ACADEMIC WRITING PEER-SUPPORT GROUP IN SINGAPORE PRIMARY CARE SETTING: BEFORE AND AFTER STUDY

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ABSTRACT

Introduction: Academic journal publications enable widespread access to primary care research evidence. Good writing skills in primary care researchers are essential and can be nurtured within a peer-support academic writing group. We present the experience and outcomes of two academic writing groups, moderated by LKCMedicine faculty and involving Singapore's primary care staff.

Methods: The academic writing group had a peer-support, small group approach and consisted of six sessions held every three weeks. The participants completed a baseline and a follow-up survey with questions relating to participants' demographics, research experience, aims at baseline as well as attitudes to an academic writing group and research successes at follow-up. Both surveys included the Research Spider questionnaire to assess participants' change in research knowledge and skills. We analysed collated data using Wilcoxon signed-rank test, descriptive statistics and thematic analysis.

Results: Of the 21 participants, most were female (62 percent), family physicians (43 percent) and involved in reviews or observational studies. At baseline, seven participants had a peer-reviewed publication and two attracted research funding. At follow-up, the analysis showed a significant improvement in research skill such as research protocol writing, use of qualitative research methods, publishing research, critically reviewing the literature, finding relevant literature and generating research ideas as per Research Spider. All participants appreciated the small group format and agreed that academic writing group was helpful, relevant and exceeded their expectations.

Conclusion: The findings from the academic writing groups surveys convey a clear need and appreciation for academic writing support. The participants reported improvements in their research knowledge and skills and appreciation for this type of training.

Keywords: family physicians; writing; publishing; primary health care; research capacity building

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INTRODUCTION

Primary care clinical practice recommendations are largely based on evidence from non-primary care settings which can lead to inappropriate and harmful patient care.[1] By addressing these evidence gaps, research in primary care has the potential for improving service delivery and patient outcomes. At the same time, it offers numerous benefits to primary care professionals, including encouragement of personal reflection, peer-to-peer discussion, collaboration, and training. Building a successful primary care research environment is a challenge. It calls for targeted and continuous support of development, implementation and delivery of research projects, as well as dissemination of their findings in the form of peer-reviewed publications. Regardless of their rigour and importance, primary care research projects that are not published fail to contribute to the limited evidence base in the field. Writing for publication is therefore an essential skill and a major barrier due to a variety of reasons such as lack of time, confidence, support or knowledge.

One way of addressing these challenges and supporting the development of writing competence in primary care is through academic writing groups.[2] These small, peer-supported, ongoing groups of aspiring journal publication authors are common in academic institutions and increasingly employed in healthcare settings.[3-7] Academic writing groups help to create the time, support and environment needed for the development of writing skills and increase in academic productivity through learning and analysis of the writing process.[8] They facilitate peer-mentoring and building of writing confidence and positive attitudes towards academic writing within a like-minded and supportive community.[9]

Primary care in Singapore is faced with many challenges, including an ageing society, a growing burden of multiple chronic diseases and a projected shortage of primary care physicians. The value of primary care research in improving patient and healthcare professional outcomes is strongly acknowledged as reflected in the host of research capacity building activities such as the recently launched Singapore Primary Care Research Network.[10] Akin to established European, Australian and North American examples, the Singapore Network aims to link primary care physicians to enhance their research involvement through research advice, training and collaboration.[11-14] As part of the Network research skills program, an academic writing group involving primary care staff has been set up. The academic writing group was seen as meeting the needs of busy primary care professionals for several reasons. Discussions with primary care practitioners in Singapore revealed a clear need for continuous support, customised to their skills, needs and schedules. Writing for publication was identified as the top priority as findings from primary care research projects were mostly disseminated as conference abstract. Also, while there were diverse research skills training courses offered to primary care practitioners, it

was not primarily focused on writing for publication. In this study, we present our experience of an academic writing group in Singapore's primary care setting.

METHODS

We modelled our academic writing group according to the Department of Family Practice at the University of British Columbia's example.[2] The academic writing group was envisaged as a series of two-hour meetings within a set period of time with a view for continuation. We established a positive and safe environment in which participants would be free to share their writing, views and challenges. The meetings were held in comfortable spaces, and short coffee breaks and food was provided to create a relaxed and open atmosphere. We used the "Winning the publication game: the smart way to write your paper and get it published" as a reference and suggested reading resource.[15] Also, the sessions were tailored to the participants' needs and sought their views on topics through the discussions at the first session as well as commentaries from subsequent sessions. Additional resources were shared through emails and a Dropbox folder. The participants were strongly encouraged to share their writing with the group. The target audience included clinical and research staff working in Singapore primary care, including polyclinics, community hospitals or individual private practices. Participant recruitment was conducted via e-mail communication and word-of-mouth.

The data was collected using a self-administered paper-based baseline and a follow-up questionnaire. The baseline questionnaire was administered to all participants when they first joined the academic writing group. It included questions on participants' qualifications, job title, previous research experience, type of study the participant is involved in and participants' aims for the academic writing group. The follow-up questionnaire was distributed at the last session and information was collected on the attitudes to the academic writing group and participants' research successes in relation to publications, research projects, grants etc. The survey included questions about the most useful aspects of the group meetings and suggestions for changes or improvements. A series of four questions asking for participants' satisfaction with the teaching style, topics, difficulty level and overall satisfaction were included with responses marked on a four-point Likert scale. The follow-up survey assessed Level 1 and 2 (i.e. reaction and learning) of the Kirkpatrick model.[16]

Both questionnaires included the Research Spider questionnaire to assess research experience (Figure 1).[17] The Research Spider is a validated, self-administered star-plot style questionnaire which was developed in consultation with practice-based researchers. It consists of ten scales (or limbs) relating to various areas of the research process including protocol development, the use of qualitative and quantitative research methods, publishing, writing, analysis, interpretation, critical review and search of the literature, generation of research ideas and applying for research funding. The respondents were asked to rate their research experience from 1 = no experience to 5 = very experienced on each of the ten scales. Data analysis was performed using descriptive statistics,

Wilcoxon signed-rank test and thematic analysis.

RESULTS

Two academic writing groups met six times between February 2017 to June 2017. The academic writing groups were moderated by LKCMedicine faculty (HS and LTC) and took place every three weeks either on Saturday afternoon at the university's staff lounge or on Thursday afternoon at a primary care provider's office meeting room as per participants' expressed preference and availability. The sessions lasted for two to three hours and focused on topics such as general writing conduct (e.g. planning a manuscript, managing time, collaboration with co-authors, manuscript presentation, writing productivity), writing-up qualitative research (e.g. reducing the word count, using qualitative reporting guidelines), survey development (e.g. mode of data collection, linguistic & cultural considerations, questionnaire validity, piloting) and evidence-based medicine concepts (e.g. hierarchy of evidence and types of evidence synthesis, reporting guidelines). The Saturday group had a session on literature database searching conducted by the university librarians. The choice of topics was aligned with participants' preferences and needs. The sessions were guided by focused hand-outs without the use of power-point presentation. They were interactive with the use of hands-on activities such as reviewing a cover letter, completing a reporting guideline checklist for a qualitative paper, précising a manuscript etc. The resources shared with the participants included "top tips" from each session, session hand-outs and a list of family medicine journals.

Twenty-one participants, including family medicine physicians, nurses and primary care-based research staff, were recruited. Of the 21 participants, most were female (62 percent) and family physicians (43 percent). Participants reported that they were largely involved in reviews (30 percent) or observational studies (30 percent) followed by qualitative research (10 percent) and had limited research experience. At baseline, seven participants had published a paper in a peer-reviewed journal, two attracted research funding (one exceeding the amount of $50,000) and one had a non-peer-reviewed publication. The participants' aims for the academic writing group included learning primarily how to write for publication with a focus on the appropriate tone, structure and type of study. The participants were also keen to learn how to write research grants, conduct research projects, formulate a research question, critically appraise the literature and choose an appropriate journal. Only one participant presented her writing in the form of a Masters dissertation which included a systematic review (co-authored with another participant from the group) and a qualitative study.

The follow-up questionnaire was completed by 11 participants. Two participants reported winning a research grant, three made progress with their projects, and two embarked on new projects. All participants agreed or strongly agreed that the teaching style was helpful, covered relevant topics, was of appropriate difficulty level and exceeded their expectations. In answer to the question on what they found most helpful about the academic writing group, participants shared that they appreciated the small group format, clear guidance and tips,

diversity of participants, peer support and the atmosphere. Suggestions for improvement included setting up additional meetings such as more academic writing group sessions, a journal club on family medicine topics and longer, full-day courses. Participants also proposed inclusion of examples of published manuscripts, more hands-on exercises as well as assignments.

Finally, the Research Spider data showed significant improvement from baseline in skills relating to research protocol writing, use of qualitative research methods, publishing research, critically reviewing the literature, finding relevant literature and generating research ideas (Figure 2).

DISCUSSION

In the academic writing group comprising primary care staff in Singapore, significant improvement was observed in participants' research experience in most research areas in line with the academic writing group content. Academic writing group participants reported several research successes and high appreciation of this type of training. Their comments convey a need for this type of research capacity building among primary care staff in Singapore.

There are three factors in relation to an academic writing group that we would like to highlight: the attendance, the productivity and the evaluation. To ensure efficiency of academic writing groups, participants' frequent attendance is essential. The University of British Columbia's example showed that the higher writing group attendance led to higher publication rate. However, due to the participants' busy schedules, such commitment may be challenging. For the academic writing group, we polled the participants for their preferred timing and aimed to align the academic writing groups accordingly. While most participants were committed, there were some participants who were only able to attend one meeting. The group structure often changed as we had an open-door policy throughout the duration of our academic writing group in order reach out to as many primary care practitioners as possible. However, to ensure better group's coordination, openness and commitment, it may be more helpful to only include participants attending the initial sessions.

While sharing of research manuscript was encouraged, this offer was not taken up by most participants. The reasons included their manuscript not being ready to be shared or ongoing data collection. The sharing of research outputs was optional in the academic writing group. Literature shows examples of compulsory academic group writing accountability, followed by seemingly greater productivity. In one study, the participants were required to present their writing at each session for peer-review within group.[18] Another study reported using participants' loss aversion by asking them to make a financial deposit which will be forfeited in the event that they did not present their writing.[19] There are also examples of the use of 'action plans' with to-do-lists and deadlines.[5] Greater accountability may therefore be an important feature of successful and productive academic writing groups.

Finally, there is a need for an appropriate way to evaluate the outcomes of an academic writing group. In our evaluation, we aimed to capture both "soft" outcomes such as an increase in confidence, knowledge and competences as well as "hard" outcomes such as number of published manuscripts, active writing projects, posters, presentations, workshops at academic meetings and obtained grants. While the limited duration of the writing group did not allow for major research deliverables, it was encouraging to see several research successes in the group. Other studies on writing groups of lasting more than a year reported increased productivity and more concrete outcomes. A longer duration is key to observe a change in research successes. Fortunately, the participants were eager to continue in the academic writing group. The academic writing group has resumed from October 2017 with some original and new members.

We recognized that there are some limitations to our study. We recruited a small sample of participants who may differ from other primary care staff by enjoying group work and being more committed to research. We were only able to collect follow-up information for 11 participants. Furthermore, as we aimed to align the academic writing group content with the participants' needs, we did not touch on all research areas included in the Research Spider, which may have affected the evaluation. Also, the four months duration of the academic writing group may not be sufficient to observe changes in some participants' experiences measured by the Research Spider (e.g. successfully obtaining research funding). Finally, in our study we used self-reported data to measure the impact on participants' behaviour which may have introduced bias. Future evaluations should include a larger sample, longitudinal data collection and objective measurement of outcomes.

CONCLUSION

Academic writing groups are a beneficial research capacity building strategy that promotes collegiality, collaboration and improvement of writing skills, confidence and output. We have organised an academic writing group in Singapore's primary care setting. The participants reported an improvement in their research knowledge and skills and response was positive towards this type of training. This concluded a clear need and appreciation for this type of academic writing support.

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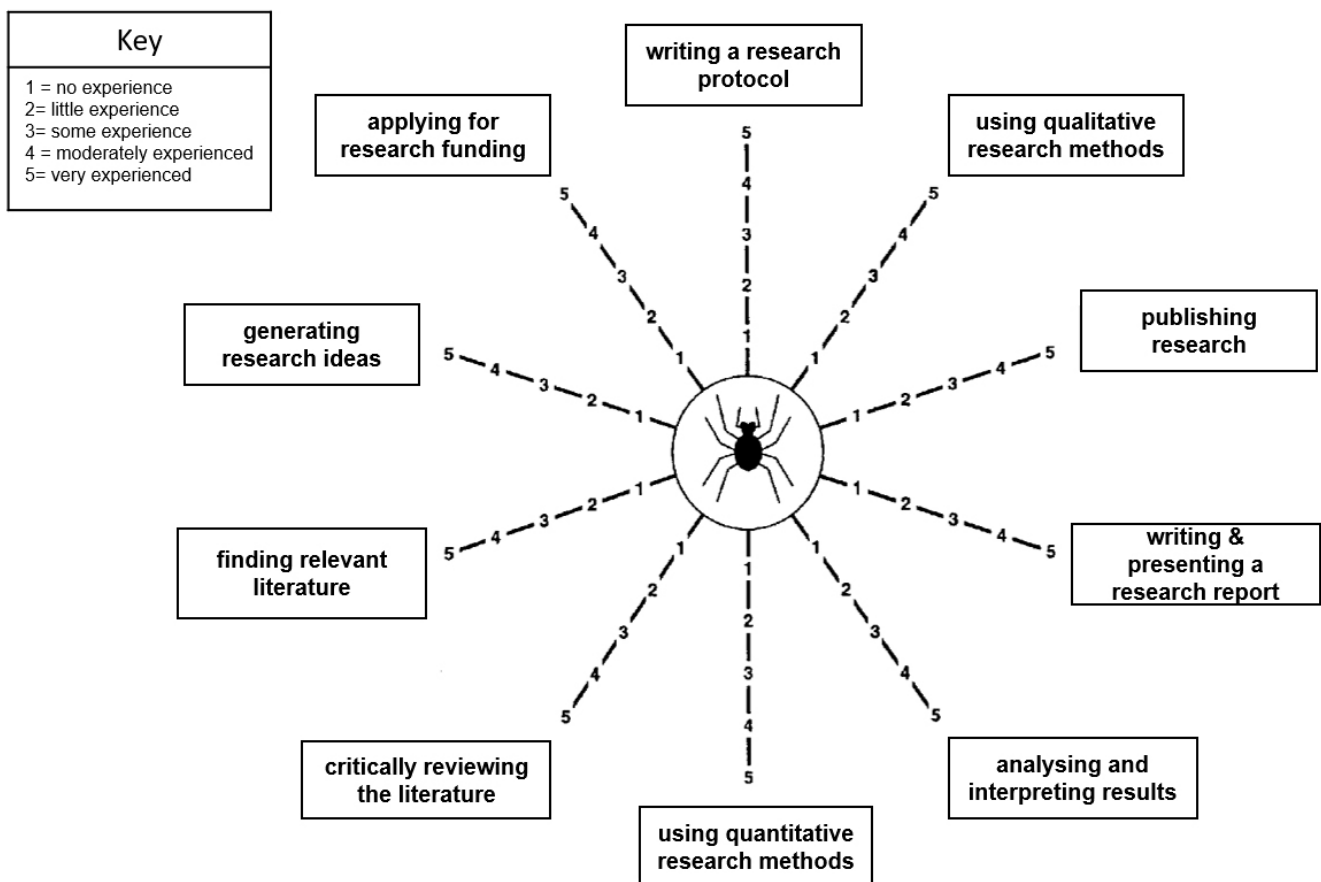
Fig. 1 Research Spider questionnaire

Fig. 2 Pre- and post-academic writing group Research Spider scores