Group Supervision in an Interdisciplinary Research Setting

Pedagogiskt docenturarbete

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Medical research is frequently conducted in an interdisciplinary fashion, with collaborators coming from clinical as well as preclinical settings. With the onset of more advanced research methodologies (most notably the “multi-omics” methodologies), today’s bachelor, masters and graduate students are subjected to a vast landscape of knowledge from many different disciplines. Even so, the current organizational structure is often relatively confined in specific subject fields. One potential downside of this division of research into separate areas is the risk of isolation, thus reducing the potential benefit of an interdisciplinary approach. Bearing in mind the varying nature of projects, as well as the diverse backgrounds of both students and supervisors, this downside may significantly impact the research and research supervision. Many of the students need input from supervisors with a background in statistics, computer science, and bioinformatics in addition to medical science to name a few.

In order to cater to the needs of both supervisors and students, a group supervision strategy has been suggested. At the Center for Disaster Medicine and Traumatology, such a model has been evaluated. The model relies on bi-weekly meetings, where all the available students and supervisors meet for one hour. The meeting starts with general information from the research coordinator, followed by one student giving a short presentation of recent advances in his or her project. Then, each student is given the opportunity to raise questions regarding specific projects or obstacles. The joint supervisor group together with the students try to resolve any issues.

The concept of group supervision has been suggested to address challenges and create opportunities for collective and collaborative research culture (Malfroy 2005). Group supervision has been employed in a wide range of scenarios within the medical field, for instance in the clinical supervision of medical residents and psychologists. As an example, group supervision has been used to strengthen clinical nurses in their profession (Andersson et al. 2013) and studies have reported a positive influence on personal and professional development (Brunero and Stein-Parbury 2008). Other positive aspects of group supervision include multiple perspectives, feedback from peers, fostering more cohesion, and exposure to a greater number of clinical cases (Riva and Cornish 2008). A study published in 2018 analyzed 145 graduate students that either received classic supervision or partook in groups supervision during the first year of graduate studies. The study concluded that group supervision increases
the probability of thesis completion and decreases the time to thesis completion (Agné and Mörkenstam 2018). A recent mixed-model study by Dungey and Bates assessed radiation therapy students’ perception of peer group supervision (Dungey and Bates 2021). After a year of group supervision, the students completed a “Clinical Supervision Evaluation Questionnaire” and answered an open-ended question about the supervision model. Only approximately one third of the respondents had a positive attitude to groups supervision, with the beneficial aspects mainly related to better stress management.

Another study explored group supervision of graduate students in order to address the question of what factors help or hinder doctoral scholarship (Hutchings 2017). Group supervision was found to engage and support students who are feeling academically and socially isolated. In this setting, group supervision was suggested as complementary support to the conventional supervisor–supervisee relationship, and was found to encourage mutual and sustained support between students sharing emotional and practical issues.

A specific group supervision model, and the results of its implementation has been described by Grevholm. The setting in which the model was developed and implemented was the department of mathematics at the Luleå University of Technology in Sweden. Several positive effects of the approach were noted, including general satisfaction of the students, increased experience with research presentation and grant application, as well as the interaction with students from other fields of research (Grevholm 2005).

A group composed of several senior researchers serving as a supervisor group by default includes some researchers to a varying degree distant to any specific subject. As such, their input may be limited to knowledge not directly related to a specific research question. This can in turn result in a loss of focus in a discussion and time being consumed debating superficial details. To some extent this has been observed in the group supervision setting at the Center for Disaster Medicine and Traumatology. Since the trials of group supervision is relatively new, only time will tell if this situation is mitigated as the group becomes further educated in each other’s projects.

Some reports identify the issue of logistics and time constraints in relation to group supervision. In contrast, group supervision has been suggested as a way to mitigate limited staff time and high staff to student ratios (McCallin & Nayar, 2012). Our experience is that time constraints for the group of supervisors many times have been significant. This taken together with the fundamental fact that a group of students most likely takes longer to mentor than a single
student, may render group supervision infeasible. Moreover, some of the graduate students as well as supervisors in our setting have clinical positions, thus significantly limiting their partaking in the group supervision sessions.

Going forward, the group supervision concept at the Center for Disaster Medicine and Traumatology will continue, but will be used primarily as a supplement to the more traditional supervisor-student meetings. This will undoubtedly increase the time spent on active supervision from all involved, but hopefully result in a productive interdisciplinary research environment. The model could potentially be suggested for wider implementation in cross-disciplinary research environments at Linköping University.

In conclusion, there are several positive aspects of group supervision, including reduced stress, increased likelihood of study completion and reduction of time to dissertation. On the other hand, resource and time constraints may limit the feasibility of implementing the group supervision model in many settings.

References


