



OPEN ACCESS

Professional values and behaviours of younger and older general practitioners in Scotland: a cross-sectional survey

Trudy Lynn Foster ,^{1,2} Paul Bowie³

¹NHS Education for Scotland, Glasgow, UK
²Graeme Medical Centre, Falkirk, UK
³CPD Connect, NHS Education for Scotland, Glasgow, UK

Correspondence to

Dr Trudy Lynn Foster, NHS Education for Scotland, Glasgow, UK; trudy.foster@nhs.net

Received 24 January 2019
 Revised 1 October 2019
 Accepted 23 October 2019
 Published Online First 19 February 2020

ABSTRACT

Aim Professionalism has been linked with improved patient care and reduced complaints. Our goal was to define what, if any, differences exist in the professional values and behaviours of younger general practitioners (GPs), those aged 34 years and under, compared with their older colleagues, those being aged 55 years and over.

Method An online cross-sectional questionnaire survey of GPs in Scotland was undertaken during 2018 using a modified version of the Nijmegen Professionalism Scale, which comprises 4 domains: professionalism towards patients, towards colleagues, towards society and towards oneself. Descriptive and inferential data analysis was undertaken between responses from both GP groups.

Results 273 responses were obtained. Of these, 106 respondents were classed as either younger GPs (n=55; 51.9%) or older (n=51; 48.1%). The greatest number of differences were found in the Professional Distance subsection of professionalism towards patients. The greatest single disparity in responses was to distinguish between personal and professional interests in negotiations (p<0.0001). Younger GPs also reported they were less likely to bear the consequences of their own actions (p<0.02) and to be more likely to give others the blame or responsibility (p<0.006). Younger GPs report being less skilled in quality management, being less able to signal suboptimal care (p<0.006) and justify indications for making home visits (p<0.001).

Conclusion While there were areas of similarity in relation to collaborating with colleagues, reflection on learning and dealing with emotions, differences were identified in relation to the 5 other subsections. Some differences may be explained by lack of exposure and experience, but this may not account for all the differences reported.

INTRODUCTION

The definition of professionalism in medicine (box 1) is a debated term which has changed over time.¹⁻³ The methods for teaching professionalism have also changed with many institutions developing formal professionalism modules within their curricula.⁴ However, the informal and hidden curriculum continue to be relevant as medical trainees often learn by watching senior colleagues.⁵ A good role model may help the junior colleague articulate and discuss values as well as engage in personal and professional development.⁶ This was probably never more evident than in the one-to-one mentoring relationship between a general

practice trainee and their trainer. The development of professionalism depends on homogenous shared values, a situation which no longer exists⁷ as medicine and society, and the contract between them has changed.⁸⁻¹⁰ For this paper, the definition of medical professionalism is a set of values, behaviours and relationships that underpin the trust the public has in doctors.⁹

But why is medical professionalism important? Medical professionalism is characteristic of being a 'good doctor' and is considered critical to achieving a high-quality patient-centred healthcare service, while poor professionalism is often associated with suboptimal medical care by the public.¹⁰ Research has shown that recent high-profile cases of lapses in medical professionalism have damaged the profession's reputation while on an individual level poor professionalism may increase complaints, litigation, incidents of adverse events and reduce patient and colleague satisfaction.¹¹

Anecdotal stories abound of conflicts between older and new general practitioners (GPs) in relation to what is professional behaviour, particularly in respect of work-life balance and altruism. We set out to shed light on this area and to begin a discussion on the potential implications to future professionalism of the younger generation entering the medical workforce. The aim of this study was to identify what, if any, differences exist between younger and older GPs working in Scotland in terms attitudes and behaviours related to different elements of professionalism.

METHODS

Study design, participants and setting

A cross-sectional online questionnaire survey of younger and older GPs working in Scottish general practices was undertaken. There was no single GP performer list available at the time of this study and while the Information Services Division of NHS Services Scotland (ISD) maintain a list of GP partners, this would have excluded salaried and locum GPs. To reach as wide and diverse a group as possible, multiple strategies were used to disseminate the questionnaire including email circulation through the main primary care organisations in the 14 Scottish NHS territorial boards, postal mailing where email was not permitted, professional networks and social media. It was not possible to determine the ages of GPs to allow only younger and older GPs to be targeted. This circulation strategy was also limited because no follow-up reminders could be sent to non-responders. The online Questback



© Author(s) (or their employer(s)) 2020. Re-use permitted under CC BY-NC. No commercial re-use. See rights and permissions. Published by BMJ.

To cite: Foster TL, Bowie P. *BMJ Leader* 2020;4:57–63.

Box 1 Definitions of medical professionalism

'Professionalism as an application of virtue to practice'.¹
'Intellectual operation with large individual responsibility
Derive their raw material from science or learning
Work this material to a practical and definite end
Possess an educationally communicable technique
Self-organise
Increasingly altruistic in motivation'.³
'Medical professionalism signifies a set of values, behaviours
and relationships that underpin the trust the public has in
doctors'.⁸

survey software system, hosted by NHS Education for Scotland, was used to administer the survey questionnaire.

Data collection

Data were collected using the Nijmegen Professionalism Scale questionnaire which was developed in 2006 to assess professional behaviour in general practice trainees in the Netherlands.¹² Although not developed in a UK healthcare setting, unlike other professionalism tools which have been developed in the UK, the Nijmegen Professionalism Scale was developed specifically for general practice. It identified four themes to professionalism related specifically to general practice: professionalism towards the patient, professionalism towards other professionals, professionalism towards the public and professionalism towards oneself. These four areas are broadly similar to the key areas identified by the Ottawa Working Group.¹⁰ Each theme in the Nijmegen Professionalism Scale consisted of two subsections and there are 84 questions in total using a 4-point Likert scale for responses (1=almost never, 2=sometimes, 3=often, 4=almost all the time). The stem statement in the Nijmegen Professionalism Scale was modified from 'The GP trainee' to 'I' for this survey. No other changes were made to the original questions or the form of the questionnaire, but additional questions were added to gather demographic information on respondents including age, gender and professional role. The age brackets used corresponded with those used by ISD and corresponded with the potential ages of the generational groups to be compared, 34 years and under for younger GPs and 55 and over for older. Respondents were also given the opportunity to provide an email contact through which they could receive a high-level summary of the findings.

An email explaining the study purpose with a link to the online survey was sent to approximately 1000 potential respondents (or where necessary a covering letter with paper-based questionnaire and return envelope) during February and March 2018.

Data analysis

Survey response data were downloaded from Questback into an EXCEL spreadsheet to enable basic descriptive and inferential statistical analysis to be performed. The proportionate differences for all responses rated '4' on Likert scale ('almost all the time') were calculated and compared between younger and older GPs. The working hypothesis was that there would be no difference in the responses between the two groups. The MedCalc online statistical program¹³ was used to calculate statistical differences along 95% CIs and p values. These responses were tabulated according to the four domains. Although data on participants' gender and years of experience was requested in the survey, limitations in access to data analysis tools meant this was

Table 1 Age profile of GPs working in Scotland and survey respondents

Age group (years)	Proportion of GP workforce by age group (n, %)	% of GP works	No of survey respondents by GP age group (n, %)	% of respondents
24 or under	3	00.06	0	00.00
25–34	991	20.17	55	20.45
35–44	1547	31.49	61	22.68
45–54	1526	31.06	102	37.92
55–64	799	16.26	48	17.84
65 and over	47	00.96	3	01.12
Total	4913	100	269	100

GP, general practitioner.

not considered in the results. Gender, years of experience as well as factors such as the number of partners or practice size and location could also be legitimate influences on the self-reported responses.

RESULTS

Response rate

A total of 273 responses were received overall, but 4 responses were incomplete resulting in an estimated response rate of 269/1000 (27.0%), which equates to approximately 5.5% of GPs working in Scotland.¹⁴ Of these responses, a total of 106 (38.8%) were from either older GPs (n=51; 48.1%) or younger GPs (n=55; 51.9%). Table 1 shows the breakdown of respondents and GPs working in Scotland by age group. Table 2 provides information on the gender profile of respondents.

Professionalism towards the patient

This domain had the greatest number of differences between the generational groups (table 3) with six questions generating a difference which did not cross 0, indicating a statistically significant difference between the two groups. Table 2 provides a summary of responses for the two subsections of this domain.

Regarding respecting patient interests both generations responded similarly to 'Approaches patients with a different frame of reference (eg, religion)' but in response to 'Takes sex-specific differences into account' there was a difference of 30.5%, (95% CI 11.7% to 46.6%, p=0.001). Younger and older GPs also appear to differ on the right of patients to inspect their medical record (28.2% difference, 95% CI 11.6% to 42.8%, p=0.001). In subsection 2, professional distance, there was statistically significant differences in all responses except 'Takes care not to become too involved in the patient's emotions' and 'Does not give patients false hope'.

Professionalism towards other professionals

Responses from younger and older GPs were very similar for several questions in the collaboration skills subsection of this domain with particular agreement on 'Ensures structured information transfer with other care providers' and 'Makes clear agreements with support personnel' (table 4).

However, this was not the pattern for the second subsection management skills where the only question generating strong agreement was 'Ensures coherence in first-line and second-line medical care'. The greatest single variation in responses across the whole survey was in this subsection to "Am able to distinguish between professional and personal interests in negotiations" 40.1% (95% CI 21.4%–55%, p<0.0001) with statistically

Table 2 Age and gender profile of younger and older GPs

	Male N (%)	Female N (%)	No response N (%)
GPs aged 34 and under	20 (36.4)	34 (61.8)	1 (1.8)
GPs aged 55 and over	24 (47.1)	24 (47.1)	3 (5.9)

GP, general practitioner.

significant differences also noted to “Am able to discuss differences of opinion with a specialist directly” ($p=0.04$), “Am able to take policy decisions” ($p=0.001$) and “Am able to conduct job evaluations” ($p=0.0004$).

Professionalism towards society

Professionalism towards society

The subsections for this domain are responsibility and quality management (table 5).

Differences in responses between younger and older GPs were noted in relation to several questions in both subsections namely “Bear the consequences of my own conduct” ($p=0.02$), ‘Do not hide behind others (give others the blame or responsibility)’ ($p=0.006$), ‘Is able to signal suboptimal care within the practice’ ($p=0.007$) and “Is able to name the tasks to be, or that I would like to be, delegated to an assistant” ($p=0.02$), with older GPs consistently scoring higher for each question. Older GPs were also more likely to be ‘able to justify indications for making

home visits’ than their younger counterparts (32.7, 95% CI 13.9 to 48.3, $p=0.001$).

Professionalism towards oneself

The subsections for this domain are reflection on learning and dealing with emotions (table 6). There were no statistically significant differences in responses between younger and older GPs to any of the questions in either subsection.

DISCUSSION

There has been an increase in interest in medical professionalism in recent years with efforts focused on definition, understand and teaching.^{3 10} As professionalism is often learnt as part of the hidden curriculum from mentoring and role models, a consistent difference would further shift an emphasis onto the undergraduate and postgraduate training institutions to bring professionalism into the light of the formal curricula. Focus could be placed explicitly on professionalism and how it translates to modern medical care, particularly following the publication of the realistic medicine trilogy^{15–17} and considering consultation styles enabling shared decision making with the patient.

The purpose of the survey was to identify what, if any, differences existed in professionalism between younger and older GPs working in Scotland. Using a modified Nijmegen Questionnaire comprising four domains of professionalism (towards the patient, towards other professionals, towards society and

Table 3 Domain 1: professionalism towards the patient (comparison of responses between both groups were both groups score=4 on 4-point Likert scale)

Question (responses, n)	GPs aged 34 and under (n=55) n (%)	GPs aged 55 and over (n=51) n (%)	Difference % (95% CI)	P value
Deals correctly with legislative rules regarding informed consent	43 (78.2)	33 (66.0)	12.2 (−4.9 to 28.6)	0.16
Is able to bring up difficult subjects	32 (58.2)	34 (66.7)	8.5 (−9.8 to 25.9)	0.37
Respects the rights of patients to inspect their medical records	33 (60.0)	45 (88.2)	28.2 (11.6 to 42.8)	0.001
Is able to show sympathy	37 (67.3)	37 (72.6)	5.3 (−12.1 to 22.0)	0.55
Takes patient's opinions seriously	36 (65.5)	37 (72.6)	7.1 (−10.4 to 23.9)	0.43
Takes patients' embarrassment, shyness and reluctance into account	39 (70.9)	32 (62.8)	8.1 (−9.6 to 25.3)	0.38
During physical examinations, explains the aim of the procedure and what is expected of the patient	36 (65.5)	35 (68.6)	3.1 (−14.5 to 20.3)	0.74
Approaches patients with a different frame of reference (eg, religion) openly	48 (87.3)	44 (86.3)	1.0 (−12.2 to 14.6)	0.88
Looks clean and tidy and dresses according to current norms	42 (76.4)	35 (70.0)	6.4 (−10.3 to 22.9)	0.46
Adjusts language to communicate with patients with little education	37 (67.3)	36 (70.6)	3.3 (−14.1 to 20.3)	0.72
Takes sex-specific differences into account	14 (25.5)	28 (56.0)	30.5 (11.72 to 46.56)	0.001
Is able to cope with the different expectations that patients have of their GP	33 (61.1)	37 (72.6)	11.5 (−6.5 to 28.4)	0.21
Involves the previous history of the patient in the provision of care	25 (45.5)	29 (58.0)	12.5 (−6.4 to 30.2)	0.20
Pays attention to the consequences of the treatment policy on the daily functioning of the patient	23 (42.6)	28 (54.9)	12.3 (−6.6 to 30.0)	0.21
Involves relevant aspects of the patient's home and environment in the provision of care	25 (45.5)	32 (64.0)	18.5 (−0.52 to 35.7)	0.05
Retains insight into the medical history of patients in order to act proactively if necessary	17 (30.9)	21 (41.2)	10.3 (−7.8 to 27.6)	0.27
If necessary, takes action after life events	34 (61.8)	39 (76.5)	14.7 (−2.9 to 30.9)	0.10
Deals carefully with professional secrecy when talking to colleagues or acquaintances	31 (56.4)	41 (80.4)	24 (6.2 to 39.7)	0.008
Does not give patients false hope	24 (43.4)	29 (56.9)	13.5 (−5.4 to 31.1)	0.17
Takes care not to become part of the patient's system	10 (18.2)	25 (49.0)	30.8 (12.9 to 46.3)	0.001
Takes care not to become too involved in the patient's emotions	12 (22.2)	19 (37.3)	15.1 (−2.3 to 31.5)	0.09
Takes care not to become too intimate	34 (61.8)	43 (87.8)	26 (9.3 to 40.7)	0.003
Takes care not to be influenced by patients of high social status	26 (48.2)	37 (72.6)	24.4 (5.7 to 40.8)	0.01

GP, general practitioner.

Table 4 Domain 2: professionalism towards other professionals (comparison of responses between both groups were both groups score=4 on 4-point Likert scale)

Question	GPs aged 34 and under (n=55) n (%)	GPs aged 55 and over n (%)	Difference % (95% CI)	P value
Is able to mediate with other care providers in the interests of the patient	33 (60.0)	32 (62.8)	2.8 (−15.3 to 20.6)	0.77
Consults other care providers with targeted questions	33 (60.0)	21 (42)	18 (−1.1 to 35.3)	0.07
Complies with multidisciplinary working agreements	35 (63.6)	27 (52.9)	10.7 (−7.8 to 28.3)	0.27
Ensures structured information transfer with other care providers	32 (59.3)	30 (60.0)	0.7 (−17.64 to 18.9)	0.94
Deals correctly with targeted questions from other care providers	32 (58.2)	33 (64.7)	6.4 (−11.9 to 24.0)	0.50
Is able to write a good referral letter with direct questions	34 (61.8)	34 (68.0)	6.2 (−11.9 to 23.5)	0.51
Is able to motivate support personnel	14 (25.5)	21 (41.2)	15.7 (−2.2 to 32.4)	0.09
Makes clear agreements with support personnel	20 (36.4)	18 (64.7)	1.1 (−16.8 to 18.7)	0.90
Listens to the contributions of support personnel	34 (61.8)	33 (64.7)	2.9 (−15.1 to 20.5)	0.76
Transfers services correctly	25 (45.5)	26 (51.0)	5.5 (−13.1 to 23.6)	0.57
Discussed bottlenecks in cooperation with others directly	10 (18.2)	11 (22.0)	3.8 (−11.5 to 19.3)	0.62
Is able to discuss differences of opinion with a specialist directly	9 (16.4)	17 (33.3)	16.9 (0.5 to 32.5)	0.04
Is able to manage the mutual demarcation of tasks between GP and specialists	8 (14.6)	14 (27.5)	12.9 (−2.7 to 28.1)	0.10
Ensures coherence in first-line and second-line medical care	13 (23.6)	13 (25.5)	1.9 (−14.2 to 18.2)	0.82
Is able to distinguish between professional and personal interests in negotiations	20 (36.4)	39 (76.5)	40.1 (21.4 to 55.0)	<0.0001
Is able to deal constructively with conflicts	12 (21.8)	17 (38.3)	16.5 (−0.9 to 32.8)	0.06
Is able to take policy decisions	7 (13.0)	25 (49.0)	36 (18.5 to 50.8)	0.001
Is able to conduct job evaluations	6 (11.1)	21 (41.2)	30.1 (13.5 to 44.9)	0.0004

GP, general practitioner.

towards oneself) with eight subsections (respecting patients' interests, maintaining professional distance, collaboration skills, management skills, responsibility, quality management, reflection on learning and dealing with emotions) significant differences in responses were noted in relation to five of the eight subsections. However, several individual questions yielded particularly significant differences between younger and older respondents,

with the most striking in response to distinguishing between personal and professional interests in negotiations. Other statistically significant responses were obtained to questions within quality management and respecting patients' interests. However, the domain with the most discordance in responses was maintaining professional distance, with significant differences in four of the six questions. Within the final domain, professionalism

Table 5 Domain 3: professionalism towards society (comparison of responses between both groups were both groups score=4 on 4-point Likert scale)

Question	GPs aged 34 and under (n=55) n (%)	GPs aged 55 and over (n=51) n (%)	Difference % (95% CI)	P value
Bears the consequences of own actions	44 (81.5)	49 (96.1)	14.6 (2.3 to 27.2)	0.02
Is able to justify deviations from rules and guidelines	40 (72.7)	37 (72.6)	0.1 (−16.5 to 16.9)	0.99
Keeps promises and agreements	39 (70.9)	41 (82.0)	11.1 (−5.3 to 26.5)	0.18
Does not hide behind others (give others blame or responsibility)	43 (78.2)	49 (96.1)	17.9 (5.1 to 30.8)	0.006
Is aware of how own norms regarding disease influence disease management	28 (50.9)	29 (59.2)	8.3 (−10.6 to 26.3)	0.40
Is aware of the meaning and relative value of scientific evidence in decision making	34 (61.8)	28 (56.0)	5.8 (−12.6 to 23.8)	0.55
In decision making, weighs scientific evidence against factors related to the patient or circumstances	30 (54.6)	25 (49.0)	5.6 (−13.0 to 23.7)	0.57
Is able to justify choices made on the basis of scientific evidence	21 (38.2)	16 (31.4)	6.8 (−11.2 to 24.0)	0.47
Is able to explain own norms and values regarding the application of scientific evidence	22 (40.0)	20 (39.2)	0.8 (−17.3 to 18.8)	0.93
Is able to signal suboptimal care within the practice	12 (22.2)	24 (47.1)	24.9 (6.7 to 41.1)	0.007
Is able to work out quality improvement projects	21 (38.2)	23 (45.1)	6.9 (−11.5 to 24.8)	0.47
Is able to estimate which problems are suitable for a quality improvement project	17 (30.9)	17 (34)	3.1 (−14.4 to 20.6)	0.74
Is able to name tasks to be, or that would like to be, delegated to an assistant	12 (21.8)	22 (43.1)	21.3 (3.5 to 37.5)	0.02
Has perceptions about how form can be given to means of contact	14 (25.9)	22 (44)	18.1 (−0.1 to 34.9)	0.05
Is able to justify indications for making home visits	23 (41.8)	38 (74.5)	32.7 (13.9 to 48.3)	0.001

GP, general practitioner.

Table 6 Domain 4: professionalism towards oneself (comparison of responses between both groups were both groups score=4 on 4-point Likert scale)

Question	GPs aged 34 and under (n=55) n (%)	GPs aged 55 and over (n=51) n (%)	Difference % (95% CI)	P value
Is able to name reactions, thoughts and feelings that patients evoke	21 (38.2)	26 (51.0)	12.8 (-5.9 to 30.4)	0.19
Asks questions about own role in relationship (patient, group, colleague)	22 (40.0)	17 (34)	6.0 (-12.2 to 23.5)	0.53
Uses specific practical situations as starting point for critical self-reflection	26 (47.3)	19 (37.3)	10 (-8.6 to 27.6)	0.30
In a specific situation with a patient, is able to analyse own behaviour and adjust, if necessary	20 (36.4)	17 (34.0)	2.4 (-15.6 to 20.0)	0.80
Discusses own shortcomings and failures without losing belief in own competence	15 (27.3)	12 (24)	3.3 (-13.4 to 19.5)	0.70
Makes a realistic estimation of own strong and weak points	17 (30.9)	17 (34.0)	3.1 (-14.4 to 20.6)	0.74
Is able to balance work and private life	14 (25.5)	11 (21.6)	3.9 (-12.3 to 19.6)	0.64
Is able to mention aspects of work that increase satisfaction	19 (34.6)	23 (45.1)	10.5 (-7.9 to 28.0)	0.27
Is open about feelings provoked by feedback	18 (32.7)	22 (44.0)	11.3 (-7.1 to 28.8)	0.24
Adheres to agreements made during feedback	24 (43.6)	18 (35.3)	8.3 (-10.1 to 25.8)	0.38
Attaches importance to what others think about behaviour	30 (54.6)	31 (60.8)	6.2 (-12.3 to 24.0)	0.52
Sets priorities in learning	24 (43.6)	19 (37.3)	6.3 (-12.1 to 24.0)	0.51
Does not resist being judged	18 (32.7)	16 (32)	0.7 (-16.9 to 18.0)	0.94
Has an inquiring mind (asks questions and takes initiative)	27 (49.1)	29 (56.9)	7.8 (-10.9 to 25.7)	0.42
Is able to figure things out for self	27 (49.1)	24 (47.1)	2 (-16.5 to 20.3)	0.84
Is able to admit own mistakes	31 (56.4)	32 (64)	7.6 (-10.9 to 25.3)	0.43
Takes action to rectify own mistakes	36 (65.5)	34 (66.7)	1.2 (-16.5 to 18.6)	0.90
Withdraws from consequences of own mistakes	32 (58.2)	28 (56)	2.2 (-16.2 to 20.5)	0.82
Learns from mistakes	37 (67.3)	31 (60.8)	6.5 (-11.4 to 24.0)	0.49
Is able to adapt and keep control of the situation if patients unexpectedly need to be seen during other activities	13 (23.6)	17 (33.3)	9.7 (-7.3 to 26.2)	0.27
Recovers rapidly after an unpleasant consultation	4 (7.3)	9 (17.7)	10.4 (-2.5 to 23.8)	0.11
Is able to cope after making a mistake	7 (12.7)	12 (24)	11.3 (-3.6 to 26.2)	0.13
Is able to let a mild disorder run its own course even though the correct diagnosis may remain a mystery	17 (31.5)	23 (46.0)	14.5 (-4.1 to 31.9)	0.13
Makes rational deliberations about whether it is necessary to request specialist or other advice	26 (47.3)	27 (52.9)	5.6 (-13.0 to 23.7)	0.57
Is able to deal with the possibility that a treatment decision may be unsuccessful	25 (45.5)	31 (60.8)	15.3 (-3.6 to 32.7)	0.12
Is able to deal with difficult or angry patients	17 (30.9)	17 (33.3)	2.4 (-15.0 to 19.7)	0.79
Is able to conduct interventions that lead to a decrease in aggression from the patient	13 (23.6)	19 (37.3)	13.7 (-3.7 to 30.3)	0.13
Is able to formulate own opinion in a clear and inoffensive manner	29 (52.7)	23 (46.0)	6.7 (-12.1 to 24.8)	0.49

GP, general practitioner.

towards oneself, both subsections showed no statistical difference between younger and older GPs to any of the questions.

There are several strengths to this survey:

- The Nijmegen Professionalism Scale is an already validated tool for the assessment of professional values and behaviours, saving time and resources developing and validating a tool for this survey.
- The respondents were from a diverse area covering remote and rural as well as urban areas of practice.
- The percentage of respondents in the younger and older groups very closely resembled the reported national figures for these age groups.

It is also worth noting the limitations of the study:

- The Nijmegen Professionalism Scale consists of over 80 questions which may have affected its completion rate.
- The Nijmegen Professionalism Scale was developed and validated for use in Dutch GP trainees. Use out of this context may impact on its validity and reproducibility.
- As with many online surveys, the response rate was low and can only be approximated. At the time of the survey, there was no single performers list in Scotland to enable a national distribution of information and surveys.
- Additionally, a further limitation of questionnaire surveys is that responses to questions cannot be verified in terms of their veracity.

- The inferential statistical analysis lacks complexity and could be improved by, for example, application of univariate and multivariate statistical analysis which may have provided better insights.
- Although data on gender and years of experience were requested through the survey, these have not been used in the analysis.
- Overall, the response rate is low for both GP groups and so the results cannot be generalised, and caution should be exercised when interpreting the findings.

The findings of this survey would suggest the two groups have different professional values in relation to their patients. One possible explanation for the observed difference in respect of patients accessing their own medical records is the socioeconomic climate in which younger GPs have learnt their craft.¹⁸ Increasing challenges to medical authority from insurance companies could be increasing the tendency towards risk aversion behaviours among younger GPs while the older generation are perhaps insulated by virtue of the longer relationships and the different climate during which they refined their skills postqualification. While the Patients' Rights (Scotland) Act of 2011¹⁹ states people should be provided with such information as needed to allow participation and that communication should be clearly accessible and understood, the changes made early in 2018 to the Data Protection Act introducing General

Data Protection Regulation²⁰ mean any person with capacity can request part or all of their medical record without providing a reason, potentially further eroding medical authority over the records they hold.

Recent years have seen Scotland celebrate its expanding multicultural diversity with campaigns under the 'One Scotland' banner.²¹ General practice appears to have embraced the diversity of our population while gender remains an area of difference between the two generations studied. While acknowledging gender differences may seem to be demonstrating bias, it could be argued gender-specific differences exist in the prevalence of many conditions. Therefore, is disregarding gender potentially detrimental to good patient care? Currently, no evidence exists on the correct approach to take to patient gender, but person-centred care encompasses all aspects of an individual's preferences, needs and values.²²

It is suggested that those born to the millennial generation value close relationships and social connectedness in the workplace.^{23 24} Combining these traits with policies such as person-centred care and shared decision making, it is perhaps possible to understand why GPs from the younger generation in Scotland report greater challenges in the subsection maintaining professional distance.

The differences observed in the subsection of management skills could be explained by a lack of confidence, experience or opportunity on the part of the younger GPs who will have had on average <6 years' experience as a GP compared with typically over 20 years of experience in the older group. Analysis of the responses from the middle cohort of GPs (those born between 1961 and 1981²⁵) would seem to support this hypothesis with six of the eight questions providing Likert 4 responses (Is able to discuss a difference of opinion with a specialist directly, is able to distinguish between professional and personal interests in negotiations, is able to make policy decisions) on this trajectory. However, if this was the case, it would be expected that the analysis of the results for the generational subgroups of ages 35–44 and 45–54 years would demonstrate two points on the corresponding trajectories. When analysed to this level of detail the responses for the eight questions in this subdomain provide a much less cohesive picture suggesting there may be other forces at play.

The responses to subsection 5 on responsibility would seem to support previous findings that those of the millennial generation are less likely to accept responsibility for their actions or learn from their mistakes.²⁶ However, this work also cites unrealistic expectations as a character trait for the millennial generation. To fully understand the responses in this subsection, further research is required to understand against what standard the two generations are benchmarking themselves.

Younger GPs appear comfortable with quality improvement activities, perhaps due to the emphasis placed on undertaking this type of activity during training.²⁷ They appear less comfortable than their older counterparts however, with the wider quality management agenda and particularly with the justification of home visits. This may represent the differing work patterns of each generation with part-time work and portfolio careers being more common among the GPs of the younger generation.²⁸ Following completion of training, ongoing support would seem to be required, enabling new colleagues to gain experience in specific areas of professionalism and how it relates to general practice. Responsibility for developing, driving and monitoring these developments would seem to fall to several organisations including RCGP Scotland, the GP Committee of the BMA, NHS Education for Scotland

and the postgraduate deaneries. Potential recommendations may include more structured appraisal support, scaffolding approaches to career stages for early years GPs and greater involvement with clusters to support development at ground level.

The lack of any statistically significant difference in the domain of professionalism towards oneself would seem to conflict with the attributes of poor problem solving, inability to learn from mistakes and reduced independence postulated by Eckleberry-Hunt and Tucciarone.²⁶ Although having previously self-reported to be less likely to accept responsibility for their actions, in the subsection of reflection younger GPs report they are just as likely to admit their mistakes as older GPs and do not withdraw from the consequences of those mistakes. Clearly, further exploration is required to understand the apparent incongruity.

In summary, while some differences have been demonstrated in responses between younger and older GPs, there is no clear delineation in professionalism which would be expected based on population-based generational studies. What may be inferred is that policy makers should not necessarily consider GPs as one homogenous group when postulating the implications of strategy changes on the profession. Consideration should also be given to the ongoing development of skills, knowledge and ability among newer qualified GPs with a focus on management skills and an understanding of the wider healthcare system. There would still appear to be a positive role for mentoring by more experienced GPs with this regard.

CONCLUSION

Despite its limitations, our small study offers a potentially new perspective on professionalism as it relates to the modern GP in Scotland and may inform how professionalism should be taught to the future generations of GPs. By comparing the values and behaviours deemed professional by newly qualified GPs with those nearing the end of their careers we have been able to demonstrate there is a disparity in several areas, including management skills, maintaining professional distance and quality management.

Several questions remain unanswered, including are these findings the result of a cultural and societal change on an emerging generation in the workforce or are they the result of experience, or lack of, which balances out over time? It may be possible to perform triangulation of the results which will increase the value of the information obtained.²⁹ Ideally, repeating the survey in the younger GP group at discrete intervals may help answer the state or trait question and contribute to the longitudinal assessment of professionalism called for by the Ottawa Consensus Group.³⁰

Twitter Trudy Lynn Foster @dr_t_foster

Acknowledgements The authors would like to thank the administrative team at NHS Education for Scotland's Glasgow office for their patience and support producing spreadsheets along with Kalinka van der Camp and coauthors for their kind permission to use the Nijmegen Professionalism Scale.

Contributors TLF initiated, planned and conducted the study, analysed the data and wrote the original draft manuscript. PB provided methodological and planning advice and contributed to the draft manuscript.

Funding This research was supported by NHS Education for Scotland.

Competing interests None declared.

Patient consent for publication Not required.

Ethics approval Under UK 'Governance Arrangements for Research Ethics Committees', ethical research committee review is not required for service evaluation or research which, for example, seeks to elicit the views, experiences and knowledge

of healthcare professionals (by virtue of their professional role) on a given subject area.

Provenance and peer review Not commissioned; externally peer reviewed.

Data availability statement Data are available on reasonable request.

Open access This is an open access article distributed in accordance with the Creative Commons Attribution Non Commercial (CC BY-NC 4.0) license, which permits others to distribute, remix, adapt, build upon this work non-commercially, and license their derivative works on different terms, provided the original work is properly cited, appropriate credit is given, any changes made indicated, and the use is non-commercial. See: <http://creativecommons.org/licenses/by-nc/4.0/>.

ORCID iD

Trudy Lynn Foster <http://orcid.org/0000-0002-1811-9929>

REFERENCES

- 1 Brody H, Doukas D. Professionalism: a framework to guide medical education. *Med Educ* 2014;48:980–7.
- 2 Evetts J. *The concept of professionalism: professional work, professional practice and learning*. International Handbook of research in professionalism and practice-based learning. Dordrecht: Springer, 2014: 29–52.
- 3 Hafferty FW, Castellani B. The increasing complexities of professionalism. *Academic Medicine* 2010;85:288–301.
- 4 Barnett R, Parry G, Coate K. Conceptualising curriculum change. *Teaching in Higher Education* 2001;6:435–49.
- 5 Hays R, Hamlin G, Worthington R. Developing professionalism in health professional learners. *Clin Teach* 2013;10:64–6.
- 6 Morris C, Blaney D. Work based learning. In: Swanwick T, ed. *Understanding medical education: evidence, theory and practice*. West Sussex: Wiley-Blackwell, 2013: 69–82.
- 7 Cruess RL, Cruess SR. Teaching professionalism: general principles. *Med Teach* 2006;28:205–8.
- 8 Cruess SR, Cruess RL. Teaching professionalism: why, what and how. *Facts, views and vision in ObGyn* 2012;4:259–65.
- 9 Royal College of Physicians. *Doctors in society: medical professionalism in a changing world*. London: Royal College of Physicians, 2005.
- 10 Hodges BD, Ginsburg S, Cruess R, et al. Assessment of professionalism: recommendations from the Ottawa 2010 conference. *Med Teach* 2011;33:354–63.
- 11 Monrouxe LV, Rees CE. *Healthcare professionalism: improving practice through reflections on workplace dilemmas*. West Sussex: Wiley-Blackwell, 2017: 1–4.
- 12 Camp K, Vernooij-Dassen M, Grol R, et al. Professionalism in general practice: development of an instrument to assess professional behaviour in general practitioner trainees. *Med Educ* 2006;40:43–50.
- 13 MEDCALC. Available: https://www.medcalc.org/calc/comparison_of_proportions.php [Accessed Aug 2018].
- 14 National Services Scotland GP workforce data. Available: <http://www.isdscotland.org/Health-Topics/General-Practice/Workforce-and-Practice-Populations/> [Accessed Jun 2018].
- 15 Scottish Government. *Realistic Medicine: Chief Medical Officer's Annual Report 2014-15*. The Scottish Government: Edinburgh, 2016.
- 16 Scottish Government. *Realising Realistic Medicine: Chief Medical Officer's Annual Report 2015-16*. Edinburgh: The Scottish Government, 2017.
- 17 Scottish Government. *Practising Realistic Medicine: Chief Medical Officer's Annual Report 2016-17*. Edinburgh: The Scottish Government, 2018.
- 18 Bernat JL. Restoring medical professionalism. *Neurology* 2012;79:820–7.
- 19 Patient rights (Scotland) act 2011 Asp 5 document generated: 2018-08-24.
- 20 Data protection act 2018 (C. 12) document generated: 2018-09-10.
- 21 Scottish Government. Available: <https://onescotland.org/campaigns/> [Accessed January 2019].
- 22 Health Education England. Person centred care. Available: <https://www.hee.nhs.uk/our-work/person-centred-care> [Accessed December 2018].
- 23 Howell LP, Joad JP, Callahan E, et al. Generational forecasting in academic medicine: a unique method of planning for success in the next two decades. *Acad Med* 2009;84:985–93.
- 24 Pew Research Center. *Millennials: a portrait of generation next*. Washington: Pew Research Centre, 2010.
- 25 Howe N, Strauss W. The next 20 years: how customer and workforce attitudes will evolve. *Harv Bus Rev* 2007;85:41–52.
- 26 Eckleberry-Hunt J, Tucciarone J. The Challenges and Opportunities of Teaching "Generation Y". *J Grad Med Educ* 2011;3:458–61.
- 27 Royal College of General Practitioners. *RCGP curriculum: core curriculum statement*. London: Royal College of General Practitioners, 2016.
- 28 Gulland A. Are Millennial GPs shunning full time work? *BMJ* 2017;357:3059–65.
- 29 Thurmond VA. The point of triangulation. *J Nurs Scholarsh* 2001;33:253–8.
- 30 Hodges B, Paul R, Ginsburg S, et al. Assessment of professionalism: from where have we come – to where are we going? an update from the Ottawa consensus group on the assessment of professionalism. *Med Teach* 2019;41:249–55.
- 31 UK Government. Available: http://webarchive.nationalarchives.gov.uk/20130107105354/http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_4005727 [Accessed Dec 2018].