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# Multi-source feedback reinforces junior doctors' awareness of the need to achieve and train clinical leadership

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## ABSTRACT

**INTRODUCTION.** Increasing complexity in healthcare makes it necessary to strengthen leadership training in postgraduate medical education (PGME). Multi-source feedback (MSF) is an acknowledged formative assessment method widely implemented in PGME. The present study examined how MSF may support junior doctors' awareness of the need to achieve and train leadership skills in clinical practice.

**METHODS**. Semi-structured interviews were conducted with 30 junior doctors late in PGME after they had completed a leadership-focused MSF process. Written personal development plans were collected. Data were analysed using thematic analysis.

**RESULTS**. The majority of the junior doctors found that the MSF process was intense, rewarding and helpful for understanding the many facets of clinical leadership. The personal feedback dialogue and the development plan were highlighted as the most beneficial elements of the process. The MSF process identified new learning objectives for leadership development such as task delegation, independent decision-making, becoming a role model and giving and seeking feedback.

**CONCLUSIONS**. Junior doctors found that a leadership-focused MSF process increased their attention to and awareness of leadership in daily clinical practice and provided deep insights into and specific tools to develop leadership skills. Thus, a leadership-focused MSF process may contribute to and increase junior doctors' leadership skills.

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Postgraduate medical education (PGME) in Denmark is based on the seven CanMEDS roles [1]. In 2004, mandatory leadership courses were introduced in PGME. However, the increasing complexity in healthcare has made it necessary to integrate more leadership training for doctors at graduate, postgraduate and specialist levels [2-5], and a need for alternative leadership training has emerged [6-8].

In the Northern Educational Region of Denmark, a validated formative multi-source feedback (MSF) assessment tool was introduced in 2006 in almost all specialties and at all PGME levels [9, 10]. An MSF process fosters reflection upon one's own practice and personal development [9-12] and is the only assessment method proven to improve performance [13], possibly because feedback and structured reflection, which are considered crucial for learning, are an integral part of a MSF process [11, 14].

Originally, MSF was developed to support leaders' personal development [15]. The increasing demand for leadership skills in healthcare raises the question if an MSF instrument with a stronger emphasis on leadership than traditionally seen in MSF processes of the PGME may increase junior doctors' learning and support the development of their leadership skills in clinical practice.

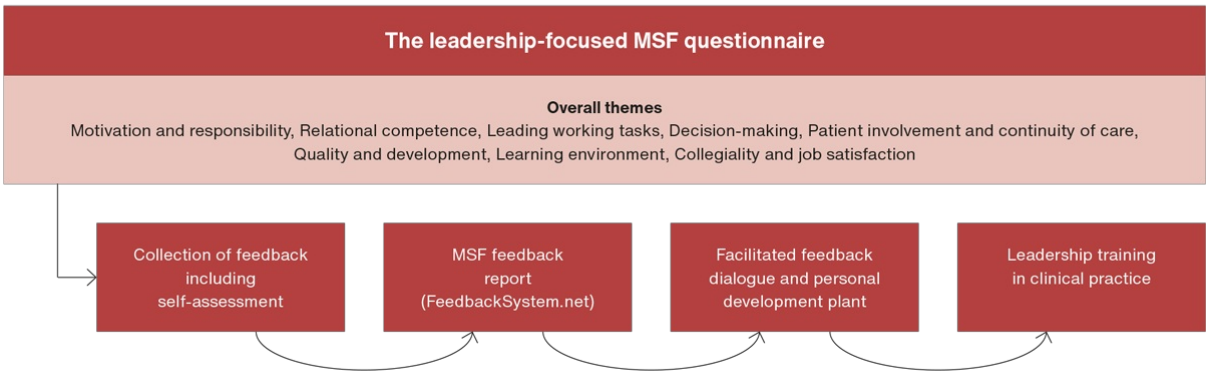
The research question explored in this article was: How may an MSF process be used to support junior doctors' awareness of the need to achieve and train leadership skills in clinical practice?

## METHODS

### Design, participants and setting

This qualitative, longitudinal study used semi-structured phone interviews and written development plans to explore junior doctors' perception of benefits from an MSF process with a specific focus on leadership development. The interviews and the data analysis were performed by an independent, experienced, external consultant (first author). The study included 32 junior doctors in their last one to two years of PGME from 32 clinical departments representing 17 specialties and eight hospitals in the Northern Educational Region of Denmark. Participants were chosen by purposeful sampling, aiming to maximise variability. The MSF process consisted of four steps as illustrated in **Figure 1**.

**FIGURE 1** The multi-source feedback (MSF) process focused on the development of junior doctors' leadership skills. The MSF questionnaire with emphasis on leadership skills consisted of eight themes with 44 questions/statements and is provided in **Supplementary - Appendix 1**. The MSF process comprised four steps; 1) Collection of feedback from colleagues and self; 2) Generation of a MSF feedback report; 3) A facilitated feedback dialogue conducted by a certified and experienced feedback facilitator, including identification of learning objectives and drawing up a personal developmental plan and 4) Leadership training in clinical practice (see [10]).




### Data

The data consisted of 30 interviews conducted one week after and 18 interviews conducted 12 weeks after the MSF process. The interviews lasted an average of 30 minutes. The interview guide (provided in Supplementary - Appendix 2 (https://content.ugeskriftet.dk/sites/default/files/2023-05/a09220573-supplementary.pdf) covered the junior doctors' perception of and experience with the MSF process. In addition, the second interview explored the junior doctors' experiences of working with the personal development plan and their assessment of the impact of the MSF process on the development of personal leadership skills. In addition, the study included 30 written personal development plans (see Supplementary - Appendix 3).

### Data analysis

The semi-structured interviews were audio-recorded. Immediately after conducting the interviews, the interviewer (first author) listened to the interview and made detailed notes including citations. The notes and the written development plans were analysed using interpretive thematic analysis [16]. To ensure reliability, all authors independently analysed the first ten development plans and interviews, compared their findings and discussed emerging themes until an agreement was reached. The data were analysed by the first author. An excerpt of the thematic analysis is shown in **Table 1** and **Table 2.**

**TABLE 1** Examples of themes, codes, and notes from the first round of semi-structured interviews.

| Subject | Theme | Code | Citation (ID) |
|---|---|---|---|
| Overall benefit | Increased reflections | Personal and intense framework | "It [the MSF framework] stimulates substantive considerations ..., which are essential for every doctor to thrive and work well with colleagues in a department" (311) |
| Benefit from specific elements in the MSF process | Personal development plan | Personal development plan as a tool | "Putting something specific [in the personal development plan] ... that you can reuse in other situations" (218) |
| | Personal feedback dialogue | Useful for working out a development plan | "In particular, we managed to grasp more specifically how I should try to develop my leadership skills in the future" (110) |
| Relevance of leadership | Relevance | Relevant for the forthcoming transition to specialist | "You start out being a trainee ..., so it's good to be confronted with the fact that it's time to think about leadership roles to a greater extent" (114) |
| | Timing | Focus on leadership demands, energy and readiness | "It's a role that requires a lot of energy because it's new and it's something you should grow in tandem with" (216) |
| Increased reflection | Micro-leadership | Realise the importance of micro leadership | "Any doctor who ends up being relatively experienced and senior will inevitably be a leadership figure. You are a leader in the sense that you help to define a department for junior doctors as well as for patients and relatives" (311) |

ID = personal identification number ; MSF = multi-source feedback.

**TABLE 2** Examples of themes from the junior doctors' personal development plans.

| |
|---|
| *Intrapersonal* |
| Administrative tasks, i.e. timetable planning |
| Being a good leader |
| Being a good role model |
| Clearer communication |
| Clearer leadership role |
| Expressing uncertainty |
| Having faith in one's abilities |
| Independent decision-making |
| Maintaining job satisfaction |
| Microlevel leadership |
| Personal development |
| Receiving feedback |
| Transition to specialist |
| *Interpersonal* |
| Addressing personal needs in themselves |
| Being a good colleague |
| Colleagues' job satisfaction |
| Conflict management |
| Continuity of care through collaboration |
| Developing practice |
| Giving feedback/supervision |
| Making demands, i.e. delegating tasks |
| Sharing responsibilities |
| Encouraging a speak-up culture |
| Teaching |

**Ethical considerations**

Participants received oral and written information and confidentiality was assured. We obtained written consent and all participants were anonymised with a personal identification number (e.g. 110, 111).

**Data sharing statement**

Data generated from the interviews and analysed during the current study are not publicly available, primarily due to discretion purposes and to ensure the anonymity of the participants, and secondarily because all data sets

are in Danish. Anonymised data-coding examples are available from the corresponding author upon reasonable request.

*Trial registration:* Registered in the Central Denmark Region: 1-16-02-315-20.

## RESULTS

Demographic data are presented in **Table 3.**

**TABLE 3** Demographics of junior doctors participating in the study.

| | Speciality | | | |
|---|---|---|---|---|
| | medical[a] | surgical[b] | technical[c] | Total |
| Participants, n | | | | |
| Men, n | 5 | 3 | 4 | 12 |
| Women, n | 9 | 8 | 3 | 20 |
| Total | 14 | 11 | 7 | 32 |
| Remaining months of PGME, n, mean | 17 | 13 | 14 | -[d] |

PGME = postgraduate medical education.
a) Child psychiatry, paediatrics, internal medicine (6 specialities).
b) Obstetrics and gynaecology, surgery, orthopaedic surgery, otolaryngology.
c) Radiology, anaesthesiology, microbiology, genetics.
d) In average participants remained 15 months of their PGME

### Overall benefit

The junior doctors generally had positive experiences of the leadership-focused MSF process. The majority (25/30) of the junior doctors found that the MSF process was relevant, intense, rewarding and helpful in understanding the many facets of clinical leadership.

After completing the MSF process, the junior doctors reported being more reflective in relation to their leadership role in daily practice:

*"I hadn't really seen my daily workflow from a leadership perspective. We actually have many microleadership roles in our daily practice" (316).*

Some junior doctors had already started reflecting on their leadership role before completing the MSF process, and they considered the process a natural step towards becoming specialists.

A few (5/30) junior doctors did not experience particular benefits regarding development of leadership skills compared with previous MSF processes.

### How the multi-source feedback process supported leadership development

The junior doctors highlighted the personal feedback dialogue and the development plan as the most beneficial aspects of the MSF process. They described how the personal feedback dialogue nuanced and illuminated the feedback received from respondents and helped them to define focus points and formulate the development plan:

*"It [the feedback dialogue] meant that we went in depth with a few very relevant topics, and they were also the*

*ones that ended up being reflected on in my personal development plan" (311).*

However, the four steps of the MSF process were described as equal and mutually dependent by several junior doctors.

**Relevance of leadership**

The junior doctors described the process as an 'eye opener' regarding the many facets of leadership:

*"It has only now struck me that what we are doing as doctors is, in fact, microleadership (...) that it is something we do daily" (316).*

Furthermore, leadership skills were considered relevant because they focused on their future responsibilities and tasks as specialists:

*"Besides, it is expected that - when you become a specialist - you have acquired some leadership skills" (110).*

Others, however, did not consider leadership skills relevant:

*"Right where I am now, I don't have much interest in it" (215).*

The best timing of the feedback was described as occurring when junior doctors were ready and when there was still time to implement the objectives and develop leadership skills before transitioning to specialists:

*"I don't think that it [the MSF process] should be brought in much later, as you need time to reach the goals before you start as a specialist" (115).*

The majority of the junior doctors received the MSF within the last 1-1.5 years of PGME, which they considered appropriate:

*"It was spot on for me and where I am now (...). After all, we are about to become specialist, and a big part of that is taking on more leadership and responsibility" (121).*

Several junior doctors mentioned the timing of the MSF, having received MSF in parallel with the mandatory leadership course [17], which contributed to increased reflection on both the theoretical and practical aspects of leadership:

*"It is very appropriate. The MSF has given me tools to judge leadership situations. The course has provided me with theory" (218).*

However, several respondents stated that leadership is relevant to address at all times during the PGME.

**Learning objectives in leadership development**

The MSF process identified new learning objectives related to leadership development such as task delegation, independent decision-making, being a role model and the ability to speak up and handle conflicts. Further examples of learning objectives from the development plans are listed in Table 2.

**Three-month follow-up**

Retrospectively, the majority of the junior doctors considered that the MSF process had been rewarding. At the follow-up, most (12/18) of the junior doctors had taken on a broader leadership role in their daily practice. Examples of implemented leadership roles included leading conferences, giving feedback to colleagues and senior doctors and delegating tasks. Furthermore, the junior doctors reported being more conscious of situations in which they or their colleagues practised leadership. Barriers to implement objectives included busyness due to a perceived heavy workload, labour shortage, lack of motivation, limited opportunities for leadership training and lack of support or structure for leadership training in the departments.

Despite progress, the junior doctors reported that the individual objectives from the development plans were not yet fully achieved as leadership development is an "ongoing process". In addition, some of the junior doctors could not recall specific objectives. Nevertheless, when reminded, they realised that they had been working unconsciously with the development plans and felt that their leadership skills had progressed. This finding indicates the importance of recapitulating the development plan, although only very few reported having had a formal follow-up dialogue with a mentor or supervisor.

## DISCUSSION

Junior doctors completing an MSF process in the last part of PGME reported being more reflective about their leadership role in daily practice; and, three months after the MSF process, two thirds of the junior doctors had taken on a broader leadership role.

The junior doctors highlighted the personal feedback dialogue with a certified and experienced facilitator and the preparation of a development plan as the most beneficial aspects of the MSF process as they contributed to increased reflection and definition of concrete objectives for developing their leadership skills. However, our results indicate that the facilitator needs to be able to address and focus on leadership themes to foster reflections on leadership. This is consistent with findings in the literature, where facilitated reflections on feedback are described as having a positive impact on the assimilation and acceptance of feedback and on guiding doctors in preparing a development plan [9, 11, 12].

The junior doctors emphasised the importance of recapitulating the development plan and suggested follow-up on the ongoing development process of their leadership skills, but only a few junior doctors reported having had a formal follow-up dialogue. The literature describes facilitated follow-up as best practice to confirm progress [9, 11], so this may potentially be a beneficial addition to future MSF processes. This would call for senior staff's encouragement and support of junior doctors' leadership development. Further studies are needed to explore how departments may support junior doctors' leadership development.

Junior doctors considered the departments' responsiveness and organisation pivotal for the opportunity to practise leadership skills and implement objectives from their development plan. Medical leadership training may be used as a tool to prepare junior doctors for leadership positions [2, 4, 5, 18], providing doctors with situations in clinical practice in which they can experiment with leadership skills [2, 18] and gradually increase their motivation, confidence and willingness to lead [6]. However, one impediment may be that medical leadership training is associated with investments, e.g., in time and human resources [5], and thus demand clear prioritisation embedded at all organisational levels within the clinical departments.

Finally, several junior doctors reported a change in self-image from being a doctor with no wish to pursue a career as a medical leader to imagining themselves holding responsibility for and practising leadership in their daily practice. Thus, the MSF process contributed to evolving and shaping the junior doctors' 'professional identity' [12, 18, 19]. The junior doctors described increased benefits when the MSF process was combined with a leadership course [17]. However, the effect of leadership programmes has been discussed, and while some authors have found that medical leadership programmes enable the formation of professional identities [18, 19], Kumar recently showed no effect of leadership courses, and alternative leadership training embedded in practice has been suggested [6-8]. The MSF used in this study provided most junior doctors with a new perspective on and insights into leadership. This may possibly be a pivotal first step in developing future medical leaders and ensuring management at all levels in complex healthcare systems. However, further studies are needed to identify the best way to motivate and train future medical leaders; this will probably turn out to be a combination of various training models tailored to the responsiveness and readiness of the culture and

organisations in which junior doctors work.

### Strengths and limitations

This study included junior doctors representing various specialities and hospitals. The participation was high for the first interview and acceptable for the second interview, and data saturation was reached. Thus, the results may be considered representative for all Danish junior doctors in PGME.

However, it cannot be ruled out that the doctors participating in both interviews were the ones finding the MSF process rewarding. This induces a risk of positive bias in the results. This study relies solely on the junior doctors' self-assessment, and it cannot be ruled out that department leaders or feedback facilitators related to the MSF process would have presented different perspectives regarding the development of junior doctors' leadership skills. Due to these limitations, it would be interesting to conduct a similar study including clinical leaders, consultants responsible for education, feedback facilitators of the MSF process and other stakeholders.

## CONCLUSIONS

Junior doctors found that a systematic use of a leadership-focused MSF process in the final part of PGME increased their attention towards and awareness of how leadership is embedded in daily clinical practice and how they already play a role as leaders. The MSF process compelled junior doctors to make plans for further development of leadership skills and may thus contribute to and increase leadership skills among junior doctors.

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