

‘Piloting of a national perinatal patient satisfaction scale - feedback and patient satisfaction in perinatal mental health services’

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Project Background

Measuring patient satisfaction is a broadly acknowledged method of assessing quality of healthcare services¹. Healthcare satisfaction has been assessed for more than 30 years, and routinely used to implement service improvements². Mental health services have studied this less commonly than other specialities and questionnaires such as The Client Satisfaction Questionnaire, were briefly used then discontinued³. Mental health services have preferentially opted for several low powered, independent questionnaires to measure satisfaction⁴. For example, the Mother and Baby Unit Satisfaction Questionnaire was first used in 2005, then once again in 2008^{5,6}. Although it demonstrated an improvement in satisfaction over time, the study was under powered⁶ and the questionnaire was abandoned, like many other early, small studies before⁴⁻⁶.

The influence of age, gender, ethnicity and mental health⁶⁻⁹ on satisfaction is disputed, but emotional distress and educational attainment are relevant^{2,7,10}.

Questionnaires often include Likert scales, which are susceptible to acquiescence bias and readily criticised for imprecisely measuring satisfaction¹¹. Nonetheless, with all these factors playing a part, patients rarely differentiate between levels of satisfaction regardless of the satisfaction measure¹², and report 90% satisfaction in most surveys¹³.

Still, however nebulous a concept satisfaction may be it is linked to better patient outcomes^{13,14}, and would benefit from improved standards of survey to enhance its credibility as a measure.

Aims

This project aimed to pilot the Patient Rated Outcome and Experience Measure (PROM), designed to assess patient satisfaction across a number of perinatal mental health services in the UK.

The PROM was psychometrically evaluated to assess suitability for continued use, and provided preliminary patient satisfaction data for each MBU.

Method

Design

The PROM was designed by Dr Alain Gregoire, consultant perinatal psychiatrist at Melbury Lodge MBU. Themes were identified from independent satisfaction tools already used in MBUs and other community mental health services. Communication, sensitivity towards

patients, referral speed, provision of information and ward facilities were common themes. A focus group of MBU inpatients alongside consultation with MBUs decided the most suitable questions.

PROM Contents

The PROM consists of 23 Likert scaled statements surrounding satisfaction with general and inpatient care (Figure 1). Respondents can select 'strongly agree', 'agree', 'disagree', 'strongly disagree' or 'don't know'. Two further questions ask the patient to assess their health before and after treatment as 'very well', 'well', 'unwell', 'very unwell' or 'extremely unwell'. The final Likert scaled question states 'This questionnaire was easy to fill in', selecting 'strongly agree', 'agree', 'disagree' or 'strongly disagree' as a response. Questions 5 and 6 ask the respondent to state the number of days their mental health had interfered with usual activities in the last 30 days, before and after treatment. The PROM has space for respondents to provide comments about the service and questionnaire design. The potential for acquiescence bias was reduced by reverse formatting approximately half of the questions¹¹. An online version of the PROM was available through KwikSurveys.com. The PROM was anonymous, but patients could provide contact details should they wish to be informed of the project's outcome.

Sample Selection

The questionnaire was sent to MBUs at Glasgow, Newcastle, Welwyn Garden City, Bournemouth, Leeds, Birmingham, London and Winchester. The PROM was offered to inpatients less than 24 hours from discharge, and sent to outpatients post discharge. Each patient received two PROMs, allowing a partner or family member to complete a questionnaire. PROMs were returned via stamped addressed envelope to the originating MBU, and forwarded to Melbury Lodge MBU for analysis. MBUs were sent a survey towards the end of the study, asking their opinion on the content and practicalities of the PROM (Figure 2).

Analysing Collected Data

SPSS 21 was used for psychometric evaluation and Microsoft Excel 2010 was used to collate data and produce graphical analysis of the results.

Cronbach's alpha was used to assess internal consistency, using a threshold of 0.7 to represent good reliability¹⁵. A threshold of 0.8 was used to assess split-half reliability¹⁵.

Six items regarding inpatient care were not analysed, owing to considerable amounts of missing data. This was caused by outpatients completing inpatient questions in error, highlighted by a MBU that cares for all patients on the same site.

'Don't know' has been recorded in SPSS as the mean of the respondent's 17 answers regarding general satisfaction. This increased data set size and minimised bias by creating a neutral centre. 'Don't Know' is last on the Likert scale, so not interchangeable with 'Neither Agree or Disagree' in rank order, but has been used previously as a neutral point in surveys when placed mid scale¹⁶. Many respondents wrote 'N/A' on the PROM, potentially owing to no experience of the question asked. 'N/A' has been scored identically to 'Don't Know' to maximise the study number for analysis. Missing data analysis can be more sophisticated, but has been limited by the author's ability.

Answers marked between two anchor points were conservatively rounded down, for example from 'Disagree' to 'Strongly Disagree'. Answers marked between 'Agree' and 'Disagree' were recorded as 'N/A' and a mean score calculated.

Questions 5 and 6, as described, were removed from analysis owing to several PROMs being sent without these questions (n=22, 32%). One third of PROMs including these questions had unanticipated answers in percentages or words, rather than numbers, so impossible to analyse.

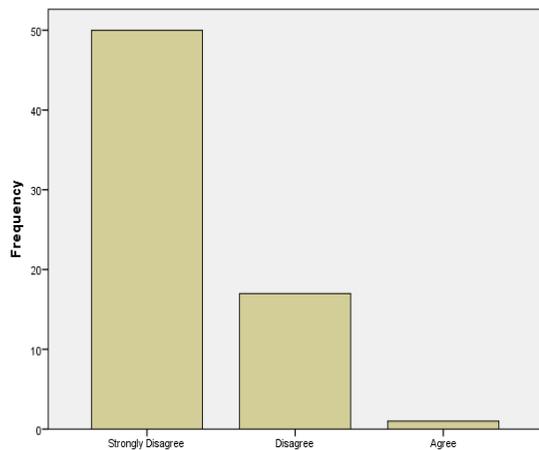
Results

Six MBUs returned sixty eight questionnaires. Most were returned by patients (n=53, 78%). One questionnaire was completed online. Only two sites recorded response rates of 100% (n = 7) and 25% (n = 5), so an overall rate could not be calculated. The usual expected response rate for a questionnaire is around 55%¹⁷.

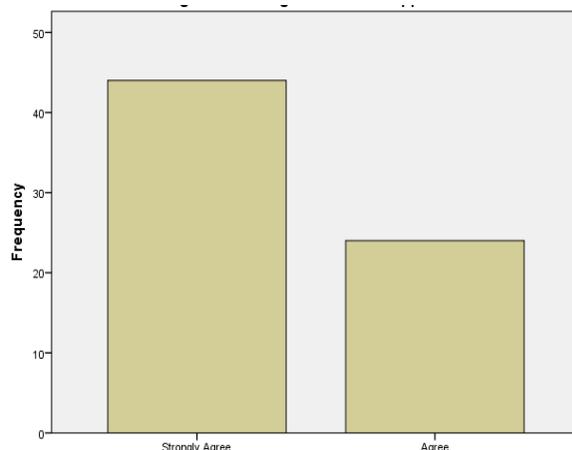
Satisfaction Analysis

	Satisfied% (n)	Dissatisfied% (n)	Don't Know % (n)	Blank/Not Applicable % (n)
Staff did not communicate with others involved in my care	95.6% (65)	1.5% (1)	1.5% (1)	1.5% (1)
Staff gave me the right amount of support	98.5% (67)	0.0% (0)	1.5% (1)	0.0% (0)
I did not get help quickly enough after referral	83.8% (57)	7.4% (5)	8.8% (6)	0.0% (0)
Staff listened to me and understood my problems	95.6% (65)	4.4% (3)	0.0% (0)	0.0% (0)
Staff did not treat me with respect and dignity	97.1% (66)	2.9% (2)	0.0% (0)	0.0% (0)
The information I received from staff was useful and helpful	95.6% (65)	0.0% (0)	4.4% (3)	0.0% (0)
Staff did not involve me enough in my care and treatment	98.5% (67)	1.5% (1)	0.0% (0)	0.0% (0)
The service provided me with the information I needed	95.6% (65)	1.5% (1)	2.9% (2)	0.0% (0)
Staff were not sensitive to my needs	95.6% (65)	1.5% (1)	1.5% (1)	1.5% (1)
Staff helped me to understand my illness/difficulties	95.6% (65)	1.5% (1)	2.9% (2)	0.0% (0)
Staff were not sensitive to the needs of my baby	97.1% (66)	1.5% (1)	0.0% (0)	1.5% (1)
My partner was not well supported by the service	77.9% (53)	2.9% (2)	10.3%(7)	8.8% (6)
The service definitely helped me to get better	95.6% (65)	0.0% (0)	1.5% (1)	2.9% (2)
Staff helped me be more confident with caring for my baby	91.2% (62)	0.0% (0)	2.9% (2)	5.9% (4)
The service involved other relevant people in a helpful way	83.8% (57)	1.5% (1)	7.4% (5)	7.4% (5)
My discharge from the service was not well organised	73.5% (50)	7.4% (5)	10.3% (7)	8.8% (6)
I would recommend this service to others	97.1% (66)	0.0% (0)	2.9% (2)	0.0%(0)

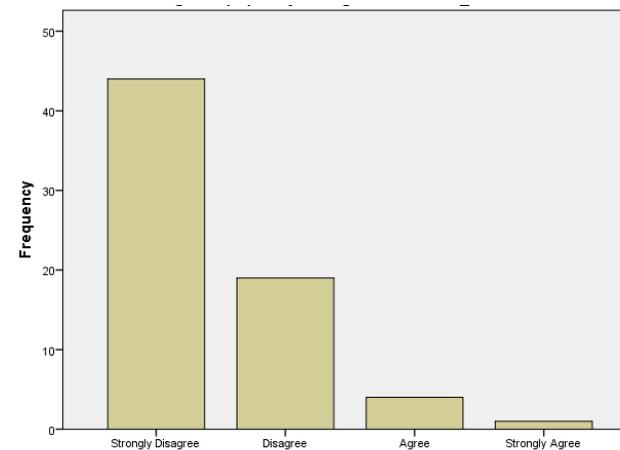
Figure 3 –Table showing satisfaction with general patient care in percentages and numbers. The anchor points 'Strongly Agree' and 'Agree' have been merged, as have 'Strongly Disagree' and 'Disagree'. Reverse formatting of questions has been taken into account.



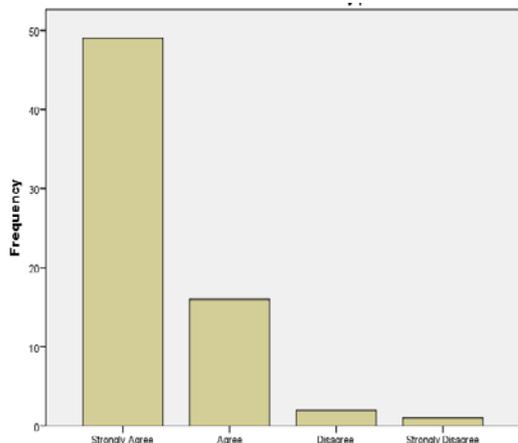
a) **Staff did not communicate with others involved in my care_Recoded**



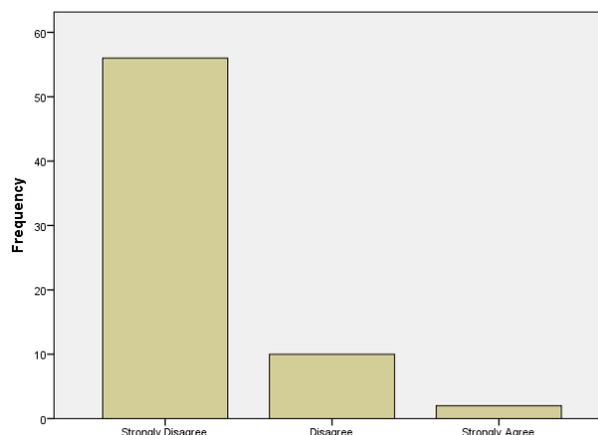
b) **Staff gave me the right amount of support**



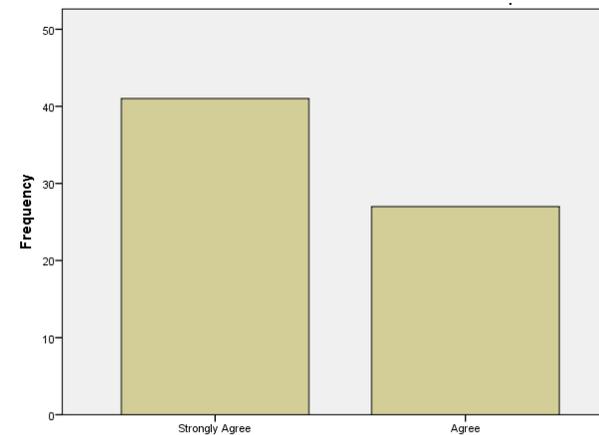
c) **I did not get help quickly enough after referral_Recoded**



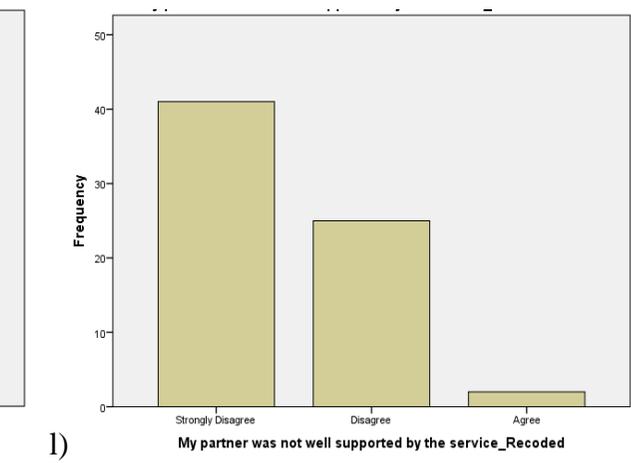
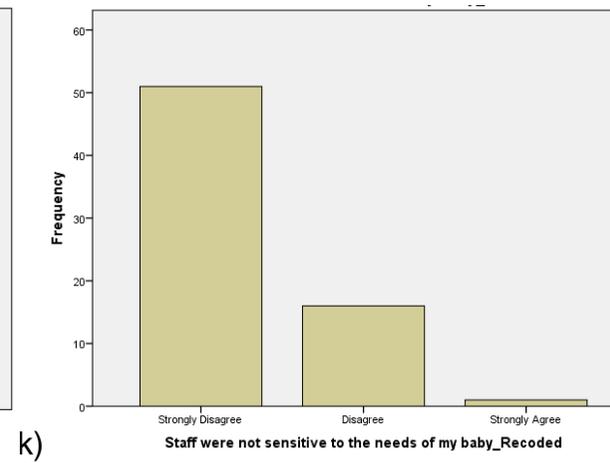
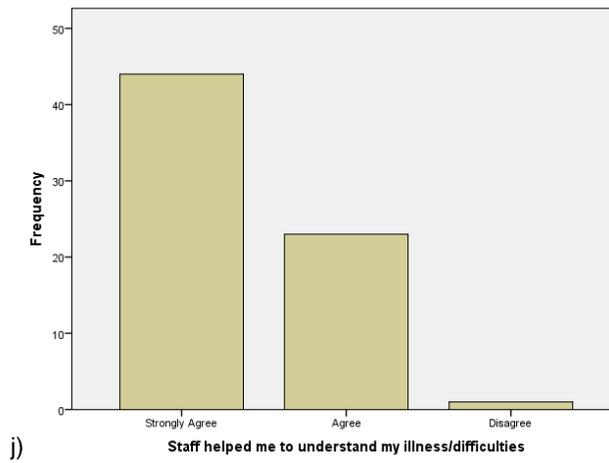
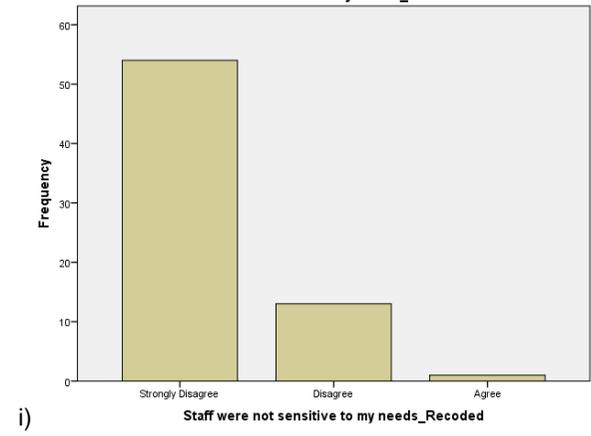
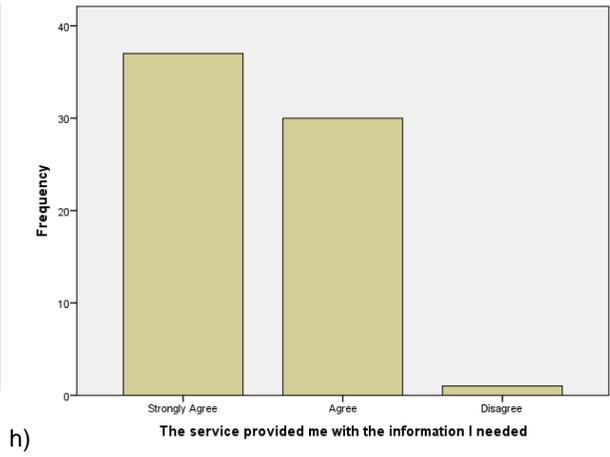
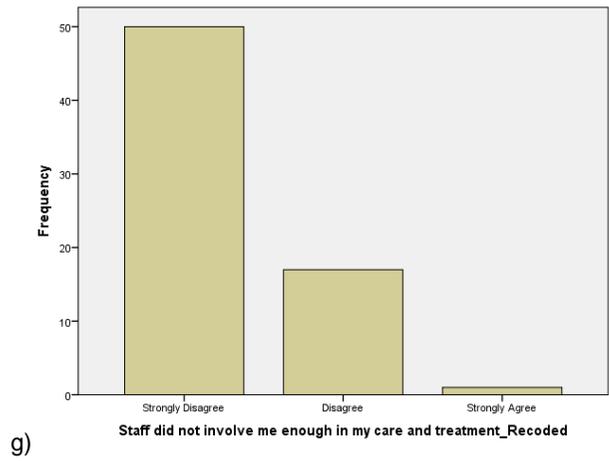
d) **Staff listened to me and understood my problems**



e) **Staff did not treat me with respect and dignity_Recoded**



f) **The information I received from staff was useful and helpful**



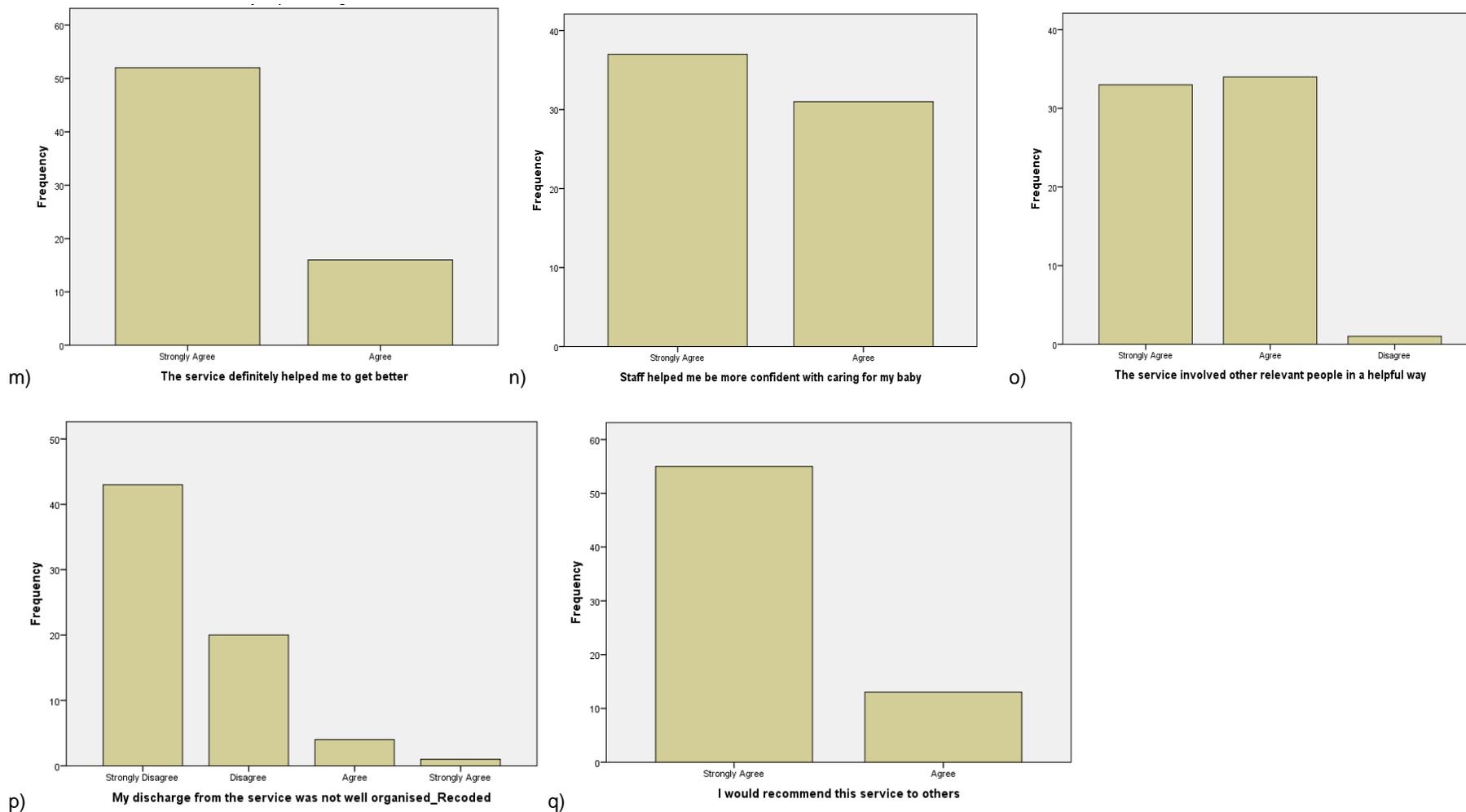
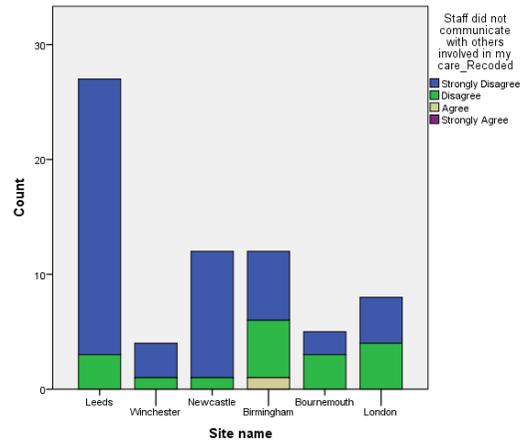
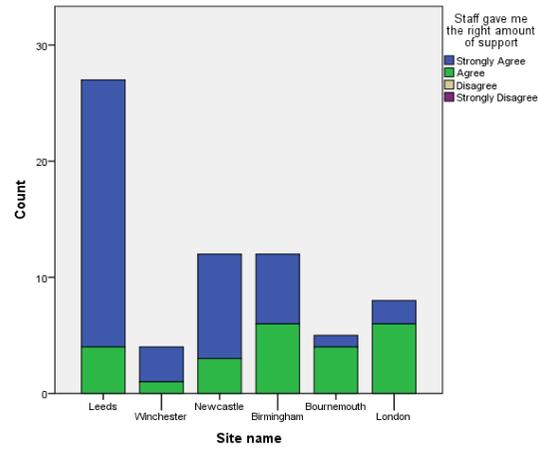


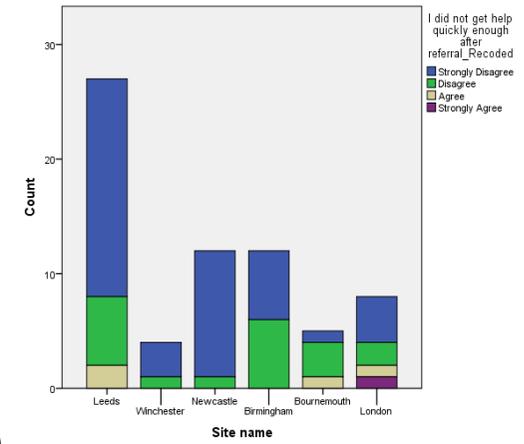
Figure 4 – Bar charts demonstrating frequency of answers to seventeen items on general satisfaction. All questions spread over at least two responses, and over half spread over three responses. The lack of ceiling or floor effect demonstrates the PROM questions are sufficiently sensitive to distinguish between patients that have different level of agreement or disagreement¹⁸.



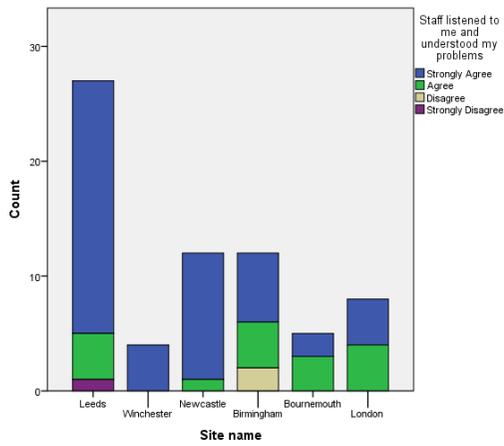
a)



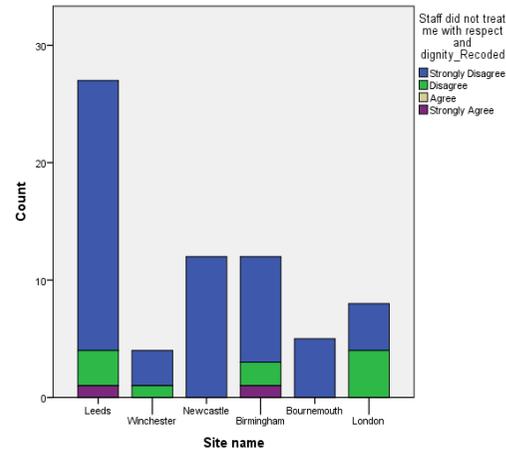
b)



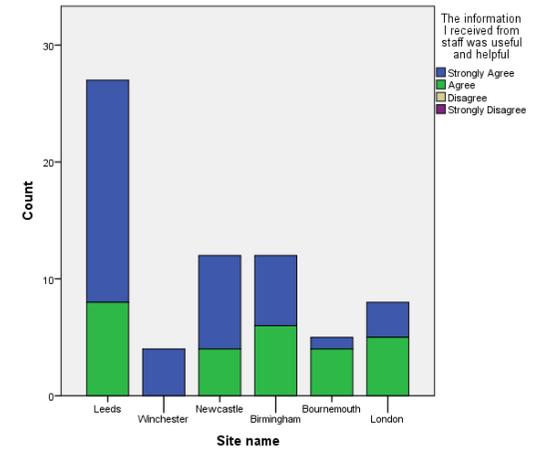
c)



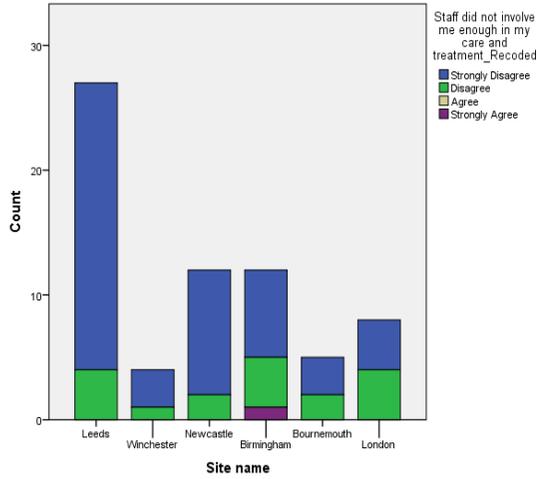
d)



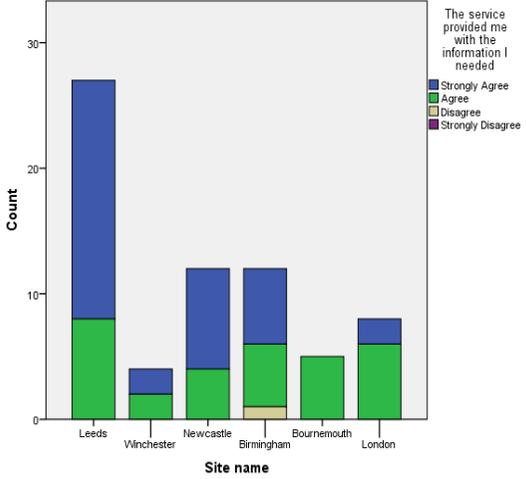
e)



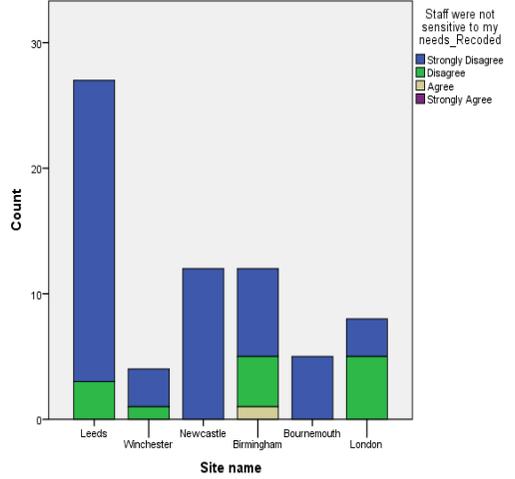
f)



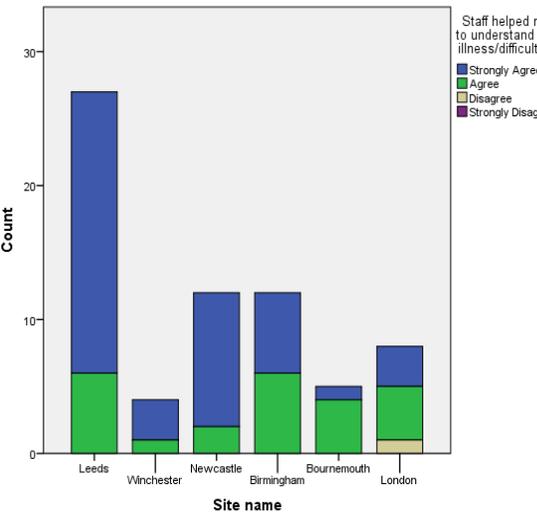
g)



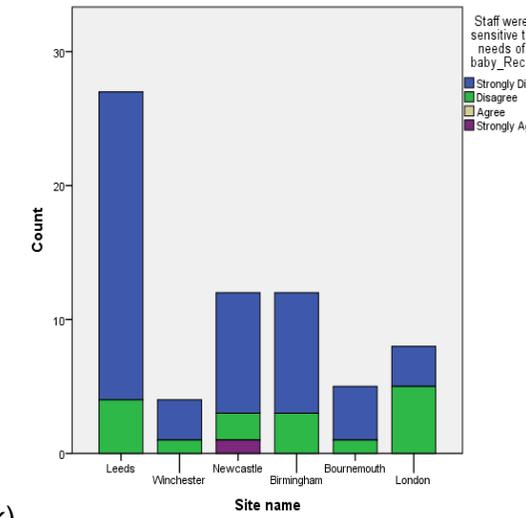
h)



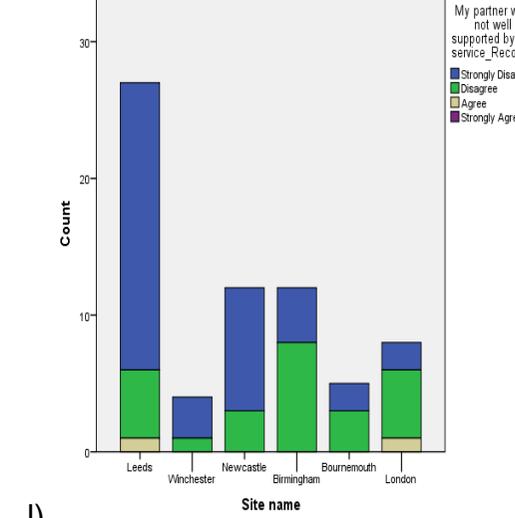
i)



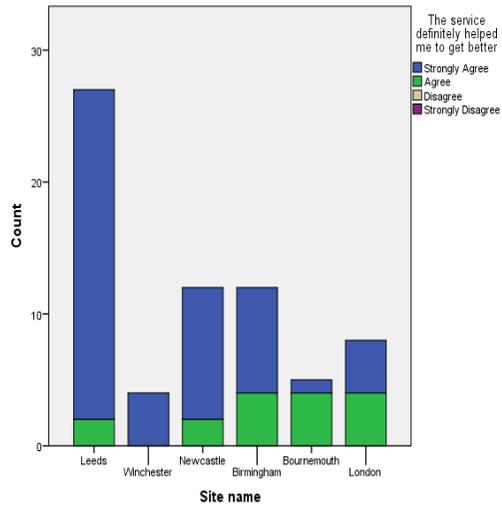
j)



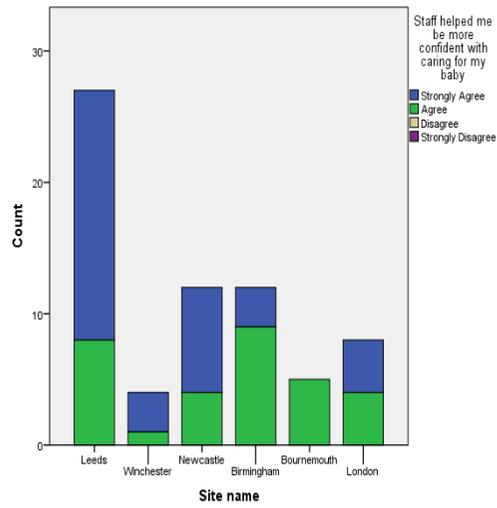
k)



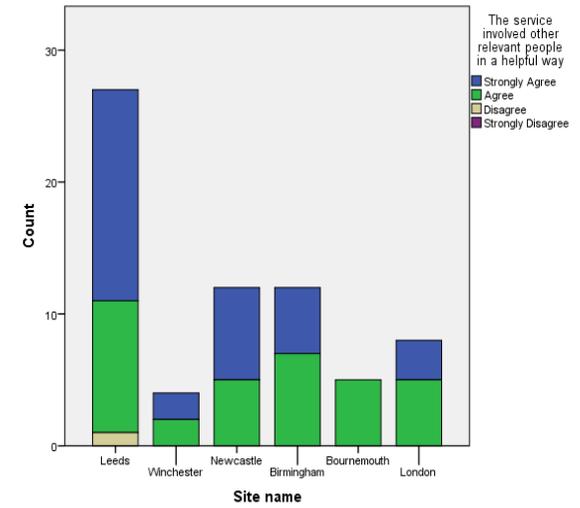
l)



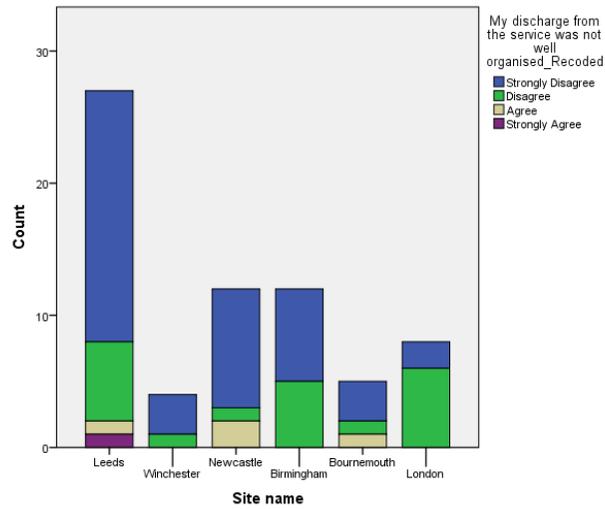
m)



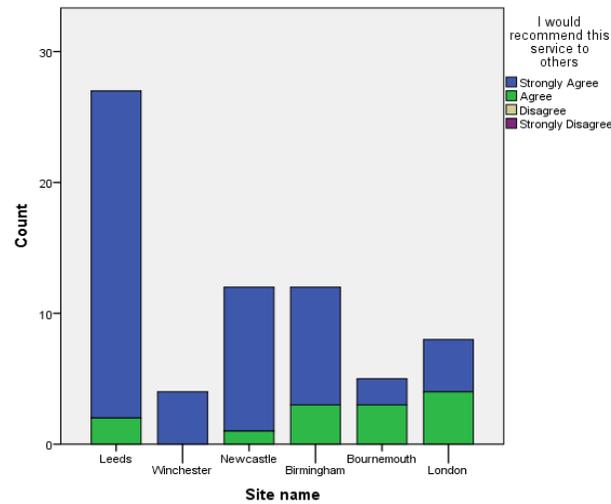
n)



o)



p)



q)

Figure 5 – Stacked bar charts for each question, for each site. There are a couple of unexpected answers in the data, but looking back through SPSS it appears these answers may be mistakes in marking as the other answers, and comments at the end do not reinforce the response. The raw data can be found in the appendix (Figure 6).

Improvement in health state

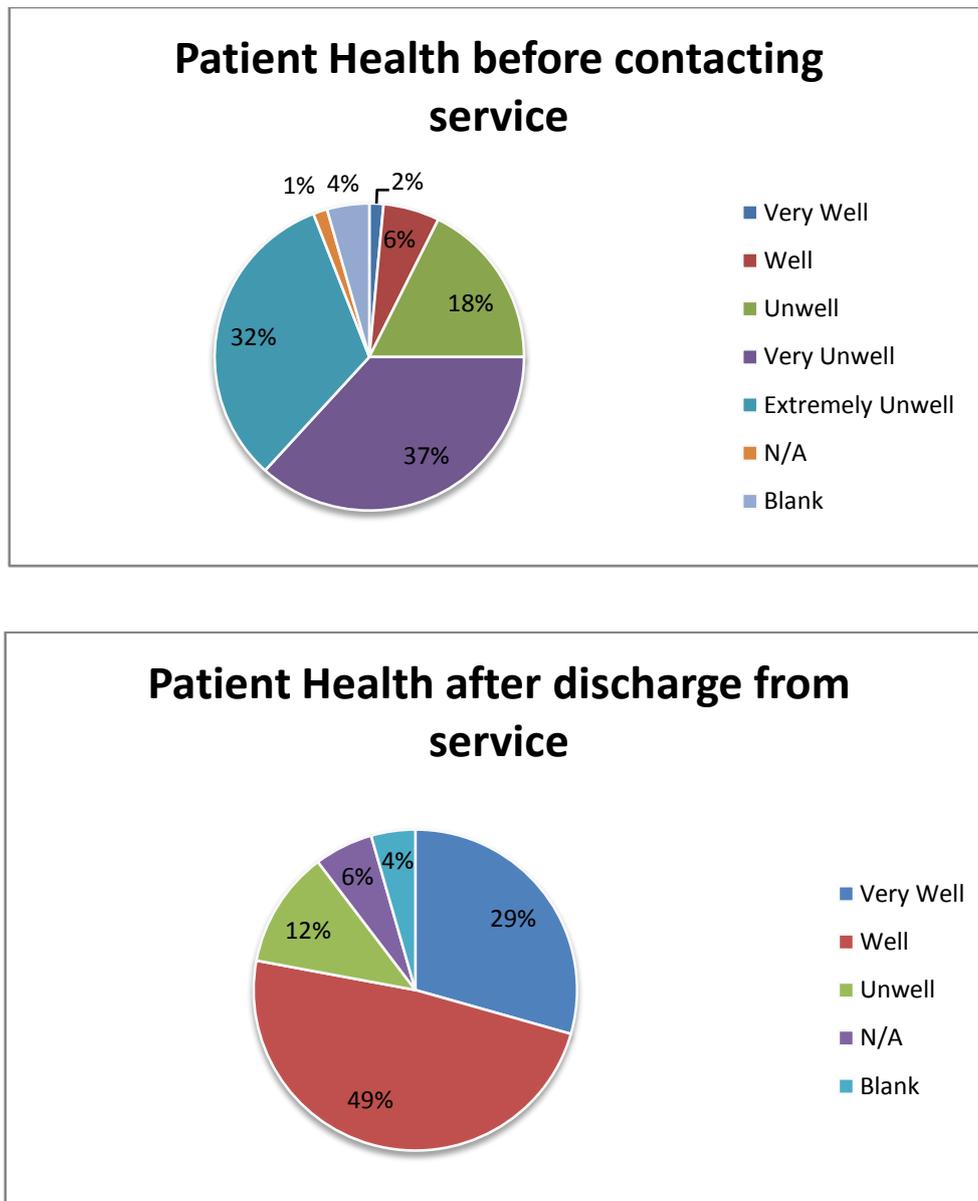


Figure 7 demonstrates the change in respondent's perception of their health before contact with their MBU and after discharge.

Comparison amongst MBU Sites

Figure 5 compares the responses given by each MBU. The lower quartile, upper quartile and median responses for each question and site were calculated (Figure 8).

Question	Site Names					
	Leeds	Winchester	Newcastle	Birmingham	Bournemouth	London
a)	1.0(1.0,1.0)	1.0(1.0,1.5)	1.0(1.0,1.0)	1.5(1.0,2.0)	2.0(1.0,2.0)	1.5(1.0,2.0)
b)	1.0(1.0,1.0)	1.0(1.0,1.5)	1.0(1.0,1.5)	1.5(1.0,2.0)	2.0(2.0,2.0)	1.5(2.0,2.0)
c)	1.0(1.0,2.0)	1.0(1.0,1.5)	1.0(1.0,1.0)	1.5(1.0,2.0)	2.0(2.0,2.0)	1.5(1.0,2.5)
d)	1.0(1.0,1.0)		1.0(1.0,1.0)	1.5(1.0,2.0)	2.0(1.0,2.0)	1.5(1.0,2.0)
e)	1.0(1.0,1.0)	1.0(1.0,1.5)		1.0(1.0,1.5)		1.5(1.0,2.0)
f)	1.0(1.0,2.0)		1.0(1.0,2.0)	1.5(1.0,2.0)	2.0(2.0,2.0)	2.0(1.0,2.0)
g)	1.0(1.0,1.0)	1.0(1.0,1.5)	1.0(1.0,1.0)	1.0(1.0,2.0)	1.0(1.0,2.0)	1.5(1.0,2.0)
h)	1.0(1.0,2.0)	1.5(1.0,2.0)	1.0(1.0,2.0)	1.5(1.0,2.0)		2.0(1.5,2.0)
i)	1.0(1.0,1.0)	1.0(1.0,1.5)		1.0(1.0,2.0)		2.0(1.0,2.0)
j)	1.0(1.0,1.0)	1.0(1.0,1.5)	1.0(1.0,1.0)	1.5(1.0,2.0)	2.0(2.0,2.0)	2.0(1.0,2.0)
k)	1.0(1.0,1.0)	1.0(1.0,1.5)	1.0(1.0,1.5)	1.0(1.0,1.5)	1.0(1.0,1.0)	2.0(1.0,2.0)
l)	1.0(1.0,1.0)	1.0(1.0,1.5)	1.0(1.0,1.5)	2.0(1.0,2.0)	2.0(1.0,2.0)	2.0(1.5,2.0)
m)	1.0(1.0,1.0)		1.0(1.0,1.0)	1.0(1.0,2.0)	2.0(2.0,2.0)	1.5(1.0,2.0)
n)	1.0(1.0,2.0)	1.0(1.0,1.5)	1.0(1.0,2.0)	2.0(1.5,2.0)		1.5(1.0,2.0)
o)	1.0(1.0,2.0)	1.5(1.0,2.0)	1.0(1.0,2.0)	2.0(1.0,2.0)		2.0(1.0,2.0)
p)	1.0(1.0,2.0)	1.0(1.0,1.5)	1.0(1.0,1.5)	1.0(1.0,2.0)	1.0(1.0,2.0)	2.0(1.5,2.0)
q)	1.0(1.0,1.0)		1.0(1.0,1.0)	1.0(1.0,1.5)	2.0(1.0,2.0)	1.5(1.0,2.0)

Figure 8 – table showing the median, lower quartile and upper quartile across each site for each question. This is formatted as Median (Lower Quartile, Upper Quartile).

The Kruskal-Wallis Test was conducted to compare each site against the others, stemming from the differing mean responses amongst sites. Ten questions had statistically significantly different answers amongst sites ($p < 0.05$) (Figure 9).

	Staff did not communicate with others involved in my care	Staff gave me the right amount of support	Staff listened to me and understood my problems	The service provided me with the information I needed	Staff were not sensitive to my needs	Staff helped me to understand my illness/difficulties	My partner was not well supported by the service	The service definitely helped me to get better	Staff helped me be more confident with caring for my baby	I would recommend this service to others
Asymp. Sig.	.017	.006	.036	.036	.004	.030	.024	.003	.014	.012

Figure 9 – The ten questions identified by Kruskal-Wallis Test as having statistically different outcomes amongst the sites surveyed. “Asymp. Sig” is the p value.

A Mann-Whitney U test was conducted, comparing each site for each statistically significant question identified. The p value was set at < 0.01 , to correct for a Type 1 error occurring from repeated testing of the same values (Figure 10).

	Staff did not communicate with others involved in my care							Staff gave me the right amount of support					
	Leeds	Winchester	Newcastle	Birmingham	Bournemouth	London		Leeds	Winchester	Newcastle	Birmingham	Bournemouth	London
Leeds		0.670	0.893	0.049	0.087	0.104	Leeds		0.755	0.62	0.086	0.019	0.009
Winchester			0.684	0.446	0.413	0.57	Winchester			1	0.521	0.19	0.214
Newcastle				0.078	0.104	0.135	Newcastle				0.319	0.082	0.069
Birmingham					0.879	0.91	Birmingham					0.383	0.384
Bournemouth						0.833	Bournemouth						0.943
London							London						

	Staff listened to me and understood my problems							The service provided me with the information I needed					
	Leeds	Winchester	Newcastle	Birmingham	Bournemouth	London		Leeds	Winchester	Newcastle	Birmingham	Bournemouth	London
Leeds		0.589	0.62	0.118	0.183	0.221	Leeds		0.55	0.869	0.271	0.011	0.056
Winchester			0.862	0.17	0.19	0.214	Winchester			0.684	0.953	0.286	0.57
Newcastle				0.078	0.104	0.135	Newcastle				0.443	0.037	0.135
Birmingham					1	0.792	Birmingham					0.195	0.521
Bournemouth						0.833	Bournemouth						0.524
London							London						

	Staff were not sensitive to my needs							Staff helped me to understand my illness/difficulties					
	Leeds	Winchester	Newcastle	Birmingham	Bournemouth	London		Leeds	Winchester	Newcastle	Birmingham	Bournemouth	London
Leeds		0.67	0.599	0.126	0.725	0.027	Leeds		0.932	0.799	0.178	0.04	0.067
Winchester			0.521	0.599	0.556	0.368	Winchester			0.862	0.521	0.19	0.283
Newcastle				0.089	1	0.02	Newcastle				0.178	0.048	0.082
Birmingham					0.195	0.571	Birmingham					0.383	0.521
Bournemouth						0.065	Bournemouth						0.833
London							London						

	My partner was not well supported by the service							The service definitely helped me to get better					
	Leeds	Winchester	Newcastle	Birmingham	Bournemouth	London		Leeds	Winchester	Newcastle	Birmingham	Bournemouth	London
Leeds		0.977	0.94	0.039	0.22	0.024	Leeds		0.842	0.663	0.21	0.008	0.073
Winchester			1	0.262	0.413	0.154	Winchester			0.684	0.379	0.063	0.214
Newcastle				0.089	0.279	0.047	Newcastle				0.514	0.048	0.238
Birmingham					0.879	0.571	Birmingham					0.16	0.571
Bournemouth						0.524	Bournemouth						0.435
London							London						

	Staff helped me be more confident with caring for my baby							I would recommend this service to others					
	Leeds	Winchester	Newcastle	Birmingham	Bournemouth	London		Leeds	Winchester	Newcastle	Birmingham	Bournemouth	London
Leeds		0.887	0.869	0.024	0.011	0.406	Leeds		0.842	0.964	0.391	0.068	0.073
Winchester			0.862	0.17	0.063	0.57	Winchester			0.862	0.521	0.19	0.214
Newcastle				0.089	0.037	0.571	Newcastle				0.514	0.104	0.135
Birmingham					0.442	0.384	Birmingham					0.279	0.384
Bournemouth						0.171	Bournemouth						0.833
London							London						

Figure 10 – Mann-Whitney U test between each combination of sites, for each questions. Only two questions gave results of statistically significant responses between sites ($p < 0.01$);

Leeds/London – ‘staff gave me the right amount of support’ and Leeds/Bournemouth – ‘the service definitely helped me to get better’

Psychometric Evaluation

Face Validity

Questions have been developed from pre-existing perinatal mental health service questionnaires¹⁹. Themes were gained from inpatient groups and MBUs, providing a relevant foundation for the questions asked. Validity in satisfaction questionnaires suffers from being unable to provide a 'gold standard' to test against¹, but the PROM's face validity is well established.

Principal Components Analysis (PCA)

PCA identifies variables underpinning the PROM, by grouping them and establishing common 'components'^{15,20}. This reduces the number of correlations produced amongst variables, presenting trends in the data collected^{20,21}.

PCA was used on seventeen items, using oblique rotation in anticipation of variables being correlated²¹. The Keiser-Meyer-Olkin (KMO) value was calculated at 0.823, allowing PCA to be used²¹ (*Figure 11*).

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.823
	Approx. Chi-Square	610.511
Bartlett's Test of Sphericity	df	136
	Sig.	.000

Figure 11 – SPSS output for PCA analysis of data. The KMO value measure whether reliable values can be made from the data set and 0.823 is a good score. Bartlett's Test of Sphericity is statistically significant and says that there are correlations amongst the data, enabling PCA to happen²¹.

PCA found four significant components with Eigenvalues > 1²⁰. The Scree plot demonstrates this pictorially (*Figure 12*).

The Total Variance Matrix (*Figure 13*) demonstrates that 42% of variance is from the first component, with the total variance across four components at 66%. 0.722 is a generally accepted loading level for this sample size²¹ and was used to assess the rotated structure matrix (*Figure 14*).

The questions in each component are;

Component 1 – ‘The service provided me with the information I needed’

‘Staff helped me to understand my illness/difficulties’

‘The service involved other relevant people in a helpful way’

Component 2 - ‘Staff were not sensitive to my needs’

Component 3 – ‘Staff gave me the right amount of support’

‘The service definitely helped me to get better’

‘I would recommend this service to others’

Component 4 - ‘Staff did not communicate with others involved in my care’

‘Staff did not involve me enough in my care and treatment’

Total Variance Explained									
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	7.177	42.218	42.218	7.177	42.218	42.218	3.621	21.301	21.301
2	1.715	10.087	52.305	1.715	10.087	52.305	2.914	17.141	38.442
3	1.228	7.225	59.530	1.228	7.225	59.530	2.637	15.514	53.956
4	1.066	6.268	65.797	1.066	6.268	65.797	2.013	11.841	65.797
5	.934	5.492	71.290						
6	.825	4.851	76.140						
7	.706	4.155	80.296						
8	.634	3.730	84.025						
9	.547	3.216	87.242						
10	.465	2.738	89.980						
11	.426	2.505	92.485						
12	.302	1.777	94.262						
13	.279	1.644	95.906						
14	.222	1.306	97.212						
15	.202	1.189	98.401						
16	.153	.902	99.303						
17	.119	.697	100.000						

Extraction Method: Principal Component Analysis.

Figure 13 – PCA Total Variance Matrix, showing that the first four components with Eigenvalues over 1 are responsible for 66% of variance. There should be as many total Components as there are questions in the questionnaire²¹.

Structure Matrix

	Factor			
	1	2	3	4
Staff did not communicate with others involved in my care_Recoded	.326	.374	-.320	.740
Staff gave me the right amount of support	.543	.395	-.761	.569
I did not get help quickly enough after referral_Recoded	.656	.534	-.363	.401
Staff listened to me and understood my problems	.587	.241	-.286	.146
Staff did not treat me with respect and dignity_Recoded	.140	.547	-.207	.278
The information I received from staff was useful and helpful	.713	.490	-.638	.204
Staff did not involve me enough in my care and treatment_Recoded	.269	.514	-.427	.830
The service provided me with the information I needed	.735	.446	-.584	.152
Staff were not sensitive to my needs_Recoded	.513	.903	-.366	.410
Staff helped me to understand my illness/difficulties	.749	.466	-.633	.423
Staff were not sensitive to the needs of my baby_Recoded	.218	.634	-.350	.348
My partner was not well supported by the service_Recoded	.547	.578	-.524	.448
The service definitely helped me to get better	.466	.324	-.864	.284
Staff helped me be more confident with caring for my baby	.594	.118	-.342	.267
The service involved other relevant people in a helpful way	.798	.303	-.462	.257
My discharge from the service was not well organised_Recoded	.245	.419	-.257	.185
I would recommend this service to others	.418	.420	-.777	.352

Extraction Method: Principal Axis Factoring.
Rotation Method: Oblimin with Kaiser Normalization.

Figure 14 – A PCA Structure Matrix demonstrating the questions that are best associated with each component. The loading level for relevance is 0.722 and -0.722.

Reliability

PCA subscales with Cronbach's Alpha

Reliability was measured for each factor identified by PCA²¹. Components 1 and 3 were highly reliable (alpha > 0.8) with no indication that item deletion would improve reliability^{15,21}.

General satisfaction – Cronbach's Alpha

PCA highlighted few questions, so Cronbach's alpha was conducted with all 17 items. The alpha score was 0.903, hence very reliable (Figure 15). Removal of two questions improved the alpha score to 0.91¹⁵. Item Total Correlation ascertains whether individual questions correlate positively with the full questionnaire, and reinforce the PROM's internal consistency. Correlation > 0.3 demonstrates good correlation²¹ (Figure 16).

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Staff did not communicate with others involved in my care_Recoded	21.6912	29.739	.497	.899
Staff gave me the right amount of support	21.6176	28.747	.701	.894
I did not get help quickly enough after referral_Recoded	21.5294	27.447	.661	.894
Staff listened to me and understood my problems	21.6324	29.281	.443	.902
Staff did not treat me with respect and dignity_Recoded	21.7353	29.959	.346	.905
The information I received from staff was useful and helpful	21.5735	28.666	.699	.894
Staff did not involve me enough in my care and treatment_Recoded	21.6765	29.058	.548	.898
The service provided me with the information I needed	21.5000	28.582	.656	.895
Staff were not sensitive to my needs_Recoded	21.7500	28.907	.717	.894
Staff helped me to understand my illness/difficulties	21.6029	28.213	.752	.892
Staff were not sensitive to the needs of my baby_Recoded	21.6912	29.530	.470	.900
My partner was not well supported by the service_Recoded	21.5441	28.222	.690	.893
The service definitely helped me to get better	21.7353	29.660	.592	.897
Staff helped me be more confident with caring for my baby	21.5147	29.925	.441	.901
The service involved other relevant people in a helpful way	21.4412	28.668	.640	.895
My discharge from the service was not well organised_Recoded	21.5147	29.477	.361	.906
I would recommend this service to others	21.7794	29.757	.621	.897

Figure 15–SPSS data output for Cronbach’s alpha reliability testing. Overall alpha score is 0.903. ‘Staff did not treat me with respect and dignity’ and ‘My discharge from the service was not well organised’ are two questions that, if removed, would improve already excellent reliability.

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Staff did not communicate with others involved in my care_Recoded	19.0000	24.418	.487	.908
Staff gave me the right amount of support	18.9265	23.442	.709	.900
I did not get help quickly enough after referral_Recoded	18.8382	22.317	.657	.903
Staff listened to me and understood my problems	18.9412	23.877	.455	.910
The information I received from staff was useful and helpful	18.8824	23.329	.716	.900
Staff did not involve me enough in my care and treatment_Recoded	18.9853	23.746	.549	.906
The service provided me with the information I needed	18.8088	23.232	.676	.901
Staff were not sensitive to my needs_Recoded	19.0588	23.847	.663	.902
Staff helped me to understand my illness/difficulties	18.9118	22.888	.776	.898
Staff were not sensitive to the needs of my baby_Recoded	19.0000	24.328	.441	.910
My partner was not well supported by the service_Recoded	18.8529	23.053	.679	.901
The service definitely helped me to get better	19.0441	24.252	.605	.904
Staff helped me be more confident with caring for my baby	18.8235	24.386	.473	.908
The service involved other relevant people in a helpful way	18.7500	23.295	.663	.902
I would recommend this service to others	19.0882	24.410	.617	.904

Figure 16 – Cronbach’s Item-Total Statistics, demonstrating that after deletion of the two items, item total correlation is above 0.3 for the other items, so are measuring the same outcome²⁰.

Split-half reliability

Split-half reliability divides the PROM into two and assesses correlation between both halves²¹. Correlation of >0.80 is deemed an acceptable level of reliability^{15,20}. The PROM scored 0.92 .

Inter-Item Correlation

Spearman's rho was used to calculate Inter-Item Correlation (Figure 17). Values of >0.7 and <0.3 denote strong and weak correlation respectively.

All strong correlations were highly statistically significant ($p < 0.01$). All results are positively correlated and the majority are highly statistically significant ($p < 0.01$).

Ease of PROM completion

78% of respondents felt the PROM was easy to complete. Those who disagreed felt reverse formatted questions were confusing, and that the questionnaire was too long.

Correlations

			Staff did not communicate with others involved in my care_Recoded	Staff gave me the right amount of support	I did not get help quickly enough after referral_Recoded	Staff listened to me and understood my problems	The information I received from staff was useful and helpful	Staff did not involve me enough in my care and treatment_Recoded	The service provided me with the information I needed	Staff were not sensitive to my needs_Recoded	Staff helped me to understand my illness/difficulties	Staff were not sensitive to the needs of my baby_Recoded	My partner was not well supported by the service_Recoded	The service definitely helped me to get better	Staff helped me be more confident with caring for my baby	The service involved other relevant people in a helpful way	I would recommend this service to others
Spearman's rho	Staff did not communicate with others involved in my care_Recoded	Correlation Coefficient Sig. (2-tailed) N	1.000 .000 68	.536** .000 68	.440** .000 68	.292** .016 68	.318** .008 68	.562** .000 68	.258** .033 68	.430** .000 68	.452** .000 68	.325** .007 68	.438** .000 68	.286** .018 68	.193 .114 68	.239** .050 68	.292** .016 68
	Staff gave me the right amount of support	Correlation Coefficient Sig. (2-tailed) N	.536** .000 68	1.000 .000 68	.413** .000 68	.408** .001 68	.533** .000 68	.536** .000 68	.538** .000 68	.389** .001 68	.554** .000 68	.413** .000 68	.605** .000 68	.679** .000 68	.374** .002 68	.510** .000 68	.580** .000 68
	I did not get help quickly enough after referral_Recoded	Correlation Coefficient Sig. (2-tailed) N	.440** .000 68	.413** .000 68	1.000 .000 68	.385** .001 68	.494** .000 68	.468** .000 68	.518** .000 68	.612** .000 68	.612** .000 68	.444** .000 68	.549** .000 68	.312** .010 68	.471** .000 68	.598** .000 68	.347** .004 68
	Staff listened to me and understood my problems	Correlation Coefficient Sig. (2-tailed) N	.292** .016 68	.408** .001 68	.385** .001 68	1.000 .000 68	.487** .000 68	.254** .037 68	.486** .000 68	.424** .000 68	.498** .000 68	.209 .088 68	.418** .000 68	.390** .001 68	.301** .013 68	.498** .000 68	.411** .000 68
	The information I received from staff was useful and helpful	Correlation Coefficient Sig. (2-tailed) N	.318** .008 68	.533** .000 68	.494** .000 68	.487** .000 68	1.000 .000 68	.385** .001 68	.767** .000 68	.480** .000 68	.721** .000 68	.437** .000 68	.459** .000 68	.542** .000 68	.343** .004 68	.582** .000 68	.446** .000 68
	Staff did not involve me enough in my care and treatment_Recoded	Correlation Coefficient Sig. (2-tailed) N	.562** .000 68	.536** .000 68	.468** .000 68	.254** .037 68	.385** .001 68	1.000 .000 68	.357** .003 68	.589** .000 68	.477** .000 68	.715** .000 68	.464** .000 68	.440** .000 68	.193 .114 68	.303** .012 68	.542** .000 68
	The service provided me with the information I needed	Correlation Coefficient Sig. (2-tailed) N	.258** .033 68	.538** .000 68	.518** .000 68	.486** .000 68	.424** .000 68	.498** .000 68	1.000 .000 68	.499** .000 68	.686** .000 68	.395** .001 68	.478** .000 68	.518** .000 68	.297** .014 68	.624** .000 68	.440** .000 68
	Staff were not sensitive to my needs_Recoded	Correlation Coefficient Sig. (2-tailed) N	.430** .000 68	.389** .001 68	.612** .000 68	.424** .000 68	.480** .000 68	.589** .000 68	.499** .000 68	1.000 .000 68	.549** .000 68	.699** .000 68	.619** .000 68	.326** .007 68	.268** .027 68	.405** .001 68	.390** .001 68
	Staff helped me to understand my illness/difficulties	Correlation Coefficient Sig. (2-tailed) N	.452** .000 68	.554** .000 68	.612** .000 68	.498** .000 68	.721** .000 68	.477** .000 68	.686** .000 68	.549** .000 68	1.000 .000 68	.355** .003 68	.547** .000 68	.543** .000 68	.501** .000 68	.569** .000 68	.515** .000 68
	Staff were not sensitive to the needs of my baby_Recoded	Correlation Coefficient Sig. (2-tailed) N	.325** .007 68	.413** .000 68	.444** .000 68	.209 .088 68	.437** .000 68	.715** .000 68	.395** .001 68	.699** .000 68	.355** .003 68	1.000 .000 68	.548** .000 68	.310 .010 68	.143 .244 68	.391** .001 68	.484** .000 68
	My partner was not well supported by the service_Recoded	Correlation Coefficient Sig. (2-tailed) N	.438** .000 68	.605** .000 68	.549** .000 68	.418** .000 68	.459** .000 68	.464** .000 68	.478** .000 68	.619** .000 68	.547** .000 68	.548** .000 68	1.000 .000 68	.400** .001 68	.298** .014 68	.469** .000 68	.521** .000 68
	The service definitely helped me to get better	Correlation Coefficient Sig. (2-tailed) N	.286** .018 68	.679** .000 68	.312** .010 68	.390** .001 68	.542** .000 68	.440** .000 68	.518** .000 68	.326** .007 68	.543** .000 68	.310 .010 68	.400** .001 68	1.000 .000 68	.328** .006 68	.451** .000 68	.700** .000 68
	Staff helped me be more confident with caring for my baby	Correlation Coefficient Sig. (2-tailed) N	.193 .114 68	.374** .002 68	.471** .000 68	.301 .013 68	.343** .004 68	.193 .114 68	.297** .014 68	.268** .027 68	.501** .000 68	.143 .244 68	.298** .014 68	.328** .006 68	1.000 .000 68	.539** .000 68	.306** .011 68
	The service involved other relevant people in a helpful way	Correlation Coefficient Sig. (2-tailed) N	.239** .050 68	.510** .000 68	.598** .000 68	.498** .000 68	.582** .000 68	.303** .012 68	.624** .000 68	.405** .001 68	.569** .000 68	.391** .001 68	.469** .000 68	.451** .000 68	.539** .000 68	1.000 .000 68	.381** .001 68
	I would recommend this service to others	Correlation Coefficient Sig. (2-tailed) N	.292** .016 68	.580** .000 68	.347** .004 68	.411** .000 68	.446** .000 68	.542** .000 68	.440** .000 68	.390** .001 68	.515** .000 68	.484** .000 68	.521** .000 68	.700** .000 68	.306** .011 68	.381** .001 68	1.000 .000 68

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

* . Correlation is significant at the 0.05 level (2-tailed).

Figure 17 –Inter-Item Correlation for 17 item PROM questionnaire. Strong correlation is often classed as being >0.5, however in this situation I have chosen a higher correlation, as many of my questions are correlated strongly²¹. A level of >0.7 has been selected as it denotes very strong correlation in my questions, and is still highly statistically significant (p=<0.01).

Discussion

Satisfaction

Similar to previous studies, patients are generally satisfied across all areas measured^{5,6}. In thirteen of seventeen general questions over 90% of respondents were satisfied.

Respondents were least satisfied with discharge organisation, speed of referral and perceived support of their partner. Only two sites had highly statistically significant differences in satisfaction experienced, in just two questions (Figure 16).

Both *'My discharge from the service was not well organised'* and *'My partner was not well supported by the service'* had equal highest levels of answers 'Don't Know' (n = 7, 10.3%), blank or 'N/A' (n = 6, 8.8%). Dissatisfaction with discharge organisation may be owing to respondents assessing the efficiency of something they are yet to experience. Additionally, respondents may not have a partner and have marked 'Don't Know' for want of an alternative. Of course there may be care quality issues in these areas.

Reported Health

Respondents reporting as 'Very Well' increased from 2% before contact with an MBU to 29% postcontact. Respondents that were 'Well' increased from 6% to 49%. Confounding factors such as medication, naturally improving mood and increased insight contribute to these findings. This should replace Questions 5 and 6, as acutely unwell respondents may have had no mental health issues until admission. Respondents appeared to find this question more acceptable, with only three respondents (4.5%) not answering the question.

Qualitative Responses

Qualitative questions highlight topics not already covered by a questionnaire⁵. 62% (n = 42) of respondents elaborated on previous answers and thanked MBU staff members for their help. Some reported frustration at reduced independence in daily tasks, whilst others requested access to basic housekeeping equipment.

PCA

PCA shows variability in the PROM as follows;

Component 1 - perceived support from the MBU

Component 2 - staff sensitivity

Component 3 - MBU treatment effectiveness

Component 4 - staff communication

A sample size of 68 is not large enough for PCA; 300 subjects are required to ensure reliable results²¹ by decreasing the loading value required to include questions in each component²¹.

Cronbach's Alpha

Cronbach's alpha reliability was calculated as 0.91, increased from 0.903 by removing '*Staff did not treat me with respect and dignity*' and '*My discharge from the service was not well organised*' from the PROM. Although it is optional to remove questions that do not substantially improve reliability²¹, patients cannot comment on their impending discharge.

Inter-Item Correlation

Some items correlated strongly with high statistical significance ($p < 0.01$);

'The information I received from staff was useful and helpful' and ***'The service provided me with the information I needed'*** and ***'Staff helped me to understand my illness/difficulties'***

Only one question about information is required. Although '*The service provided me with the information I needed*' asks about all types of information in one question, '*Staff helped me to understand my illness*' highly correlates and tests the ability to convey clinical information with good communication skills and sensitivity towards patients.

‘Staff did not involve me enough in my care and treatment’ with ‘Staff were not sensitive to the needs of my baby’

Both questions above should remain as they measure care towards the patient and baby separately, and only weakly correlate with other questions. MBU feedback suggests baby specific questions are seldom asked, making potentially unique to the PROM.

‘The service definitely helped me to get better’ and ‘I would recommend this service to others’

Neither question is required. The former duplicates measuring health before and after MBU involvement (Figure 13) and the latter is the NHS Friends and Family Test question, which is already asked.

Questionnaires returned by MBUs

Three MBUs returned site surveys. They agreed reverse formatted questions cause confusion and considered the bias against non-English speaking respondents. Questions surrounding care planning and specific treatments were requested. MBUs confirmed that many patients are single, or do not want their partner involved in their care, making such questions unnecessary. PROM completion on the day of discharge was effective, and preferable to low response rates for postal questionnaires.

Limitations to study

Missing data

Missing data makes psychometric evaluation difficult to complete. Calculating a mean respondent score for missing data allowed evaluation to occur, but would have been more valuable had all questions been completed.

Questions 5 and 6 had 63% missing data but, as already discussed, these can be replaced by measuring health before and after contact with MBUs. Additionally, this produces a measurable result without excluding acute patients or complicating data collection with unexpected answers.

Patients should be asked to identify as inpatients or outpatients at the start of the PROM to prevent respondents answering questions not intended for them, and wasting data through uncertainty of its source. Additionally it would highlight issues unique to either group which may be valuable to the originating MBU.

Missing data increased towards the end of the questionnaire, from 1% to 5% total blank items by the end of the general questions. Respondents may be losing interest in the PROM, or not understanding the later questions, so shortening the PROM may improve completion.

Likert Scale

The PROM Likert scale is not without issues. As already discussed, there are differing opinions about the positioning of 'Don't Know' to denote neutrality²².

Previous studies found neutral middle points dissuade respondents away from negative answers^{23, 24}, and encourage central tendency bias through consistently neutral responses²⁵. However, a neutral midpoint does not force a respondent into an opinion²², providing an alternative for people who 'Don't Know'²⁴. Some PROM respondents asked why there was no neutral response, so a midpoint on the Likert scale would be useful.

Reverse Formatted Questions

Nine respondents (13%) commented that reverse worded questions were confusing. Reverse format questions are commonly used to avoid bias¹¹, but can make questionnaires harder to complete, risking mistakes through confusion with no material change to bias levels²⁶.

Response Rate

The response rate could not be calculated without, but as the PROM is designed for a small patient population it is imperative that response rates are optimised. Other than complicating statistical analysis, a poor response rate introduces bias by overlooking characteristics of non-responders, compromising the reliability of conclusions drawn²².

Conclusion

The following revisions are suggested to the PROM to improve reliability, psychometric properties and acceptability to patients as a satisfaction questionnaire.

- Remove;

'Staff did not treat me with respect and dignity'

'My discharge from the service was not well organised'

'The information I received from staff was useful and helpful'

'I would recommend this service to others'

'The service definitely helped me to get better'

'My partner was not well supported by the service'

- Ask respondents to identify as inpatients or outpatients
- Consider rewording reverse formatted questions.
- Consider additional questions regarding care planning and specific treatments.
- Create a neutral anchor point of 'neither agree nor disagree' on the Likert scale to encourage non-responders to provide an answer

Future considerations for PROM

Non-English speaking participants

The pilot version of PROM has not considered the need for foreign language PROMs.

Future studies would need to consider this.

Questionnaire burden

It is unknown how long the PROM takes to complete. Lengthy questionnaires are sufficiently burdensome to cause low response rates²⁸. Future studies would assess the time required to complete the PROM, being cautious not to shorten further at the expense of the psychometric properties²⁷.

MBU Feedback

The various care structures found in MBUs need further investigation so that a useful, service wide PROM can be achieved. The PROM would be an additional satisfaction questionnaire for patients to complete, so minimising the additional burden on staff to deliver the PROM must be considered.

Online Questionnaire

The PROM received one online response, so is unsuitable for measuring satisfaction in this setting. It is unknown why an online PROM is undesirable, but may be owing to the lack of human involvement in the process¹⁷.

WORD COUNT - 2987

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Appendix

Winchester Perinatal PROM Patient Rated Outcome and Experience Measure

We are always trying to improve the quality of the service we provide. To help us do this we would be grateful if you could give us your views regarding the service you have received from us. If you have a partner, or someone who has been closely involved in supporting you, who would also like to express their views on the care we offered you, we have enclosed another form for them to fill in. If you would prefer to complete this online please visit <http://goo.gl/TiXvfg>

- I am a patient
- I am a partner/other (when answering questions, 'me' or 'my' means the mum/patient)

1. Please rate your view of the service based on your own experiences. Please try to tick one answer for each of the questions:	<i>Strongly agree</i>	<i>Agree</i>	<i>Disagree</i>	<i>Strongly disagree</i>	<i>Don't know</i>
Staff did not communicate with others involved in my care					
Staff gave me the right amount of support					
I did not get help quickly enough after referral					
Staff listened to me and understood my problems					
Staff did not treat me with respect and dignity					
The information I received from staff was useful and helpful					
Staff did not involve me enough in my care and treatment					
The service provided me with the information I needed					
Staff were not sensitive to my needs					
Staff helped me to understand my illness/difficulties					
Staff were not sensitive to the needs of my baby					
My partner was not well supported by the service					
The service definitely helped me to get better					
Staff helped me be more confident with caring for my baby					
The service involved other relevant people in a helpful way					
My discharge from the service was not well organised					
I would recommend this service to others					

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2. If you have been on the Mother and Baby Unit:	Strongly agree	Agree	Disagree	Strongly disagree	Don't know
The unit was clean and hygienic					
The unit did not provide a good place for me to recover in					
The unit did not provide helpful activities and therapies					
The unit provided a good place for my baby to be with me					
The unit supported me in my contact with family and friends					
The food provided was not acceptable to me					

3. Please rate how your mental health has been	Very well	Well	Unwell	Very unwell	Extremely unwell
When I first came into contact with the service, I was					
When I was discharged from the service, I was					
When you first came into contact with the service, how many days out of the previous 30 had your mental health interfered with your usual activities?					
When you were discharged from the service, how many days out of the previous 30 had your mental health interfered with your usual activities?					

4. Please use this space for any other comments about the service and how we could improve it

5. This questionnaire was easy to fill in Strongly agree Agree Disagree Strongly disagree

Please use the space below for any other comments about this questionnaire

Thank you for completing this questionnaire. If you wish to find out more about the Perinatal Feedback Questionnaire please contact the Perinatal Quality Network on 0207 977 6691

Would you be interested in contributing to the improvement of our service by participating in discussion/meetings? No Yes

OPTIONAL: If you want to be contacted about helping with our service improvement, please write your name address/email below. If you prefer, you can tear off and send it to us separately. ©Alain Gregoire

Figure 1 –Perinatal Patient Rated Outcome and Experience Measure (PROM) Questionnaire that was sent to eight MBUs as part of the project.

Staff views on Patient Rated Outcome Measure –
SURVEY

Thank you for your assistance with the PROM pilot. Please could you give me some brief feedback regarding your experiences with the PROM.

Thank you.

Site Name:-

Number of PROMs sent out:-

1. Your comments/suggestions about the form itself :

2. Any difficulties/comments/suggestions made by patients/partners about the form itself:

3. Your difficulties/comments/suggestions with distributing the PROM:

5. Were there benefits of using the PROM?

6. Suggestions for improving response rates:

7. Any other comments;

Figure 2 – Questionnaire on staff views of the PROM. This was sent out to the six MBUs that returned questionnaires to assess their opinion on the PROM, and comment on the practicalities of implementation

Staff did not communicate with others involved in my care_Recorded

Site name	Frequency	Percent	Valid Percent	Cumulative Percent
Leeds Valid Strongly Disagree	24	88.9	88.9	88.9
Leeds Valid Disagree	3	11.1	11.1	100.0
Leeds Total	27	100.0	100.0	
Winchester Valid Strongly Disagree	3	75.0	75.0	75.0
Winchester Valid Disagree	1	25.0	25.0	100.0
Winchester Total	4	100.0	100.0	
Newcastle Valid Strongly Disagree	11	91.7	91.7	91.7
Newcastle Valid Disagree	1	8.3	8.3	100.0
Newcastle Total	12	100.0	100.0	
Birmingham Valid Strongly Disagree	6	50.0	50.0	50.0
Birmingham Valid Disagree	5	41.7	41.7	91.7
Birmingham Valid Agree	1	8.3	8.3	100.0
Birmingham Total	12	100.0	100.0	
Bournemouth Valid Strongly Disagree	2	40.0	40.0	40.0
Bournemouth Valid Disagree	3	60.0	60.0	100.0
Bournemouth Total	5	100.0	100.0	
London Valid Strongly Disagree	4	50.0	50.0	50.0
London Valid Disagree	4	50.0	50.0	100.0
London Total	8	100.0	100.0	

a)

Staff gave me the right amount of support

Site name	Frequency	Percent	Valid Percent	Cumulative Percent
Leeds Valid Strongly Agree	23	85.2	85.2	85.2
Leeds Valid Agree	4	14.8	14.8	100.0
Leeds Total	27	100.0	100.0	
Winchester Valid Strongly Agree	3	75.0	75.0	75.0
Winchester Valid Agree	1	25.0	25.0	100.0
Winchester Total	4	100.0	100.0	
Newcastle Valid Strongly Agree	9	75.0	75.0	75.0
Newcastle Valid Agree	3	25.0	25.0	100.0
Newcastle Total	12	100.0	100.0	
Birmingham Valid Strongly Agree	6	50.0	50.0	50.0
Birmingham Valid Agree	6	50.0	50.0	100.0
Birmingham Total	12	100.0	100.0	
Bournemouth Valid Strongly Agree	1	20.0	20.0	20.0
Bournemouth Valid Agree	4	80.0	80.0	100.0
Bournemouth Total	5	100.0	100.0	
London Valid Strongly Agree	2	25.0	25.0	25.0
London Valid Agree	6	75.0	75.0	100.0
London Total	8	100.0	100.0	

b)

I did not get help quickly enough after referral_Recorded

Site name	Frequency	Percent	Valid Percent	Cumulative Percent
Leeds Valid Strongly Disagree	19	70.4	70.4	70.4
Leeds Valid Disagree	6	22.2	22.2	92.6
Leeds Valid Agree	2	7.4	7.4	100.0
Leeds Total	27	100.0	100.0	
Winchester Valid Strongly Disagree	3	75.0	75.0	75.0
Winchester Valid Disagree	1	25.0	25.0	100.0
Winchester Total	4	100.0	100.0	
Newcastle Valid Strongly Disagree	11	91.7	91.7	91.7
Newcastle Valid Disagree	1	8.3	8.3	100.0
Newcastle Total	12	100.0	100.0	
Birmingham Valid Strongly Disagree	6	50.0	50.0	50.0
Birmingham Valid Disagree	6	50.0	50.0	100.0
Birmingham Total	12	100.0	100.0	
Bournemouth Valid Strongly Disagree	1	20.0	20.0	20.0
Bournemouth Valid Disagree	3	60.0	60.0	80.0
Bournemouth Valid Agree	1	20.0	20.0	100.0
Bournemouth Total	5	100.0	100.0	
London Valid Strongly Disagree	4	50.0	50.0	50.0
London Valid Disagree	2	25.0	25.0	75.0
London Valid Agree	1	12.5	12.5	87.5
London Valid Strongly Agree	1	12.5	12.5	100.0
London Total	8	100.0	100.0	

c)

Staff listened to me and understood my problems

Site name	Frequency	Percent	Valid Percent	Cumulative Percent
Leeds Valid Strongly Agree	22	81.5	81.5	81.5
Leeds Valid Agree	4	14.8	14.8	96.3
Leeds Valid Strongly Disagree	1	3.7	3.7	100.0
Leeds Total	27	100.0	100.0	
Winchester Valid Strongly Agree	4	100.0	100.0	100.0
Winchester Total	4	100.0	100.0	
Newcastle Valid Strongly Agree	11	91.7	91.7	91.7
Newcastle Valid Agree	1	8.3	8.3	100.0
Newcastle Total	12	100.0	100.0	
Birmingham Valid Strongly Agree	6	50.0	50.0	50.0
Birmingham Valid Agree	4	33.3	33.3	83.3
Birmingham Valid Disagree	2	16.7	16.7	100.0
Birmingham Total	12	100.0	100.0	
Bournemouth Valid Strongly Agree	2	40.0	40.0	40.0
Bournemouth Valid Agree	3	60.0	60.0	100.0
Bournemouth Total	5	100.0	100.0	
London Valid Strongly Agree	4	50.0	50.0	50.0
London Valid Agree	4	50.0	50.0	100.0
London Total	8	100.0	100.0	

d)

Staff did not treat me with respect and dignity_Recorded

Site name	Frequency	Percent	Valid Percent	Cumulative Percent
Leeds Valid Strongly Disagree	23	85.2	85.2	85.2
Leeds Valid Disagree	3	11.1	11.1	96.3
Leeds Valid Strongly Agree	1	3.7	3.7	100.0
Leeds Total	27	100.0	100.0	
Winchester Valid Strongly Disagree	3	75.0	75.0	75.0
Winchester Valid Disagree	1	25.0	25.0	100.0
Winchester Total	4	100.0	100.0	
Newcastle Valid Strongly Disagree	12	100.0	100.0	100.0
Newcastle Total	12	100.0	100.0	
Birmingham Valid Strongly Disagree	9	75.0	75.0	75.0
Birmingham Valid Disagree	2	16.7	16.7	91.7
Birmingham Valid Strongly Agree	1	8.3	8.3	100.0
Birmingham Total	12	100.0	100.0	
Bournemouth Valid Strongly Disagree	5	100.0	100.0	100.0
Bournemouth Total	5	100.0	100.0	
London Valid Strongly Disagree	4	50.0	50.0	50.0
London Valid Disagree	4	50.0	50.0	100.0
London Total	8	100.0	100.0	

e)

The information I received from staff was useful and helpful

Site name	Frequency	Percent	Valid Percent	Cumulative Percent
Leeds Valid Strongly Agree	19	70.4	70.4	70.4
Leeds Valid Agree	8	29.6	29.6	100.0
Leeds Total	27	100.0	100.0	
Winchester Valid Strongly Agree	4	100.0	100.0	100.0
Winchester Total	4	100.0	100.0	
Newcastle Valid Strongly Agree	8	66.7	66.7	66.7
Newcastle Valid Agree	4	33.3	33.3	100.0
Newcastle Total	12	100.0	100.0	
Birmingham Valid Strongly Agree	6	50.0	50.0	50.0
Birmingham Valid Agree	6	50.0	50.0	100.0
Birmingham Total	12	100.0	100.0	
Bournemouth Valid Strongly Agree	1	20.0	20.0	20.0
Bournemouth Valid Agree	4	80.0	80.0	100.0
Bournemouth Total	5	100.0	100.0	
London Valid Strongly Agree	3	37.5	37.5	37.5
London Valid Agree	5	62.5	62.5	100.0
London Total	8	100.0	100.0	

f)

Staff did not involve me enough in my care and treatment_Recoded

Site name	Frequency	Percent	Valid Percent	Cumulative Percent
Leeds Valid Strongly Disagree	23	85.2	85.2	85.2
Leeds Valid Disagree	4	14.8	14.8	100.0
Leeds Valid Total	27	100.0	100.0	
Winchester Valid Strongly Disagree	3	75.0	75.0	75.0
Winchester Valid Disagree	1	25.0	25.0	100.0
Winchester Valid Total	4	100.0	100.0	
Newcastle Valid Strongly Disagree	10	83.3	83.3	83.3
Newcastle Valid Disagree	2	16.7	16.7	100.0
Newcastle Valid Total	12	100.0	100.0	
Birmingham Valid Strongly Disagree	7	58.3	58.3	58.3
Birmingham Valid Disagree	4	33.3	33.3	91.7
Birmingham Valid Strongly Agree	1	8.3	8.3	100.0
Birmingham Valid Total	12	100.0	100.0	
Bournemouth Valid Strongly Disagree	3	60.0	60.0	60.0
Bournemouth Valid Disagree	2	40.0	40.0	100.0
Bournemouth Valid Total	5	100.0	100.0	
London Valid Strongly Disagree	4	50.0	50.0	50.0
London Valid Disagree	4	50.0	50.0	100.0
London Valid Total	8	100.0	100.0	

g)

The service provided me with the information I needed

Site name	Frequency	Percent	Valid Percent	Cumulative Percent
Leeds Valid Strongly Agree	19	70.4	70.4	70.4
Leeds Valid Agree	8	29.6	29.6	100.0
Leeds Valid Total	27	100.0	100.0	
Winchester Valid Strongly Agree	2	50.0	50.0	50.0
Winchester Valid Agree	2	50.0	50.0	100.0
Winchester Valid Total	4	100.0	100.0	
Newcastle Valid Strongly Agree	8	66.7	66.7	66.7
Newcastle Valid Agree	4	33.3	33.3	100.0
Newcastle Valid Total	12	100.0	100.0	
Birmingham Valid Strongly Agree	6	50.0	50.0	50.0
Birmingham Valid Agree	5	41.7	41.7	91.7
Birmingham Valid Disagree	1	8.3	8.3	100.0
Birmingham Valid Total	12	100.0	100.0	
Bournemouth Valid Agree	5	100.0	100.0	100.0
Bournemouth Valid Total	5	100.0	100.0	
London Valid Strongly Agree	2	25.0	25.0	25.0
London Valid Agree	6	75.0	75.0	100.0
London Valid Total	8	100.0	100.0	

h)

Staff were not sensitive to my needs_Recoded

Site name	Frequency	Percent	Valid Percent	Cumulative Percent
Leeds Valid Strongly Disagree	24	88.9	88.9	88.9
Leeds Valid Disagree	3	11.1	11.1	100.0
Leeds Valid Total	27	100.0	100.0	
Winchester Valid Strongly Disagree	3	75.0	75.0	75.0
Winchester Valid Disagree	1	25.0	25.0	100.0
Winchester Valid Total	4	100.0	100.0	
Newcastle Valid Strongly Disagree	12	100.0	100.0	100.0
Newcastle Valid Total	12	100.0	100.0	
Birmingham Valid Strongly Disagree	7	58.3	58.3	58.3
Birmingham Valid Disagree	4	33.3	33.3	91.7
Birmingham Valid Agree	1	8.3	8.3	100.0
Birmingham Valid Total	12	100.0	100.0	
Bournemouth Valid Strongly Disagree	5	100.0	100.0	100.0
Bournemouth Valid Total	5	100.0	100.0	
London Valid Strongly Disagree	3	37.5	37.5	37.5
London Valid Disagree	5	62.5	62.5	100.0
London Valid Total	8	100.0	100.0	

i)

Staff helped me to understand my illness/difficulties

Site name	Frequency	Percent	Valid Percent	Cumulative Percent
Leeds Valid Strongly Agree	21	77.8	77.8	77.8
Leeds Valid Agree	6	22.2	22.2	100.0
Leeds Valid Total	27	100.0	100.0	
Winchester Valid Strongly Agree	3	75.0	75.0	75.0
Winchester Valid Agree	1	25.0	25.0	100.0
Winchester Valid Total	4	100.0	100.0	
Newcastle Valid Strongly Agree	10	83.3	83.3	83.3
Newcastle Valid Agree	2	16.7	16.7	100.0
Newcastle Valid Total	12	100.0	100.0	
Birmingham Valid Strongly Agree	6	50.0	50.0	50.0
Birmingham Valid Agree	6	50.0	50.0	100.0
Birmingham Valid Total	12	100.0	100.0	
Bournemouth Valid Strongly Agree	1	20.0	20.0	20.0
Bournemouth Valid Agree	4	80.0	80.0	100.0
Bournemouth Valid Total	5	100.0	100.0	
London Valid Strongly Agree	3	37.5	37.5	37.5
London Valid Agree	4	50.0	50.0	87.5
London Valid Disagree	1	12.5	12.5	100.0
London Valid Total	8	100.0	100.0	

j)

Staff were not sensitive to the needs of my baby_Recoded

Site name	Frequency	Percent	Valid Percent	Cumulative Percent
Leeds Valid Strongly Disagree	23	85.2	85.2	85.2
Leeds Valid Disagree	4	14.8	14.8	100.0
Leeds Valid Total	27	100.0	100.0	
Winchester Valid Strongly Disagree	3	75.0	75.0	75.0
Winchester Valid Disagree	1	25.0	25.0	100.0
Winchester Valid Total	4	100.0	100.0	
Newcastle Valid Strongly Disagree	9	75.0	75.0	75.0
Newcastle Valid Disagree	2	16.7	16.7	91.7
Newcastle Valid Strongly Agree	1	8.3	8.3	100.0
Newcastle Valid Total	12	100.0	100.0	
Birmingham Valid Strongly Disagree	9	75.0	75.0	75.0
Birmingham Valid Disagree	3	25.0	25.0	100.0
Birmingham Valid Total	12	100.0	100.0	
Bournemouth Valid Strongly Disagree	4	80.0	80.0	80.0
Bournemouth Valid Disagree	1	20.0	20.0	100.0
Bournemouth Valid Total	5	100.0	100.0	
London Valid Strongly Disagree	3	37.5	37.5	37.5
London Valid Disagree	5	62.5	62.5	100.0
London Valid Total	8	100.0	100.0	

k)

My partner was not well supported by the service_Recoded

Site name	Frequency	Percent	Valid Percent	Cumulative Percent
Leeds Valid Strongly Disagree	21	77.8	77.8	77.8
Leeds Valid Disagree	5	18.5	18.5	96.3
Leeds Valid Agree	1	3.7	3.7	100.0
Leeds Valid Total	27	100.0	100.0	
Winchester Valid Strongly Disagree	3	75.0	75.0	75.0
Winchester Valid Disagree	1	25.0	25.0	100.0
Winchester Valid Total	4	100.0	100.0	
Newcastle Valid Strongly Disagree	9	75.0	75.0	75.0
Newcastle Valid Disagree	3	25.0	25.0	100.0
Newcastle Valid Total	12	100.0	100.0	
Birmingham Valid Strongly Disagree	4	33.3	33.3	33.3
Birmingham Valid Disagree	8	66.7	66.7	100.0
Birmingham Valid Total	12	100.0	100.0	
Bournemouth Valid Strongly Disagree	2	40.0	40.0	40.0
Bournemouth Valid Disagree	3	60.0	60.0	100.0
Bournemouth Valid Total	5	100.0	100.0	
London Valid Strongly Disagree	2	25.0	25.0	25.0
London Valid Disagree	5	62.5	62.5	87.5
London Valid Agree	1	12.5	12.5	100.0
London Valid Total	8	100.0	100.0	

l)

The service definitely helped me to get better

Site name	Frequency	Percent	Valid Percent	Cumulative Percent
Leeds Valid Strongly Agree	25	92.6	92.6	92.6
Agree	2	7.4	7.4	100.0
Total	27	100.0	100.0	
Winchester Valid Strongly Agree	4	100.0	100.0	100.0
Newcastle Valid Strongly Agree	10	83.3	83.3	83.3
Agree	2	16.7	16.7	100.0
Total	12	100.0	100.0	
Birmingham Valid Strongly Agree	8	66.7	66.7	66.7
Agree	4	33.3	33.3	100.0
Total	12	100.0	100.0	
Bournemouth Valid Strongly Agree	1	20.0	20.0	20.0
Agree	4	80.0	80.0	100.0
Total	5	100.0	100.0	
London Valid Strongly Agree	4	50.0	50.0	50.0
Agree	4	50.0	50.0	100.0
Total	8	100.0	100.0	

m)

Staff helped me be more confident with caring for my baby

Site name	Frequency	Percent	Valid Percent	Cumulative Percent
Leeds Valid Strongly Agree	19	70.4	70.4	70.4
Agree	8	29.6	29.6	100.0
Total	27	100.0	100.0	
Winchester Valid Strongly Agree	3	75.0	75.0	75.0
Agree	1	25.0	25.0	100.0
Total	4	100.0	100.0	
Newcastle Valid Strongly Agree	8	66.7	66.7	66.7
Agree	4	33.3	33.3	100.0
Total	12	100.0	100.0	
Birmingham Valid Strongly Agree	3	25.0	25.0	25.0
Agree	9	75.0	75.0	100.0
Total	12	100.0	100.0	
Bournemouth Valid Agree	5	100.0	100.0	100.0
London Valid Strongly Agree	4	50.0	50.0	50.0
Agree	4	50.0	50.0	100.0
Total	8	100.0	100.0	

n)

The service involved other relevant people in a helpful way

Site name	Frequency	Percent	Valid Percent	Cumulative Percent
Leeds Valid Strongly Agree	16	59.3	59.3	59.3
Agree	10	37.0	37.0	96.3
Disagree	1	3.7	3.7	100.0
Total	27	100.0	100.0	
Winchester Valid Strongly Agree	2	50.0	50.0	50.0
Agree	2	50.0	50.0	100.0
Total	4	100.0	100.0	
Newcastle Valid Strongly Agree	7	58.3	58.3	58.3
Agree	5	41.7	41.7	100.0
Total	12	100.0	100.0	
Birmingham Valid Strongly Agree	5	41.7	41.7	41.7
Agree	7	58.3	58.3	100.0
Total	12	100.0	100.0	
Bournemouth Valid Agree	5	100.0	100.0	100.0
London Valid Strongly Agree	3	37.5	37.5	37.5
Agree	5	62.5	62.5	100.0
Total	8	100.0	100.0	

o)

My discharge from the service was not well organised_Recoded

Site name	Frequency	Percent	Valid Percent	Cumulative Percent
Leeds Valid Strongly Disagree	19	70.4	70.4	70.4
Disagree	6	22.2	22.2	92.6
Agree	1	3.7	3.7	96.3
Strongly Agree	1	3.7	3.7	100.0
Total	27	100.0	100.0	
Winchester Valid Strongly Disagree	3	75.0	75.0	75.0
Disagree	1	25.0	25.0	100.0
Total	4	100.0	100.0	
Newcastle Valid Strongly Disagree	9	75.0	75.0	75.0
Disagree	1	8.3	8.3	83.3
Agree	2	16.7	16.7	100.0
Total	12	100.0	100.0	
Birmingham Valid Strongly Disagree	7	58.3	58.3	58.3
Disagree	5	41.7	41.7	100.0
Total	12	100.0	100.0	
Bournemouth Valid Strongly Disagree	3	60.0	60.0	60.0
Disagree	1	20.0	20.0	80.0
Agree	1	20.0	20.0	100.0
Total	5	100.0	100.0	
London Valid Strongly Disagree	2	25.0	25.0	25.0
Disagree	6	75.0	75.0	100.0
Total	8	100.0	100.0	

p)

I would recommend this service to others

Site name	Frequency	Percent	Valid Percent	Cumulative Percent
Leeds Valid Strongly Agree	25	92.6	92.6	92.6
Agree	2	7.4	7.4	100.0
Total	27	100.0	100.0	
Winchester Valid Strongly Agree	4	100.0	100.0	100.0
Newcastle Valid Strongly Agree	11	91.7	91.7	91.7
Agree	1	8.3	8.3	100.0
Total	12	100.0	100.0	
Birmingham Valid Strongly Agree	9	75.0	75.0	75.0
Agree	3	25.0	25.0	100.0
Total	12	100.0	100.0	
Bournemouth Valid Strongly Agree	2	40.0	40.0	40.0
Agree	3	60.0	60.0	100.0
Total	5	100.0	100.0	
London Valid Strongly Agree	4	50.0	50.0	50.0
Agree	4	50.0	50.0	100.0
Total	8	100.0	100.0	

q)

Figure 6 – Cross tabulation of the answer for each questions, for each site. There are a couple of unexpected answers in the data, but looking back through SPSS it appears these answers may be mistakes in marking as the other answers, and comments at the end do not reinforce the response

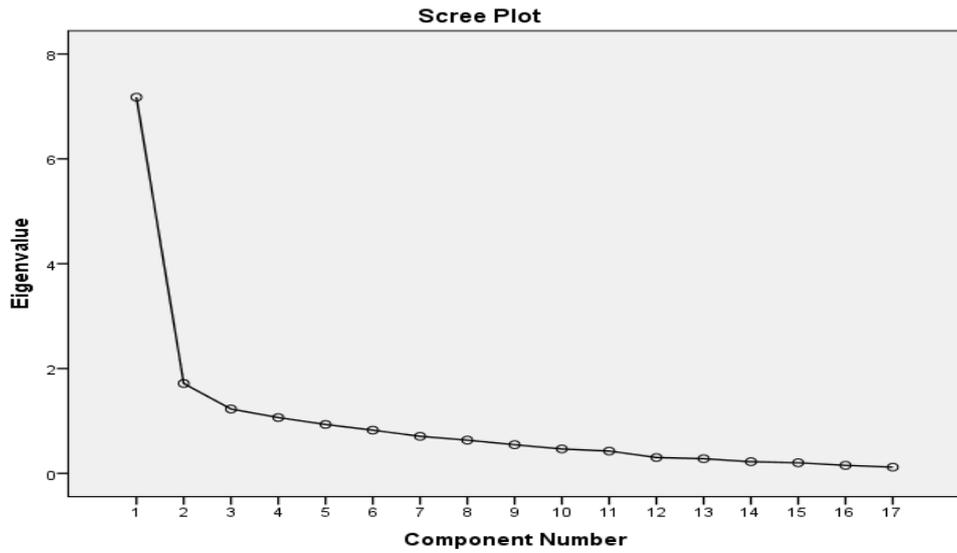


Figure 12 – A Scree Plot of the factors found in the PROM by PCA. An Eigenvalue above 1 is deemed to be important, and this shows that the first component has a very high Eigenvalue, the second component has an Eigenvalue a little under 2 and then a gradual decline happens. It is acceptable to choose your number of components from a Scree plot, and generally this is done at the point of inflexion, in this case at two components (22).