The Assessment of Post-Graduate Medical Professionalism using the MSRA: *A Critical Appraisal*

Dr Amy Price[1,2]
[1] Shrewsbury and Telford Hospital NHS Trust
[2]Keele Medical School, Keele University

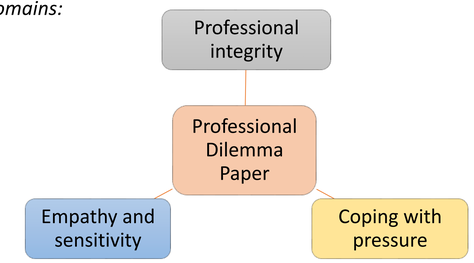
The Multi-Specialty Recruitment Assessment (MSRA)

- The MSRA is an assessment tool that is utilised by numerous **post-graduate** speciality training programmes in the United Kingdom (UK) as part of their recruitment process (Table 1).
- The aim of the MSRA is to assess ***foundation level competence***
- The assessment has two parts;
  - **Clinical Problem Solving (CPS)**
  - **Professional Dilemmas (PD)**

Table 1: **UK medical specialties that use the MSRA**

- GP
- Radiology
- Ophthalmology
- Obstetrics and Gynaecology
- Psychiatry
- Neurosurgery
- Child and Adolescent Mental Health Services
- Community Sexual and Reproductive Healthcare

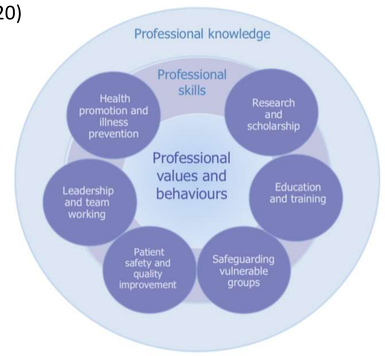
- The **CPS** section tests the ***application of medical knowledge***
- The **PD** section is an Situational Judgement Test (SJT) which assesses ***professional attributes*** *covering the following 3 domains:*



(Work psychology group, 2019)

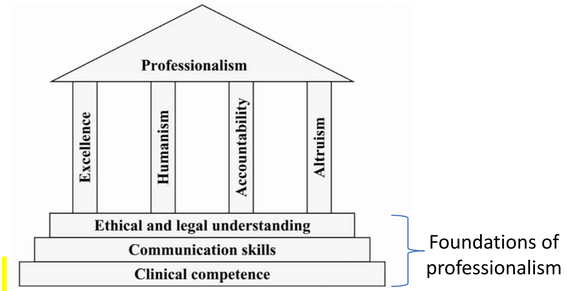
Defining Medical Professionalism

The General Medical Council (GMC) has produced the **Generic professional capabilities framework** to demonstrate the **'components that underpin professional medical practice'** (GMC, 2020)



Defining Medical Professionalism

Stern (2005) defined professionalism by demonstrating three foundations of professionalism with its four pillars.



- **Excellence:** *Commitment to the foundations of professionalism*
- **Humanism**: *Respect, empathy, compassion, honour and integrity*
- **Accountability**: *Justifying and taking responsibility for ones own actions*
- **Altruism**: *Acting in the patients best interests*

Does the MSRA assess Professionalism?

To appraise the use of the MSRA in assessing medical professionalism, we will utilise 3 elements of the **Van Der Vleuten (1996) utility formula.**

NB: The MSRA accounts for all elements of the utility equation

$U = \boldsymbol{Rw}_r \times \boldsymbol{Vw}_v \times Ew_e \times \boldsymbol{Aw}_a \times Cw_c$

R (Reliability), V (Validity) and **A (Acceptability)**

- **Reliability:** *Is the MSRA a consistent measure of professionalism?*
- **Validity:** *Is the MSRA assessing professional attributes?*
- **Acceptability:** *Is the MSRA accepted by stakeholders?*

Is the MSRA a consistent measure of professionalism?

Patterson et al. (2012) SJT scores are not influenced by coaching. Reflective of internal professional attributes and values.

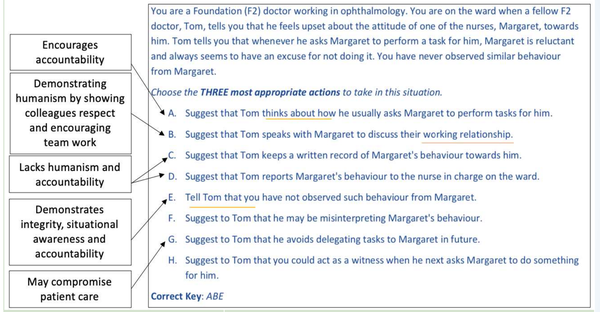
Reliability

- Computer based examination eliminates marker subjectivity.
- Patterson et al.(2016): Good internal consistency between the MSRA ($\alpha \geq 0.80$) and previously used radiology recruitment methods.

Is the MSRA assessing professional attributes?

Table 2: The validity of the MSRA in its assessment of professionalism (Dornan et al., 2011)

Type of Validity	Evidence
Face Validity *Does the MSRA assess professionalism?*	➢ **PD:** directly relates to the GMC framework (GMC, 2020). ➢ **CPS:** based on the UK Foundation Programme (UKFP) curriculum.
Content Validity *Does the MSRA assess all professional attributes?*	➢ **CPS:** addresses 'Clinical Competence' and 'Excellence' (Stern, 2005) and 'Professional Knowledge'(GMC, 2020) ➢ **PD:** see question example below:



(The GP National Recruitment Office, 2020.)

Construct Validity *Can the MSRA differentiate between candidates professionalism?*	➢ **Koczwara et al. (2012):** Strong correlation between CPS and PD scores. ➢ **Christian et al. (2010):** Correlation between PD score and general cognitive ability.
Predictive Validity *Does the MSRA predict future professionalism?*	➢ **Koczwara et al., (2012):** MSRA score predicted performance at GP selection centres. The PD paper had the highest correlation. ➢ **Patterson et al., (2016):** CPS had predictive validity for radiology trainees performance in the FRCR. No FRCR correlation with PD scores. ➢ **Cousans et al., (2017):** SJT scores correlated with UK foundation doctors performance rated by their supervisor. Low SJT scores predict trainees who may have difficulties.
Consequential Validity *Are there consequences of the assessment?*	➢ The MSRA has significant consequences for both candidates and stakeholders (Table 1).

Is the MSRA accepted by stakeholders?

- The MSRA is used in post-graduate recruitment by multiple specialities. This demonstrates acceptability amongst stakeholders (Table 1).
- Plint and Patterson (2010) showed that 75% of candidates felt the MSRA was fair in UK GP Recruitment (Table 3).

Table 3: (Plint and Patterson, 2010).

% of candidates (N = 6586, 2007) (N = 5866, 2008)	Agree
Content of clinical problem solving test appeared fair	80%
Clinical problem solving test gave sufficient opportunity to indicate ability for GP training	62%
Content of situational judgement test appeared fair	53%
Situational judgement test gave sufficient opportunity to indicate ability for GP training	42%
The content of the shortlisting assessment (overall) appeared to be fair to all candidates	75%

Adverse impact: *the extent to which particular groups perform poorly compared with other groups.* (Patterson et al., 2012)

✓/✗ Ethnicity: Mean scores between ethnic groups are smaller for SJTs than in tests of cognitive ability → Adverse impact on CPS

✗ Gender: Consistent data shows females score higher on SJTs than males.

Conclusions

Measure	Conclusion	Suggested Improvements/ Future Research
Reliability	• Good internal reliability and objectivity.	
Validity	• Written assessment so not in context – low fidelity • Content is strongly linked the GMC's definitions of professionalism. • The CPS positively predicts performance in scientific knowledge based examinations.	• Further research is required to align the MSRA with trainee outcomes that assess professionalism, such as the Annual Review of Competency Progression (ARCP).
Acceptability	• Accepted by both the recruiter and candidates. • `Adverse impact of different ethnicities and sex on MSRA score.	• Research into **why** gender adversely impacts MSRA scores is required improve the assessment of professionalism.

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