OBJECTIVES Although lack of time has been frequently cited as a barrier to scholarship, there has been little inquiry into what specific factors medical faculty staff perceive as contributing to this dilemma. The purpose of the present study was to explore, in greater detail, lack of time as a barrier for faculty interested in pursuing education scholarship.

METHODS In 2004, as part of a cross-sectional, mixed-methods needs assessment, 73 (67.6%) medical faculty completed a questionnaire probing areas related to education scholarship. Additionally, one year later, 16 respondents (60% of those invited) each participated in one of three focus groups.

RESULTS Despite their interest and regardless of their background training in education, faculty were able, on average, to devote only negligible amounts of time to education scholarship. The most commonly reported barrier to these pursuits was lack of protected time. Further analysis revealed that the time-related factor appeared to involve three themes: fragmentation (where opportunities to work on education projects are sporadic); prioritisation (where work responsibilities including after-hours work and administrative workload complete for time), and motivation (where the degree of recognition and support for education work by both the department and colleagues is limited).

CONCLUSIONS With respect to education scholarship, the dilemma caused by lack of time involves a complex, multi-faceted set of issues which extends beyond the number of hours available in a day. Personal interest and having background training in education do not appear to be sufficient to encourage involvement. Multiple institutional support mechanisms are necessary.

KEYWORDS *education, medical, undergraduate; *faculty, medical; *motivation; questionnaires; time factors; *professional practice; *schools, medical; *attitude.

INTRODUCTION

Although the provision of sufficient time to carry out work of scholarship has been shown to be critical to the development of successful scholars, evidence that the issue represents a significant challenge for many faculty members, including those in medical schools, continues to emerge.² 10 It is, therefore, surprising that so little research around the exploration of time-related barriers to education scholarship has been published in the medical education literature.

The limited existing information on this topic has identified competing work demands as one obstacle. In one study, despite working nearly 60 hours per
Constraints to education scholarship among medical faculty

Overview
What is already known on this subject

Many faculty members, including those within medical schools, struggle to find time to participate in scholarly activities.

What this study adds

Medical faculty view their time-related dilemma, as it relates to participation in education scholarship, as a multi-faceted, complex issue. Academic doctors appear to struggle continually with a number of hurdles, including time fragmentation, difficulty in prioritising education scholarship in their work schedules, and cynical attitudes towards education research on the part of colleagues.

Suggestions for further research

Time-related constraints should be explored in other academic centres to see if staff elsewhere face similar obstacles to education scholarship. Moreover, the relationship between the burden of administrative and leadership tasks and scholarly productivity in education warrants further exploration.

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METHODS

The data described were collected in 2004–05 as part of a larger, two-phase, cross-sectional, mixed-methods needs assessment conducted at our university.11 A purposive cohort of 108 medical faculty, who comprised the membership of a formal group within our academic centre focused on enhancing education scholarship, was initially invited to participate in a survey probing areas including: hours worked per week; estimated proportion of time devoted to major responsibilities, and frequency of after-hours work on these. A year later, 16 survey respondents (60% of those invited) who had expressed an interest in pursuing education scholarship additionally took part in one of three focus groups. These were undertaken in order to triangulate information collected on support needs and obstacles to participation in education scholarship. The focus group format was chosen as such groups represent an effective method for exploring survey results and are particularly suited for inquiry into attitudes and experiences.12

Data analysis

Time estimates were summarised in terms of median, interquartile range (IQR), and minimum and maximum values. Wilcoxon signed rank (T) or Mann–Whitney U-tests (U) were used to explore differences in self-reported time estimates. Relationships between formal training in education, education scholarship time, and scholarly productivity were estimated by means of a point-biserial correlation or Fisher’s exact tests and 95% confidence intervals (CIs) were calculated around estimates.

Focus group data were collected and initially analysed by an independent consulting team. A note-based transcript based on audiotaped records was created for each session. This method was strengthened by asking focus group participants to confirm the accuracy of a return-of-findings memo. The transcripts were then aggregated under main thematic headings and emergent themes were identified by two authors. The individual group session was treated as the unit of analysis and the presented themes represent content that was prevalent in a minimum of two focus groups. Therefore, it was not possible to

link survey data to any remarks made by an individual during a focus group.

RESULTS

Survey response rate and faculty demographics

The survey was completed by 73 (67.6%) predominantly clinical faculty members who were diverse in rank and department. Most had been at our school for at least 5 years and nearly 40% (28 faculty) had received additional formal training in education, including within a Masters-level degree programme (Table 1). The demographic profile of the focus group participants was similar.

Estimated work hours

Faculty reported working a median of 60 hours per week (IQR 20; minimum 10 hours, maximum 90 hours; 95% CI 55.5–62.6). Faculty with a background in education tended to work more hours during a typical week (median of 60 hours versus 55 hours; $U = 383$, $P = 0.08$).

Lack of time for education scholarship

A total of 79% of survey respondents expressed an interest in pursuing education scholarship and 81% ($47/58$) of these indicated that they wished to participate more in scholarly activities. The most commonly reported barrier was inability to protect time. Although a few respondents reported spending considerable time on education scholarship, the median time spent across the entire group was negligible (Table 2). No correlation between additional background in education and time spent on education scholarship was detected ($r_{pb} = -0.01$, $P = 0.96$; 95% CI $-0.24$ to $0.23$). During the focus groups, participants spoke in greater detail about time constraints as they relate to education scholarship. Overall, three time-related themes emerged from the triangulated data: fragmentation, prioritisation and motivation.

Fragmentation

Faculty staff expressed great frustration over their inability to secure time for education projects. At best, they indicated finding only sporadic opportunities to work:

‘So you find little bits of time here and there when education scholarship fits in, but this method is very inefficient.’

‘Every time I go back to a project, it takes a long time to get back on track. I have to redo parts... when you put it away it’s hard to get back on track.’

In terms of time sequencing, faculty expressed the opinion that it would be better to have consistently protected, extended blocks of time for scholarly activities rather than a few hours per week:

‘It would be extremely helpful to be able to take a block of time off from clinical work, say a month, and during this block of time it is known and expected that you are working on education scholarship, but you would still receive a salary during this time.’

Prioritisation

The survey data revealed that faculty were juggling a number of competing responsibilities. In addition to heavy clinical and teaching loads, they reported considerable administrative and leadership duties (Table 2). Regardless of background in education, faculty reported spending significantly more time on administrative and leadership activities than on scholarly pursuits in education ($T = 16.5$, $P = 0.00$ and $T = 16.6$, $P = 0.00$ for those with and without formal training in education, respectively). Although the result was not statistically significant, the gap between the numbers of hours devoted to these roles (administrator or leader versus education scholar) was greater for those with advanced education training. Some focus group participants commented that an additional background in education could further

Table 1 Participant demographics

<table>
<thead>
<tr>
<th>n (%)</th>
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<tbody>
<tr>
<td>Male</td>
</tr>
<tr>
<td>Clinical faculty</td>
</tr>
<tr>
<td>Assistant or associate professor</td>
</tr>
<tr>
<td>Have additional formal training in education</td>
</tr>
<tr>
<td>Master of Education from Ontario Institute for Studies in Education at the University of Toronto (OISE/UT)</td>
</tr>
<tr>
<td>Master of Health Professions Education (University of Illinois at Chicago)</td>
</tr>
<tr>
<td>Other equivalent programmes</td>
</tr>
</tbody>
</table>
exacerbate one’s administrative burden as some departments tended to assign these responsibilities to faculty with advanced education degrees:

‘As soon as someone finds out you have expertise or knowledge in education, you get a huge administrative load.’

Reduced administrative and leadership burdens appeared to have some relationship to scholarly productivity. Faculty members who had published at least one education-related paper in the past 5 years showed a non-significant trend towards spending less time on administrative or leadership activities (median 9% versus 14% of time, for those with and without published papers, respectively; $U = 358.5; P = 0.08$) and being able to devote more time to education scholarship (median 3.5% versus 0% of time; $U = 265.5, P = 0.001$). A moderate-level, significant correlation was detected between time for education scholarship and having published at least one education-related paper during the past 5 years ($r_{pb} = 0.41, P = 0.00; 95\% \text{ CI } 0.20–0.59$).

Some faculty mentioned that they attempted to cope with their lack of productivity by working on their projects after hours. Those with advanced training in education were more likely to do so (Fisher’s exact test, $P = 0.02$) (Table 2). Devoting time to education interests outside regular work hours did appear to bear some scholarly benefit as a significant association was detected between after-hours education scholarship work and having published at least one paper (Fisher’s exact test, $P = 0.005$).

There also appeared to be considerable competition for after-hours time as many faculty reported that they worked on clinical, teaching and administrative and leadership duties after hours (Table 2). Moreover, those with advanced education training were significantly more likely to report that they tried to catch up on administrative and leadership duties at home (Fisher’s exact test, $P = 0.003$; over half reported doing this several times per week). For some faculty, finding time outside regular work hours for education interests required some difficult decisions as personal and family time was often sacrificed at weekends and during holidays and vacations:

During the focus groups, the issue of financially protected time was also discussed. Faculty perceived that few of their colleagues had formally protected time for education scholarship and that such time would be difficult to attain. They described being caught in a circular, ‘no-win’ situation where they would not be granted protected time by their departments if they did not have a proven track record in scholarship, but without the protected time they would never be able to prove themselves:

Table 2 Estimated percentage of time devoted to major faculty responsibilities

<table>
<thead>
<tr>
<th>Have additional formal training in education</th>
<th>Yes ($n = 28$)</th>
<th>No ($n = 45$)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Median (IQR), Min–max</strong> After hours (%)†</td>
<td><strong>Median (IQR), Min–max</strong> After hours (%)†</td>
<td></td>
</tr>
<tr>
<td>Patient care*</td>
<td>58 (22.5) 0–80 83.3</td>
<td>55 (24.5) 18–80 67.7</td>
</tr>
<tr>
<td>Teaching</td>
<td>10 (10) 2–40 84.6</td>
<td>10 (15) 0–55 73.2</td>
</tr>
<tr>
<td>Administration and/or leadership</td>
<td>15 (26)† 0–90 88.9§</td>
<td>10 (19.8)† 0–70 52.5§</td>
</tr>
<tr>
<td>Education scholarship</td>
<td>0 (5)† 0–30 36§</td>
<td>0 (5)† 0–30 10.5§</td>
</tr>
</tbody>
</table>

* For clinically orientated faculty
† After hours: devoting time, at least twice a month, outside regular work hours
§ Between-group difference, $P < 0.05$
IQR = interquartile range
'It’s rare to have protected time for education scholarship... you’re expected to do it on your own time.'

‘If you don’t have the time protection [in the first place], you’re not going to be able to achieve the status [of scholar].’

**Motivation**

Lastly, the issue of motivation for participation also emerged as a dimension of the time-related dilemma. Faculty expressed mixed feelings with regard to their departments’ and colleagues’ reactions to their involvement in education scholarship. Over half of survey respondents 53.4% (39/73) reported that they felt their departments recognised their scholarly endeavours in education and 57.5% (42/73) felt that these might help them achieve academic promotion. By contrast, 32.9% (24/73) reported a lack of recognition and support by their departments and 48% (35/73) said that a lack of support for education scholarship on the part of colleagues had been a barrier for them. Although focus group discussion seemed to indicate that the extent to which these were barriers depended on their home department, participants in all three focus groups talked about education research being undervalued:

‘The impression that I have gotten is that it’s something that you do on top of other research. In my last annual review, I said I am doing this and was told, “Great, but don’t forget to do research in your primary field”.’

‘Not everyone knows that education is even researchable. In residency you have journal clubs, but you don’t read education articles.’

‘You don’t get the same level of recognition or respect that you do when you publish basic science research.’

These experiences influenced faculty motivation to devote time to this area. For some, the perceived value of education scholarship was not enough to warrant continued participation:

‘Not only is education scholarship not valued, but it takes time away from the things that we are evaluated on. It’s not valued so I spend my time doing other things.’

‘Before spending time on education scholarship, you need to make sure that it is valued by your department.’

**DISCUSSION**

To our knowledge, this was the first study to explore, in greater detail, the struggles which medical faculty encounter when attempting to find time for education scholarship. Our data suggest that the time-related dilemma represents a complex, multi-faceted set of issues which appears to extend beyond merely not having enough hours in the day. Despite their interest in participating in more education-related activities, the doctors who took part in our study appeared to struggle continually with a number of hurdles which interfered with their ability to achieve their goals.

Difficulties in managing multiple responsibilities appeared to be central to the dilemma. In addition to heavy clinical and teaching loads, faculty reported having considerable administrative and leadership responsibilities. Moreover, many seemed to be unable to handle these duties during regular work hours, which necessitated putting in after-hours time at least once per week. Although administrative work is a core aspect of the daily working life of most academic doctors, in our cohort this appeared to significantly compete with, and detract from time spent on education scholarship.

Like the participants in the study by Steinert et al., faculty at our centre expressed great frustration over the fragmented way in which they were attempting to complete their education projects. As one focus group participant indicated, this is like constantly starting over. Rather than having a half-day of protected time per week, participants wished to have extended blocks of protected time. This, of course, is not a new idea. Sackett and Blackburn and Lawrence also argue for providing faculty with extended amounts of time for scholarly research. Boice, however, reminds us that this is not always feasible or effective. For some, waiting for extended blocks of time may lead to procrastination. However, there is more to the scholarly process than writing and, as Blackburn and Lawrence point out, scheduling could be more creative. For example, some people are more productive when they have a full, uninterrupted day for scholarship activities or when they protect time for writing first thing in the morning each day, rather than having two separate half-day blocks. Perhaps then, the best solution is one that is not prescriptive but is tailored to the individual’s personal preferences and circumstances and allows for the possibility of extended periods of time.
Constraints to education scholarship among medical faculty

Motivation for participating in education scholarship also emerged as a major theme in the time-associated set of issues. Motivation is strongly influenced by institutional values. In their study of faculty work, Blackburn and colleagues proposed that ‘the manner in which people differentially assess their personal abilities and interests interacts with their perceptions of the organisation’s priorities (what it supports) and causes them to engage extensively in some activities and less frequently in other activities’. As related research has found, many faculty appeared to have encountered a rather negative working environment with regard to education scholarship. Education research, in particular, seemed to be viewed with some cynicism. As a potential contributing factor, one focus group participant pointed out that residents are exposed to very little, if any, of the education literature during training. Given that postgraduate journal clubs tend to focus on critical appraisal, clinical epidemiology and medical statistics, and, in our experience, relatively few residents participate in education-related projects as part of their research requirements, doctors may not develop an appreciation or interest in education scholarship until later in their careers (if at all).

During the focus groups, two people indicated that they were withdrawing from participation in education-related activities because of the negative reactions they had encountered. This is not surprising given the importance of a positive group climate. Local colleague interaction, encouragement and stimulation are fundamental aspects of this. Any attempts to address the time-related dilemma will also have to take these into account.

Given that motivation and self-efficacy are strongly related, the issue of self-belief surrounding potential achievements in education needs to be addressed. In our prior study we found that, despite additional graduate studies in education, several faculty appeared to lack self-confidence in their education research skills. This issue would also need to be taken into account by interventions aimed at enhancing faculty participation in education scholarship.

We have previously reported that additional formal training in education does not appear to have an impact in terms of scholarly productivity. The present study suggests that neither does it enhance participation in education-related activities as no relationship was detected between additional training and time spent on these. Moreover, it may even be disadvantageous as there appeared to be a greater gap between the reported percentages of time spent on administrative and leadership activities versus education scholarship for those with advanced education training. They were also more likely to report spending significant amounts of after-hours time on administrative and leadership duties.

Four individuals indicated that they spent considerable amounts of time on education scholarship (20–30% of time). At first glance, their demographic profiles and responsibilities did not stand out from the group as a whole as they represented a mixture of characteristics in terms of additional training, department, administrative burden, etc. In the future, it would be interesting to explore how these individuals may differ from the rest of the study cohort.

The present study has some limitations. It was not originally designed to explore time-related issues and, as such, several of the themes were not explored to saturation. Further, the mixed methods employed do not allow survey data to be linked to remarks made by individuals during focus group sessions. Therefore, it is not possible to explore potential relationships between factors such as attitudes towards protected time and scholarly productivity in education.

In conclusion, if academic centres wish to enhance the productivity of their current and future education scholars and improve the level of support they provide to these members of staff, they will need to do more than just provide faculty with some hours in which to work on their interests. Career support and institutional values need to be addressed. New faculty need guidance in organising and prioritising their time for academic work and scholars who have not yet proven themselves need to be identified and provided with the mentorship and support they require. The institution also needs to take practical steps to support educational scholarship by reducing administrative burdens, facilitating innovative scheduling to increase protected time, creating more opportunities for interaction between like-minded scholars and, finally, identifying better methods for recognising and rewarding faculty members’ educational scholarship.

Contributors: EMZ conceived the idea for the present study, co-developed the needs assessment methodology, primarily analysed the data and wrote the initial manuscript. WWW co-developed the needs assessment methodology, and critically reviewed and revised the initial manuscript. MAG co-developed the needs assessment methodology, assisted
with data analysis, and critically reviewed and revised the initial manuscript.

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Conflict of interest: none.

Ethical approval: the study protocol was reviewed and approved by the University of Western Ontario’s Ethics Committee for Research Involving Human Subjects.

REFERENCES

1 Ionesco E. Exit the King. New York: Grove Press 1963.
16 Ackerman DS, Gross BL. I can start that JME manuscript next week, can’t I? The task characteristics behind why faculty procrastinate. J Mark Educ 2007;29 (2):97–110.

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