagnosis categorisation was not associated with NPS score, although patients with organic illnesses appeared to have marginally poorer experiences than those receiving support for a functional mental health problem. The NPS was positively related to the length of time on the caseload and for those referred less than six months prior to the survey (amounting to one-in-five of the sample), respondents were collectively net *detractors*, indicating a reluctance to recommend the service where it had only recently begun.

[Table 3]

There was also some evidence that the type of mental health practitioner supporting the respondent may have been linked to their likelihood of recommending services. Specifically, contacts with psychiatrists and support workers were particularly valued. Comparisons between staff groups will be confounded, however, by the fact that more than three-quarters (78.5%) of respondents reported seeing more than one staff group. Indeed, there was a significant positive correlation between the NPS and the total number of different practitioner groups seen. The data also indicated that visits from social workers and homecare staff appeared unrelated to the NPS. Finally, there was no meaningful difference in NPS mean scores between the four sites.

To explore the independent association between the NPS score and patient / support characteristics, an ordinary least squares regression was performed. The results (Table 4) predominantly supported the bivariate analysis presented above, indicating that there was little confounding caused by shared variance with other variables. The regression further conditioned upon whether any assistance was received in completing the questionnaire, which was not significant, but nevertheless affected some of the point estimates of other coefficients within the model.

However, in relation to diagnosis and staff groups seen, some distinct patterns were identified. Patients with psychosis significantly more likely than patients with other diagnoses to recommend the service, but only where they reported that they were being supported by a psychiatrist (i.e. a significant interaction effect). Notably, this positive link between the NPS and having seen a psychiatrist was significantly greater for those with psychosis than for any other diagnosis. The Trust from which the questionnaire was returned from was not associated with the NPS.

[Table 4]

Two additional regression models were estimated (results available as supporting information). To test the sensitivity of these results to the categorical nature of the individual-level data, an ordinal logistic regression was performed, and revealed similar results to those shown in Table 4. In addition, the same regression as shown in Table 4 was repeated, but using the generic satisfaction measure as the dependent variable, rather than the NPS. That regression had poor explanatory power by comparison, with most coefficients being far from statistically significant. This supported the argument that the NPS measured a different construct to satisfaction.

***Test-retest reliability***

For 85 respondents, a second questionnaire with NPS and general satisfaction rating was received, 3-4 weeks after the first. Table 5 shows that 60 per cent of the NPS answers were identical for both questionnaires, with a marginally lower proportion (57.7%) agreement for the satisfaction rating. Adjusting for chance agreements and using the Landis and Koch31 thresholds for interpretation, the kappa statistic for the test-retest reliability of the NPS question fell in the “moderate” range, while that for the satisfaction question fell in the “fair” range. When using linear weighted kappa to also account for the *extent* of (dis)agreement between responses, responses to the NPS question had a higher level of agreement (0.571), than the satisfaction question, although its test-retest reliability also fell in the “moderate range” (0.491). Reliability improved further under quadratic weights. This indicates that the NPS appeared to deviate by fewer categories at the re-testing than did the satisfaction rating. It should be highlighted that this approach explored the test-retest reliability of responses to the NPS question, prior to these then being classified under either the original or new NHS scoring system. This enables direct comparison of how the semantics of the two questions affects test-retest reliability.

***Sensitivity analysis: Using the current NHS scoring system***

A final set of analyses explored the sensitivity of the results presented in this paper to how the Friends and Family Test question is scored. From Table 2, under the new scoring approach used in the English NHS, 79 per cent of respondents would be classified as recommending the services (‘extremely likely’ + ‘likely’) and 10 per cent not recommending services (‘extremely unlikely’ + ‘unlikely’). A further 11 per cent were equivocal.

Replication of the results in Table 3 using the new scoring system revealed no meaningful differences, with all directions and strengths of association being broadly maintained, and no change is significance at the 5 per cent threshold were identified. However, replicating the exploratory regression did not achieve the same results. Specifically, patients with psychosis being supported by a psychiatrist were not found to have significantly different scores to other respondents.

**DISCUSSION**

The NPS is a staple part of healthcare evaluation through its incorporation in several quality measures used internationally, including the Consumer Quality Index (CQI) in the Netherlands and the Consumer Assessment of Healthcare Providers and Systems (CAHPS) in the USA16. Its collection in England as the Friends and Family Test has been promoted as being the largest source of data on patient opinion in the world. However, its origins as an tool for appraising market share in retail industries raises legitimate questions as to its value in many health services27, and in old-age psychiatry in particular. Yet studies testing patient experience measures are scarce, and given the substantial resources devoted to asking patients the NPS question26, and its growing use in research, the case for empirically exploring its value is indicated.

Analysis of the NPS found several trends of potential value to researchers, clinicians, service managers and commissioners. The first relates to CMHTs as multidisciplinary teams, able to draw upon and care coordinate a range of specialist inputs. This study indicated that respondents’ likelihood to recommend the service increased when there were more disciplines involved in their care. This appears to support the model of effective multidisciplinary working as being well placed to meet the needs of individuals and promote good patient experience, perhaps linked to the potential to arrange more care and resources overall32.

The second finding challenges the generally accepted and long-standing view that patient evaluations of care quality increase with age33. This research finds the opposite with a general decline in reported quality amongst the oldest age groups. This supports other research with the NPS in England that perceptions of quality increase with age only up to a point, and contracts thereafter29. One possible cause is provided by studies showing poorer physical health and frailty being associated with lower satisfaction and willingness to recommend services34. This appears to support the policy drive for mental health services, particularly those for older people, to consider physical health implications and comorbidities, and the importance of joint working in wellbeing35.

Third, the study also demonstrates the importance of continuity of care and patient satisfaction. The link between the two is well established36,37 and is a core feature of many therapeutic models38. This was supported by our finding that those who had contact with services for less than six months indicated they were less likely to recommend the service.

There is also support for the notion that longer timescales may allow for greater adjustment to health problems. For example, for those diagnosed with dementia, conflicts may arise that need to be resolved to accommodate a diagnosis, including a possible initial resistance to acceptance of diagnosis39 and therefore acceptance of treatment / support40.

The findings also point to different NPS scores between people with organic and functional diagnoses. Despite the intense focus of NHS services to improve dementia care in recent years, these findings may indicate remaining challenges to be resolved. Concerns identified in wider research includes waiting times, the difficulty arranging and accessing support after diagnosis, and addressing informational needs41. However, an alternative perspective is that the results are confounded by the difference in prognosis between organic and functional illnesses. This highlights that further clarification of what construct(s) are captured by the NPS recommendation question. Caution may therefore be needed before comparing NPS between those with differing prognoses and possible treatment outcomes.

Whilst analysis of the NPS indicates some potential value, there remains concern about how it is used in practice. The supporters of the Friends and Family Test in England note that the question is not intended to be used summatively, and is instead a starting point for quality appraisal. Indeed, the NHS expects all Friends and Family Test assessments to include a free text box for other comments that may improve services25, which are reported to be more valuable to practitioners26. The curiosity of treating those ‘likely’ to recommend services to friends and family as being ‘passive’ was the subject of criticism in the NHS, and its 2014 review25 opted to change its scoring of the Friends and Family Test. As shown by the sensitivity tests in this paper, this change does not meaningfully affect the conclusions drawn from the data.

Another strength of the NPS is its reasonable test-retest reliability, both of itself (weighted kappa= 0.706) but also relative to the satisfaction score tested simultaneously. This said, in a five-point ordinal scale, with many respondents at the ceiling, the kappa statistic will be artificially inflated because of poor sensitivity at this maximum value. Further, the kappa value is still considerably lower than might be achieved by a multi-item scale. A recently developed scale to evaluate person-centredness (as part of the same study) was substantially more reliable43, as well as being co-produced with service users themselves44. And even if we accept that the NPS has its place in the quality improvement architecture, it remains unclear what it is measuring17 especially in the context of community mental health services. The question demands a difficult cognitive leap, asking for a decision in a hypothetical scenario in a hypothetical market of providers.

The research needs to be viewed in light of its limitations. Much of the analysis presented within the study was exploratory in nature and used a cross-sectional sample; geared to demonstrating the potential value of the NPS rather than for reaching firm policy conclusions. Findings arising from this analysis should be treated as a starting point for further investigation. The response rate, although low, surpassed that achieved by the Care Quality Commission recent annual survey of community mental service users45, and serves to remind readers that the majority of opinions go unrecorded. The proportionately fewer returns from people with organic illnesses, and those recently referred to the team, are likely to bias NPS scores in favour of services, suggesting that some weighting would be needed in high-stakes analysis. Furthermore, some of the data requested relied on self-reported measures (e.g. recollection of number of clinicians seen) and therefore risks inaccuracy due to impaired recall or memory distortion. Anecdotal evidence indicates that service users may not always be aware of the visiting professional’s title (e.g. the difference between a psychologist and a psychiatrist), which may cause difficulties when attempting to complete such questionnaires.

Additional research could explore the NPS in more detail. In-depth cognitive debriefing methods could be used to explore patient understanding of the question and what heuristics are used in arriving at their judgement. Additional research could also seek an understanding of how the information is used for service improvement, and what information may be missing. Finally, given that the NPS is being used as part of RCTs in lieu of better patient experience metrics, both accuracy and reliability would be enhanced by the development of multi-item scales which are severely lacking for older people’s mental health care42.

In conclusion, the NPS has gained international appeal as a means for collecting patient experience data. In England it has divided opinion as to how suitable it is, especially for its use in mental health services for older people. This study finds that, as a formative instrument for quality improvement, it may have value where used with a large sample of service users, enabling exploration of factors that are positively associated with willingness to recommend. It also has reasonable agreement in a test-retest application, and is superior to a simple service satisfaction question. However researchers would be better served by developing a quality score from a multi-item instrument, spanning the breadth of the patient experience construct and aiming for improved reliability.

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**Table 1: Respondent profile (max n=350)**

|  |  |  |  |
| --- | --- | --- | --- |
|  |  | **n** | **%** |
| **Gender**  (n=350) | *Male* | 138 | 39.4 |
| *Female* | 212 | 60.6 |
| **Age**  (n=350) | *<70 years* | 88 | 25.1 |
| *70-79 years* | 169 | 48.3 |
| *80+ years* | 93 | 26.6 |
| **Diagnosis**  (n=340) | *Functional (non-psychosis)* | 153 | 45.0 |
| *Functional (psychosis)* | 78 | 22.9 |
| *Organic* | 109 | 32.1 |
| **Time since initial referral**  (n=349) | *< 6 months* | 73 | 20.9 |
| *6-12 months* | 93 | 26.7 |
| *12-24 months* | 90 | 25.8 |
| *>24 months* | 93 | 26.7 |
| **NHS Trust**  (n=350) | *Site A* | 42 | 12.0 |
| *Site B* | 76 | 21.7 |
| *Site C* | 160 | 45.7 |
| *Site D* | 72 | 20.6 |

**Table 2: NPS profile (n=350)**

|  |  |  |  |
| --- | --- | --- | --- |
|  |  | **n** | **%** |
| “Detractor” | *Very unlikely* | 16 | 4.6 |
| *Unlikely* | 19 | 5.4 |
| *Neither likely nor unlikely* | 37 | 10.6 |
| “Passive” | *Likely* | 140 | 40.0 |
| “Promoter” | *Very likely* | 138 | 39.4 |

**Table 3: Net promoter score by patient and support characteristics (max n=350)**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | **Mean**  **NPS** | **St. dev** | **Significance** |
| **Gender** | *Male* | 14.5 | 76.9 | z=-0.681  p=0.450 |
| *Female* | 21.7 | 66.5 |
| **Age** | *<70 years* | 37.5 | 65.3 | Rho*=* - 0.129  p=0.016 |
| *70-79 years* | 14.2 | 71.2 |
| *80+ years* | 9.7 | 73.7 |
| **Diagnosis** | *Functional (non-psychosis)* | 24.2 | 71.3 | χ2(2)=5.137  p=0.077 |
| *Functional (psychosis)* | 29.5 | 67.1 |
| *Organic* | 4.6 | 72.4 |
| **Time on caseload** | *0-6 months* | -11.0 | 72.6 | Rho*=* 0.114  p=0.034 |
| *6-12 months* | 31.2 | 71.0 |
| *12-24 months* | 22.2 | 32.3 |
| *>24 months* | 28.0 | 63.9 |
| **Visits from CMHT workers** | *Psychiatrist* | 34.1 | 68.8 | z=3.852  p<0.001 |
| *Mental health nurse* | 23.6 | 70.8 | z=1.668  p=0.095 |
| *Social worker* | 18.0 | 65.2 | z=-0.221  p=0.825 |
| *Psychologist* | 34.0 | 62.0 | z=1.545  p=0.123 |
| *Mental health support worker* | 36.2 | 65.8 | z=3.285  p=0.001 |
| **Other community support** | *Home care* | 18.3 | 61.5 | z=-0.258  p=0.796 |
| *Day care* | 35.1 | 70.9 | z=1.806  p=0.071 |
| *Other community support* | 38.5 | 67.9 | z=2.694  p=0.007 |
| **Total number of staff groups involved in care** | 0/1 | -2.8 | 70.5 | Rho*=* 0.180  p=0.001 |
| 2 | 23.1 | 72.6 |
| 3 | 23.7 | 68.7 |
| 4+ | 37.0 | 59.9 |
| **NHS Trust** | *Site A* | 28.6 | 63.3 | χ2(3)=1.82  p=0.610 |
| *Site B* | 13.2 | 69.9 |
| *Site C* | 15.6 | 72.1 |
| *Site D* | 26.4 | 74.5 |

**Table 4: Exploratory ordinary least squares regression of NPS score (n=332)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | **Coefficient** | **Std error** | **t** | **p** |
| Age (years) | | -1.320 | 0.56 | -2.36 | 0.019 |
| On caseload for under six months | | -36.25 | 9.98 | -3.63 | <0.001 |
| Diagnosis  (ref: Functional, non-psychosis) | Organic | -10.30 | 14.38 | -1.06 | 0.291 |
| Psychosis | -22.90 | 14.38 | -1.59 | 0.112 |
| Staff groups seen | Psychiatrist | 17.32 | 8.89 | 1.95 | 0.052 |
| Support worker | 26.55 | 8.35 | 3.18 | 0.002 |
| Other community support | 19.98 | 9.69 | 2.06 | 0.040 |
| Interaction term: *Patient with psychosis \* seen by psychiatrist* | | 38.44 | 18.57 | 2.07 | 0.039 |
| Whether received assistance in completing the questionnaire | | -5.44 | 8.84 | -0.62 | 0.539 |
| *Constant* | | 109.16 | 41.94 | 2.60 | 0.010 |

F(9, 322)=6.77, p<0.001, R2=0.159, R2(adj)=0.136**.**

**Table 5: Test-retest reliability (n=85)**

|  |  |  |
| --- | --- | --- |
|  | Net Promoter Score | Satisfaction rating |
| Raw percent agreement | 60.0% | 57.7% |
| Simple Kappa  (std error) | 0.401  (0.066) | 0.381  (0.066) |
| Weighted Kappa - Linear  (std error) | 0.571  (0.074) | 0.492  (0.075) |
| Weighted Kappa - Quadratic  (std error) | 0.706  (0.107) | 0.539  (0.108) |