Research paper

Developing a medical engagement scale (MES)

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ABSTRACT

There is increasing emphasis upon improving levels of medical engagement as a route to improving service quality. Organisations with more engaged clinical staff appear to have better performance measures. This study describes the development process involved in designing a medical engagement scale and identifying appropriate reliability and validity data. A new scale is reported, which is now available through the NHS Institute for Innovation and Improvement.

Keywords: engagement, medical engagement scale, medical leadership, organisational performance, validity

Background

Increasingly, the idea of enhancing clinical engagement is seen as crucial to ensuring that service changes are properly planned and effectively implemented. Hospitals where clinicians are engaged in strategic planning and decision making perform better than those where clinicians are alienated from the strategic processes of the hospital (Goldstein and Ward, 2004). For the past decade, the Gallup Organisation has used its workplace satisfaction survey (the Q12) to conduct extensive research into employee engagement. The implications of this research in the current context are that medical engagement builds from:

- confidence (consistent delivery)
- integrity (being treated fairly)
- pride (feeling good about working in hospitals)
- passion (integral part of their life).

There is a growing body of evidence that organisations with highly engaged employees benefit from greater productivity, greater staff satisfaction and lower rates of staff turnover. On the face of it, the logic seems inescapable. If clinical staff are not engaged in the change process, then necessary service improvements are less likely to be successfully put in place. On the other hand, a cohort of engaged clinicians would not only welcome new and flexible ways of working, but would also be keen to work in high-performance teams across traditional professional boundaries as they help to redesign services and build more effective care pathways.

In conjunction with the Academy of Medical Royal Colleges, the NHS Institute for Innovation and Improvement has developed a management and leadership competency framework for doctors. Ensuring that doctors acquire appropriate management and leadership skills at all key stages in their careers is central to enabling the motivational benefits of enhanced engagement to be effectively harnessed. This professional development will be targeted not only at undergraduate medical education but also through postgraduate training, career grades and specialists to initial re-licensing.

As part of the Enhancing Engagement in Medical Leadership project, the NHS Institute for Innovation

and Improvement and the Academy of Medical Royal Colleges proposed to develop a reliable and valid measure of medical engagement that is quick and relatively unobtrusive to complete, but which will be capable of providing useful information about both the cultural milieu of the organisation (which may either foster or constrain professional engagement) and the personal feelings of medical staff (which may either empower or inhibit the motivation to perform optimally).

Although there are numerous measures of employee engagement, most of these only attempt to assess the personal feelings of individual staff, and do not simultaneously evaluate the associated cultural conditions of the organisation. Furthermore, no assessment tools have been specifically designed to assess medical engagement in management and leadership in the NHS. The new measure (the Medical Engagement Scale) has been specifically designed to do both, and its rationale and development are briefly described in this short paper.

Aims and rationale

With regard to the engagement measure, three key aims were specifically identified:

1 to develop a reliable and valid measure of medical engagement that is quick and relatively unobtrusive to complete
2 to differentiate within the scale between a measure of personal engagement at an individual level (the motivation of the individual to perform in appropriate managerial and leadership roles) and the organisational context (which may foster or constrain engagement)
3 to develop a systematic framework for recommending organisational strategies that are capable of enhancing medical engagement and performance at work.

This psychometric development of the engagement measure rests on three important considerations, which are briefly discussed below.

Medical engagement is a continuing problem

Despite the introduction of appraisal for doctors, many doctors are not positively engaged with the system in which they work, and their performance in the clinical management and leadership areas falls short of what it could be. If there is a persistent problem with lack of medical engagement (particularly with the leadership and management agendas), a reliable and valid means of assessing this is essential not only to identify good and bad practice, but also to monitor change. This is a particularly pressing need in the current climate, where medical commitment to healthcare issues needs to become more widely defined than the traditional focus on clinical and professional concerns. The development of a suitable assessment tool would appear to be an essential prerequisite to the ever-accelerating need for change.

Professional engagement is multi-dimensional

There are many definitions of employee engagement, although most of them are located within the perspective of 'personal feelings of individual staff members.' Two useful definitions of this type (both provided by Wellins et al, 2007) are as follows:

> The extent to which people enjoy and believe in what they do and feel valued.

> The extent to which employees put discretionary effort into their work in the form of brainpower, time and energy.

Engagement measures typically only assess this personal 'wing' of the engagement construct. For example, the three subscales of the Utrecht Work Engagement Scale (UWES) (Schaufeli and Bakker, 2003) are conceptually derived from the converse of the three components of occupational 'burnout' identified by Maslach and his colleagues. In essence, the three engagement scales are the assumed opposite poles of the three burnout scales (Box 1):

Box 1

Maslach 'burnout'	UWES 'engagement'
Exhaustion	Vigour
Cynicism	Dedication
Reduced professional efficacy	Absorption

However, it is clear that medical engagement cannot be properly understood on the basis of consideration of the individual employee alone. Clearly, organisational systems and strategies play a crucial role in providing the cultural conditions under which the individual's propensity to engage at work is either encouraged or inhibited. The development of a new measure of medical engagement must simultaneously assess both the cultural and individual components of the engagement equation reflected in our definition of medical engagement as 'the active and positive contribution of doctors within their normal working roles to maintaining and enhancing the performance of the organisation which itself recognises this commitment in supporting and encouraging high-quality care.'

Engagement mediates competence and performance

As well as clearly distinguishing between individual and organisational influences on medical engagement, it is also important to make a clear conceptual distinction between competence and performance. What doctors 'can do' (i.e. competence) is not the same as what they 'will do' (i.e. performance). In order to perform effectively, doctors must be both competent and engaged in the tasks that the healthcare system requires of them. This distinction is sometimes overlooked, and this results in confusion in many discussions about how enhanced levels of personal engagement may influence effective organisational performance.

Developing the engagement measure

For a number of years, Applied Research Ltd has been involved in the assessment of a range of different individual and cultural aspects within the NHS. At a presentation to the Enhancing Medical Engagement project team at the end of 2006, an existing framework for a Professional Engagement Scale was discussed, based on previous work with over 20 000 NHS professionals. As the most cost-effective and timely approach to the problem, it was agreed to build on this previous work and adapt this existing framework to develop the Medical Engagement Scale.

As described above, it was envisaged that the new measure of medical engagement in leadership would not only be reliable and valid, but would also be quick and relatively easy to administer and complete. Furthermore, the measure should provide useful information about both the cultural milieu of the organisation (which may either foster or constrain professional engagement) and the personal feelings of medical staff (which may either empower or inhibit the motivation to perform optimally). This proposed new measure has been specifically designed to do both, and is based on a two-dimensional model of professional engagement (see Figure 1).

Consequently, the measure contains two types of engagement scale.

- *Organisational opportunity scales* reflect the cultural conditions that facilitate doctors becoming more actively involved in leadership and management activities.
- *Individual capacity scales* reflect perceptions of enhanced personal empowerment, confidence in tackling new challenges, and increased self-efficacy.

The inclusion of two types of scale in this way means that the instrument will be capable of providing three assessments of engagement for individuals as well as organisations:
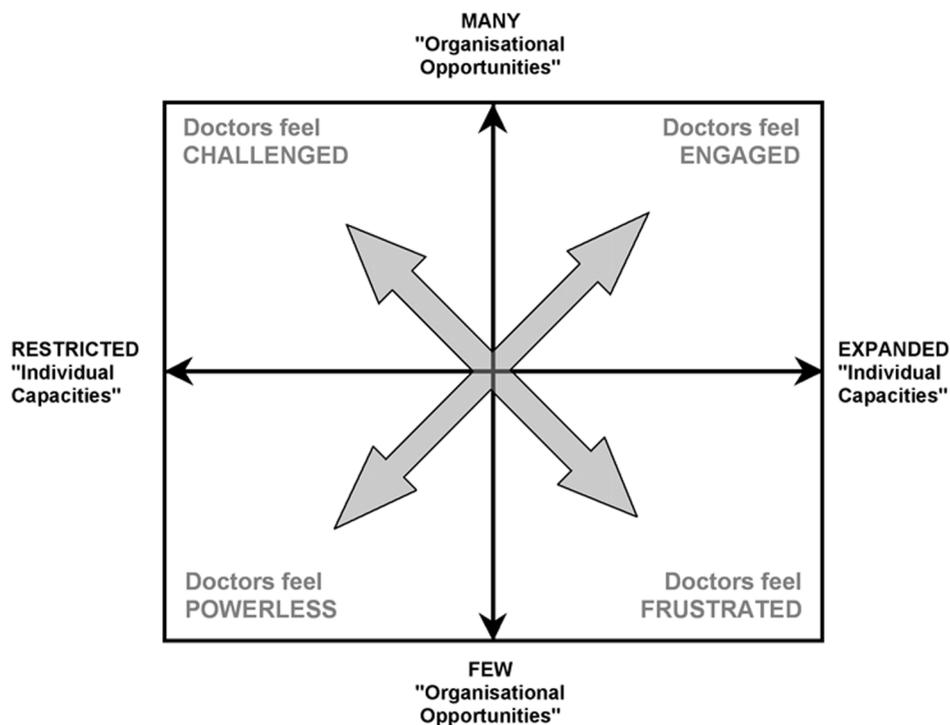
1 an overall engagement summary score

Figure 1 Medical engagement model

2 separate engagement subscale scores
3 a joint mapping of organisational opportunities and individual capacities.

Activity phases

To meet the two objectives described above, three activities were considered necessary:

- refinement of the existing scale items to provide a 'medical engagement' focus
- piloting of the items and scales with a sample of health professionals drawn from a range of high-performing and weaker-performing organisations
- psychometric analysis to confirm the reliability and validity of the scales.

Identification of items and refinement of the existing scales

This stage has drawn upon the existing database of relevant attitudinal and stress-related item data which have been collected by Applied Research Ltd from doctors and other NHS professional staff over the last 10 years. The most relevant and statistically sound items and scales from the established database were selected as the foundation from which to develop the initial set of medical engagement items. The items that were selected for inclusion at this stage were concerned with three possible important perspectives on engagement (i.e. relationship, involvement and motivation), as shown below.

- Engagement as *relationship*:
  – with the organisation
  – with managers
  – with other professionals.
- Engagement as *involvement*:
  – with planning services
  – with delivering services
  – with changing services.
- Engagement as *motivation*:
  – job satisfaction
  – commitment
  – dedication.

At this stage, over 100 items were considered to be potential candidates for inclusion in the engagement scales. These items were allocated to either the proposed subscales relevant to *organisational opportunity* or to the proposed subscales relevant to the *individual capacity* dimensions of the engagement model (see the 'medical engagement model' figure introduced in an earlier section of this report).

The existing database was statistically re-analysed using factor analysis and Cronbach's alpha, initially to identify potential factor structures, and subsequently to examine item contribution to scale and subscale reliability. This factor analysis and scale development utilised the attitudinal ratings of 23 782 NHS staff from 20 healthcare organisations as described in the table below. This table represents the optimum hierarchical scale structure which was obtained from re-analysis of the existing database. The three organisational and three individual subscales are denoted by O and I, respectively.

The meaning of each of these scales is shown in Box 2.

Piloting the MES on a sample of trusts

The adapted prototype instrument was piloted using a range of NHS trusts, and also ensuring appropriate coverage of the full range of medical staff groups. In total, four NHS trusts participated in this phase (three acute hospital trusts, of which one was a foundation trust, together with a mental health trust), providing a sample of 118 medical staff and 19 senior managers. Since approximately 200–250 questionnaires were distributed at the four participating trusts, the response rate was greater than 50%, which is reasonable for this type of study.

In addition to the engagement instrument itself, which doctors were asked to complete, senior managers were asked to complete a separate questionnaire that required them to assess the extent of medical engagement in their trusts. The purpose here was to obtain both medical and managerial assessments of medical engagement in order to explore the extent to which these perceptions of medical engagement are 'aligned' at different trusts.

Establishing the reliability and validity of MES scales

The data that were utilised during this stage consisted of the entire data set collected from the piloting phase. This was psychometrically analysed not only to establish item and scale reliability coefficients, but also to explore the complex issue of validity from the individual and organisational perspectives.

Inter-scale correlations

The scores on the scales and subscales of the MES were intercorrelated, and Figure 2 lists these correlation coefficients. Inspection of the table reveals that the pattern of correlations between the scales and subscales reflects not only the level of association between the scales, but also the hierarchically embedded scale structure. In other words, since the overall professional engagement index consists of all of the other nine scales, it tends to have the highest correlations with its constituent subscales. Similarly, each of the three meta-scales consists of two component

Box 2

MES scale	Scale definition (The scale is concerned with the extent to which …)
Index: Professional engagement	… doctors adopt a broad organisational perspective with regard to their clinical responsibilities and accountability
Meta-scale 1: Working in an open culture	… doctors have opportunities to authentically discuss issues and problems at work with all staff groups in an open and honest way
Meta-scale 2: Having purpose and direction	… medical staff share a sense of common purpose and agreed direction with others at work, particularly with regard to planning, design and delivery of services
Meta-scale 3: Feeling valued and empowered	… doctors feel that their contribution is properly appreciated and valued by the organisation and not taken for granted
Subscale 1: (O) Climate for positive learning	… the working climate for doctors is supportive, and problems are solved by sharing ideas and joint learning
Subscale 2: (I) Good interpersonal relationships	… all staff are friendly towards doctors and are sympathetic to their workload and work priorities
Subscale 3: (O) Appraisal and rewards effectively aligned	… doctors consider that their work is aligned to the wider organisational goals and mission
Subscale 4: (I) Participation in decision making and change	… doctors consider that they are able to make a positive impact through decision making about future developments
Subscale 5: (O) Development and orientation	… doctors feel that they are encouraged to develop their skills and progress their career
Subscale 6: (I) Commitment and work satisfaction	… doctors feel satisfied with their working conditions and feel a real sense of attachment and commitment to the organisation

subscales, and for these meta-scales the correlations tend to be higher.

Scale reliability

The purpose of this analysis was to shorten the prototype MES by identifying those items which would prove most useful in forming reliable and valid scales in the final version of the instrument. Figure 3 shows the final number of items in scales and the Cronbach alpha reliability coefficients at each of the three levels of the revised prototype Medical Engagement Scale (MES). It can be seen that, compared with the original set of scales, the number of items comprising scales has been reduced to 18 in total, and the overall levels of scale reliability have been increased (Cronbach's alpha in the range 0.70–0.93).

Scale validity

Having established the reliability of the shortened MES scales, some preliminary analysis was undertaken in order to better understand the validity of the instrument. Ten items had been included in the MES pilot instrument as separate 'cultural indicators', as a means of assessing how the scale scores would relate to these. These 10 items are shown in the first column in Box 3. The second column in the table shows the rating direction of each of the items in the pilot instrument. In order to ensure ease of interpretation of the results, the 10 marker concepts which are listed in the last column of the table are all stated in the same direction.

Scores on the 10 scales and subscales of the MES were correlated with these 10 marker items, and the results are shown in Figure 4. The cells of the table contain the correlation coefficients between MES scale

	Meta 1: Working in an Open & Fair Culture	Meta 2: Having Purpose & Direction	Meta 3: Being Valued & Empowered	Sub 1: Climate for Positive Learning	Sub 2: Good Interpersonal Relationships	Sub 3: Appraisal & Rewards Effectively Aligned	Sub 4: Participation in Decision Making & Change	Sub 5: Development Orientation	Sub 6: Commitment & Work Satisfaction
Professional Engagement	0.88	0.92	0.94	0.83	0.67	0.83	0.75	0.86	0.90
Meta 1: Working in an Open & Fair Culture		0.73	0.74	0.90	0.82	0.67	0.58	0.66	0.71
Meta 2: Having Purpose & Direction			0.81	0.72	0.52	0.88	0.82	0.74	0.78
Meta 3: Being Valued & Empowered				0.70	0.55	0.73	0.66	0.92	0.94
Sub 1: Climate for Positive Learning					0.49	0.67	0.55	0.62	0.69
Sub 2: Good Interpersonal Relationships						0.44	0.44	0.50	0.52
Sub 3: Appraisal & Rewards Effectively Aligned							0.46	0.70	0.67
Sub 4: Participation in Decision Making & Change								0.55	0.67
Sub 5: Development Orientation									0.74

Figure 2   Inter-scale correlations of the Medical Engagement Scale
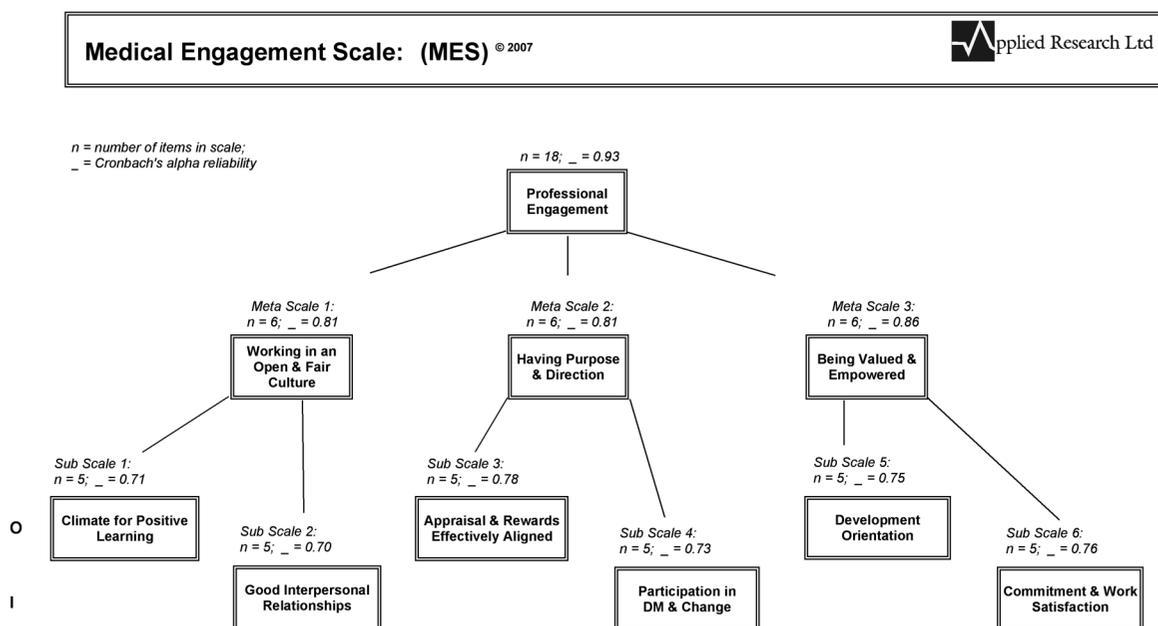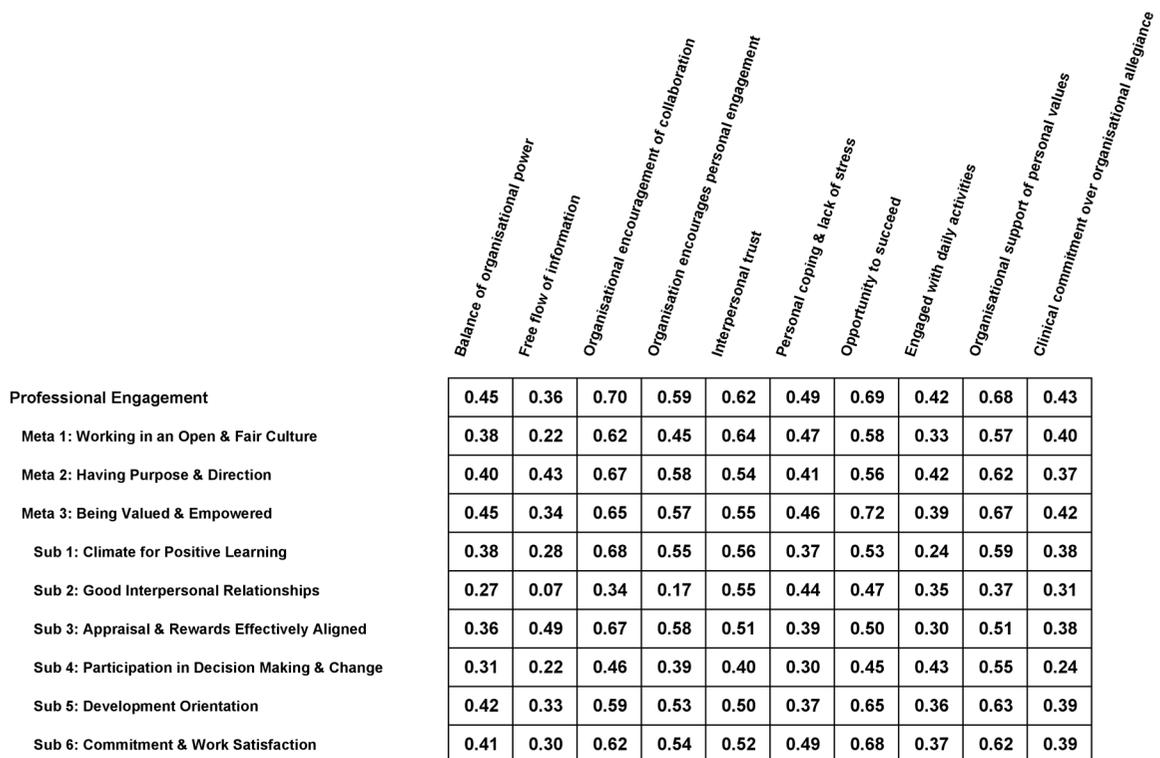

Figure 3   Medical Engagement Scale: reliability data

scores and doctors' ratings on the 10 marker items. The pattern of the results suggests that the various scales of the MES are differentially measuring different aspects of the working environment as captured by the ratings for the marker items. Some of the marker items are not strongly associated with any of the MES scales,

Box 3 Medical Engagement Scale and marker items

Q6 Some staff groups have too much power in this organisation	*(disagree)*	Balance of organisational power
Q23 Useful job-related information flows freely and quickly around this organisation	*(agree)*	Free flow of information
Q44 This organisation does not encourage cooperation or collaboration between staff	*(disagree)*	Organisational encouragement of collaboration
Q14 The organisation strongly encourages me to be engaged at work	*(agree)*	Organisation encourages personal engagement
Q38 I am confident that I can trust the people I work with	*(agree)*	Interpersonal trust
Q28 I feel pressured and under stress at work	*(disagree)*	Personal coping and lack of stress
Q32 I feel I don't have the scope or opportunity to succeed	*(disagree)*	Opportunity to succeed
Q46 I feel fully engaged with my day-to-day work activities	*(agree)*	Engaged with daily activities
Q20 This organisation does not fully support my professional values	*(disagree)*	Organisational support of personal values
Q45 Organisational allegiance is sometimes more important than clinical commitment	*(disagree)*	Clinical commitment over organisational allegiance

	Balance of organisational power	Free flow of information	Organisational encouragement of collaboration	Organisation encourages personal engagement	Interpersonal trust	Personal coping & lack of stress	Opportunity to succeed	Engaged with daily activities	Organisational support of personal values	Clinical commitment over organisational allegiance
Professional Engagement	0.45	0.36	0.70	0.59	0.62	0.49	0.69	0.42	0.68	0.43
Meta 1: Working in an Open & Fair Culture	0.38	0.22	0.62	0.45	0.64	0.47	0.58	0.33	0.57	0.40
Meta 2: Having Purpose & Direction	0.40	0.43	0.67	0.58	0.54	0.41	0.56	0.42	0.62	0.37
Meta 3: Being Valued & Empowered	0.45	0.34	0.65	0.57	0.55	0.46	0.72	0.39	0.67	0.42
Sub 1: Climate for Positive Learning	0.38	0.28	0.68	0.55	0.56	0.37	0.53	0.24	0.59	0.38
Sub 2: Good Interpersonal Relationships	0.27	0.07	0.34	0.17	0.55	0.44	0.47	0.35	0.37	0.31
Sub 3: Appraisal & Rewards Effectively Aligned	0.36	0.49	0.67	0.58	0.51	0.39	0.50	0.30	0.51	0.38
Sub 4: Participation in Decision Making & Change	0.31	0.22	0.46	0.39	0.40	0.30	0.45	0.43	0.55	0.24
Sub 5: Development Orientation	0.42	0.33	0.59	0.53	0.50	0.37	0.65	0.36	0.63	0.39
Sub 6: Commitment & Work Satisfaction	0.41	0.30	0.62	0.54	0.52	0.49	0.68	0.37	0.62	0.39

Figure 4 Correlations between the Medical Engagement Scale and marker items

whereas other marker items show a moderate association. For example, the overall level of professional engagement is strongly correlated with 'organisational encouragement of collaboration' ($r = 0.70$), 'opportunity to succeed' ($r = 0.69$) and 'organisational support of personal values' ($r = 0.68$).

These results support two conclusions.

- The generally moderate pattern of correlations suggests that engagement as a construct is conceptually distinct from other established aspects of the organisational culture, such as information flow, stress, and balance of organisational power.
- Although many of the correlations are moderate, there are differential patterns for the various scales and subscales of the MES instrument, confirming that engagement is indeed multi-dimensional.

Differences between participating trusts

One-way analysis of variance (ANOVA) for independent groups was used to test whether there were any statistically significant differences in levels of medical engagement across all four trusts that participated in the pilot database. Figure 5 shows the results of these analyses. It can be seen that there were significant differences on all scales of the MES, confirming the ability of the measure to differentiate between sites.

Figure 5 also shows the alignments (a measure of agreement about engagement expressed as a percentage value) between doctors and managers for the four trusts and for each of the 10 MES subscales. These percentage alignment scores were calculated by comparing the percentage of doctors who had self-rated their own level of engagement with senior managers' estimates of the extent of medical engagement.

Professional Engagement Index	F = 4.05; df = 3; prob = 0.009			
	C	A	B	D
Management Medical Alignment	74.4	80.9	64.2	84.0
Meta 1: Working in an Open & Fair Culture	F = 2.36; df = 3; prob = 0.075			
	C	A	B	D
Management Medical Alignment	67.8	78.4	75.0	91.9
Meta 2: Having Purpose & Direction	F = 5.84; df = 3; prob = 0.001			
	C	B	A	D
Management Medical Alignment	61.1	75.1	73.8	93.9
Meta 3: Being Valued & Empowered	F = 2.75; df = 3; prob = 0.046			
	C	A	B	D
Management Medical Alignment	63.1	87.1	83.8	87.7
Sub 1: Climate for Positive Learning	F = 1.64; df = 3; prob = 0.184 ns			
	C	A	B	D
Management Medical Alignment	55.2	71.4	70.9	79.4
Sub 2: Good Interpersonal Relationships	F = 2.34; df = 3; prob = 0.077			
	A	C	B	D
Management Medical Alignment	46.8	36.5	70.8	77.1
Sub 3: Appraisal & Rewards Effectively Aligned	F = 5.68; df = 3; prob = 0.001			
	C	B	A	D
Management Medical Alignment	71.5	64.6	69.6	96.0
Sub 4: Participation in Decision Making & Change	F = 2.38; df = 3; prob = 0.073			
	A	C	B	D
Management Medical Alignment	78.8	78.9	77.1	87.0
Sub 5: Development Orientation	F = 1.62; df = 3; prob = 0.189 ns			
	C	A	B	D
Management Medical Alignment	65.5	58.1	73.0	77.0
Sub 6: Commitment & Work Satisfaction	F = 3.57; df = 3; prob = 0.016			
	C	A	B	D
Management Medical Alignment	58.1	68.9	88.8	72.7

Least Engaged ⟷ Most Engaged

Figure 5 Level of engagement of medical staff and management/medical alignment (Trusts A, B, C and D)

Figure 5 shows that there are clear differences in the levels of medical engagement between the four participating trusts, and it also demonstrates that the degree of medical/managerial alignment varies both within and between trusts. The results are interesting in that they reveal a pattern of engagement which was predictable from external independent information relating to the participating trusts.

Two of the trusts (trusts D and B) were chosen for inclusion in the pilot study because they had taken specific organisational initiatives to enhance medical engagement, such that their actions had attracted external recognition. Furthermore, one of the trusts (trust D) had also been rated as 'excellent' in all aspects by the Health Commission. One trust had been designated a 'failing trust' with acknowledged problems with clinical engagement (trust C), although a new Chief Executive had been striving to create some positive changes. The fourth trust (trust A) was an opportunistic inclusion, and consequently was associated with no specific expectations. Thus the a priori expectation of trust order with regard to medical engagement was D, B, A, C (in order of best to worst), and this prediction is consistent with the overall Medical Engagement Index order that was actually obtained, suggesting good initial face validity of the MES measure. Interestingly, the highest doctor–manager alignments were also obtained for the independently rated 'excellent' trust D, but for the other three sites the extent of agreement between doctors and managers presented a more complex picture.

In order to further explore the proposed model of medical engagement, doctors' ratings on the 'organisational opportunity' and 'individual capacity' components of the Medical Engagement Scale were calculated and plotted on the medical engagement model grid. These plots (four in total) are shown in Figure 6, first for the overall professional engagement index and then for each of the three component scales.

It is clear from plot (a) 'Professional Engagement Index' that doctors in trust D are strongly engaged, whereas doctors in the other three trusts are less positive. The scale plot (b) 'Meta-scale 1' suggests that doctors from trusts D, B and C all consider that they are working in an open culture, although plot (c) 'Meta-scale 2' suggests that all of the trusts (particularly trust C) could enhance engagement by improving the sense of purpose and direction of medical staff. Furthermore, it appears from plot (d) 'Meta-scale 3' that doctors from trusts A and C would particularly appreciate a greater sense of feeling valued and empowered.

Recommendations for next stages

There are two main recommendations for the next stages of the overall Enhancing Engagement in Medical Leadership project.

Establish a normative database

Having established a reliable and valid engagement instrument, extensive assessment of staff across the whole NHS should be planned and undertaken as a rolling programme in order to establish a normative database which can be used to statistically benchmark all medical and other staff groups and organisations with regard to their relative levels of medical leadership. This database would be a valuable resource for understanding and shaping future policies not only with regard to future medical assessment and career development, but also with regard to establishing a framework for proposing focused organisational development strategies to enhance organisational performance.
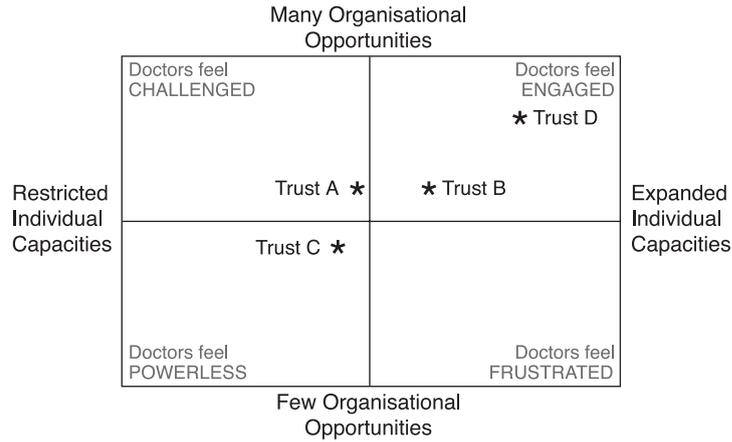
Develop strategies for promoting engagement

The ability to reliably measure medical engagement is of little value unless there are practical strategies for using these data to inform the development of organisational strategies that will enhance medical engagement, which in turn will lead to a higher level of performance and improved patient care.
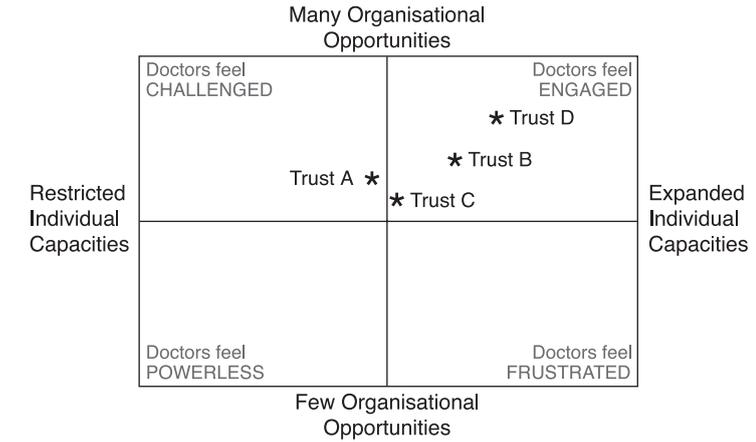
Conclusions

1 The newly developed Medical Engagement Scale (MES) is a simple, short measure that consists of either an 18-item instrument or a 30-item instrument, depending on the depth of coverage required.
2 The 18-item MES will reliably provide an overall index of medical engagement together with an engagement score on three reliable meta-scales:
- Meta-scale 1: feeling valued and empowered
- Meta-scale 2: having purpose and direction
- Meta-scale 3: working in an open culture.
3 The 30-item MES will reliably provide an overall index of medical engagement together with an engagement score on three reliable meta-scales, with each of these three meta-scales itself comprising two reliable subscales:
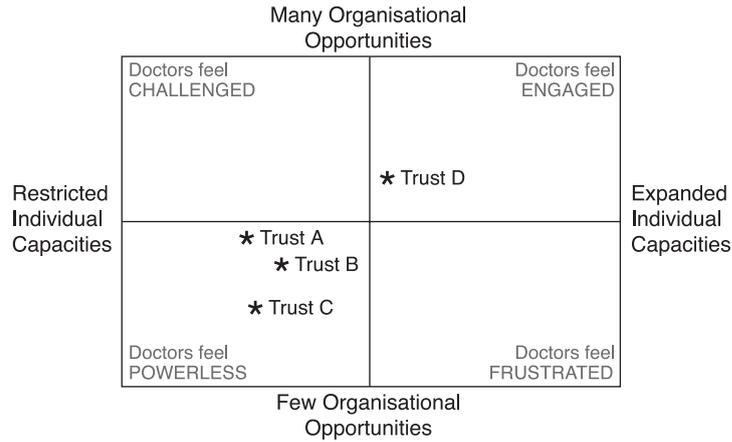- Meta-scale 1: feeling valued and empowered

(a) Professional Engagement Index

Many Organisational
Opportunities

Doctors feel
CHALLENGED

Doctors feel
ENGAGED

✱ Trust D

Trust A ✱   ✱ Trust B

Restricted
Individual
Capacities

Expanded
Individual
Capacities

Trust C ✱

Doctors feel
POWERLESS

Doctors feel
FRUSTRATED

Few Organisational
Opportunities

(b) Meta-Scale 1: Working in an open culture

Many Organisational
Opportunities

Doctors feel
CHALLENGED

Doctors feel
ENGAGED

✱ Trust D

✱ Trust B

Trust A ✱

✱ Trust C

Restricted
Individual
Capacities

Expanded
Individual
Capacities

Doctors feel
POWERLESS

Doctors feel
FRUSTRATED

Few Organisational
Opportunities

(c) Meta-Scale 2: Having purpose and direction

Many Organisational
Opportunities

Doctors feel
CHALLENGED

Doctors feel
ENGAGED

✱ Trust D

Restricted
Individual
Capacities

Expanded
Individual
Capacities

✱ Trust A

✱ Trust B

✱ Trust C

Doctors feel
POWERLESS

Doctors feel
FRUSTRATED

Few Organisational
Opportunities

(d) Meta-Scale 3: Feeling valued and empowered

Many Organisational
Opportunities

Doctors feel
CHALLENGED

Trust D ✱   Doctors feel
ENGAGED

✱ Trust B

Trust A ✱
Trust C ✱

Restricted
Individual
Capacities

Expanded
Individual
Capacities

Doctors feel
POWERLESS

Doctors feel
FRUSTRATED

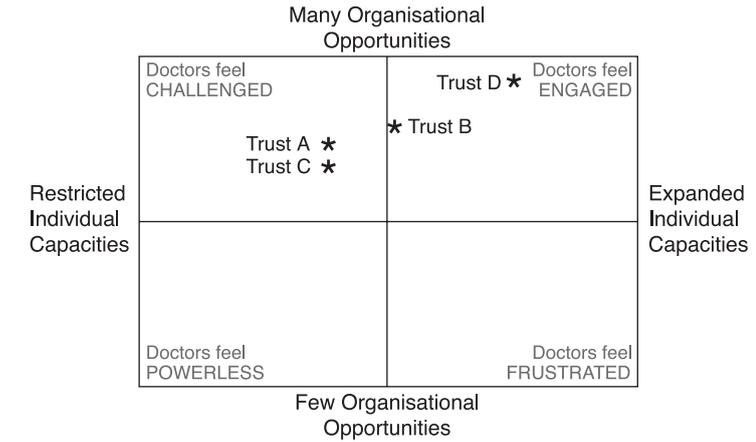Few Organisational
Opportunities

Figure 6 Plots of engagement scale for each pilot site

- Subscale 1: climate for positive learning
- Subscale 2: good interpersonal relationships
- Meta-scale 2: having purpose and direction
  - Subscale 3: appraisal and rewards effectively aligned
  - Subscale 4: participation in decision making and change
- Meta-scale 3: working in an open culture
  - Subscale 5: development orientation
  - Subscale 6: commitment and work satisfaction.

4 Both versions of the MES have face validity and construct validity, although more data collection is required for an empirical link to performance.

5 More trust data need to be collected in order to establish a normative database.

6 MES profiles require systematic linking to a set of strategies for promoting engagement at an organisational level.

7 Development work is required to ensure that the measure is appropriate for GPs working in primary care settings.

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