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RESEARCH ARTICLE

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Experiences of hospital rotation from family medicine residents' points of view an empirical holistic study

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ABSTRACT

Objective: Trainees or medical residents' experiences of hospital rotations and training have not been sufficiently studied. More empirical holistic studies of experiences of General Practice/Family Medicine (GP/FM) residents in Sweden are needed. The purpose of this study was to describe experiences of hospital rotation during residency.

Design: Empirical-holistic study.

Setting: GP/FM residents were invited by email to participate in the study. They could describe their experiences anonymously by answering two questions *via* an esMaker internet survey. Analyses of the responses were carried out with content analysis as the analytical methodology. Both manifest and latent responses were analyzed.

Subjects: Fifty-nine GP/FM residents participated in the study.

Main Outcome Measure: The results identified four main topics: structure, resources, effects, and constructive supervision.

Results: GP/FM residents experienced hospital rotations as effective when there was a structured schedule and adequate time allotted for introduction and meeting patients. Hospital rotations that lacked, or had unstructured, supervision caused uncertainty and insecurity, which led to rotations being experienced as less beneficial, which was, from a GP/FM perspective, not constructive.

Conclusion: The study suggests that family medicine residents required a structured and planned schedule during hospital rotations. This study may contribute to increased quality of hospital rotations during residency as a family physician.

KEY POINTS

Swedish family medicine residents' experiences of hospital rotations have not been sufficiently studied. Hospital rotations with a structured schedule, which included introduction, supervision and feedback, were considered the most beneficial according to residents. However, family medicine residents were often treated as part of the clinic's work force without sufficiently structured supervision or feedback. This experience could have led to uncertainty and insecurity during hospital rotations.

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Family medicine; residency; hospital rotations; education; primary health care

Introduction

In Sweden, the average family medicine residency is five years. Residency in General Practice/Family Medicine (GP/FM) takes place partly at a family medicine clinic, and within hospital-based specialties (hospital rotations). The resident physician works an average of three and a half years at a family medicine clinic, and one to one and a half years in various hospital rotations. Family medicine and hospital rotation residencies imply specific objectives that must be met by the resident physician for approval at these placements [1]. A resident physician works, during the hospital rotation, in adjoining clinics within hospital-based specialties with the guidance of hospital specialist supervisors [2]. Effective training of residents is vital during hospital-based rotations [3,4]. GP/FM residents must understand hospital routines, and be able to identify

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critically sick outpatients for referral to the hospital [5]. It is assumed that throughout resident rotations the GP/FM resident will accumulate the necessary skills to later function as a family physician [6]. However, it is also known that knowledge gained during hospital rotations is insufficient to create a knowledge base for future work as a family medicine physician [7]. As a family medicine resident the most important knowledge is obtained at primary care clinics, while the physician attains essential complementary knowledge from hospital rotations [1]. According to the quality criteria during hospital rotations for GP/FM residents in a region in southwestern Sweden the hospital specialist supervisor should act as a personal supervisor, with responsibility for the resident physician's practical training. Adjoining clinics must be focused on the resident physician's information recovery and skill development from a family medical perspective, as well as maintaining high quality during the learning experience. The supervisors of the adjoining clinics have a responsibility to assure that hospital rotations take place in accordance with the written contract. A written contract is established for each hospital rotation. Results in a study among resident doctors in Germany emphasized the importance of a structured curriculum and the need to develop supervision. This causes a trusting and open learning climate.

[8]. Here, the individual requirements of the hospital rotation, and an agreement on how hospital rotation should be structured, are specified [9]. Clinics throughout Sweden have guidelines for family medicine residents outlining the importance of GP/FM residents having their own patients and an easily approachable specialist supervisor [10].

Different types of supervision are described in the literature, for example, medical student supervision, supervision during residents' hospital rotations, and supervision of doctoral students. A survey among doctoral students who had not completed their research training showed that 40% of these were due to lack of support from supervisors [11,12] Multiple studies have shown that a good clinical supervisor is of crucial importance to educational quality [13]. Strong clinical skills of supervisors are important, but not sufficient. Necessary criteria for a good hospital specialist supervisor are to provide resident physicians with freedom and respect, accept criticism, maintain interest, be available, and provide feedback. Better feedback and support during supervision leads to better qualified physicians in healthcare [14–22].

Literature overviews show that a good hospital specialist supervisor, at different levels of medical training, is characterised as inspirational, supportive, actively engaged and communicative with the residents. This is a recommended definition for mentorship in medicine: provide guidance and feedback regarding personal, professional, and pedagogical development within the framework of a physician's care for patients [23,24].

An important factor for the quality of the residency program is that feedback and mentoring work optimally, both at the home clinic and hospital rotation, so that the GP/FM residents' goals are achieved. According to a study conducted by the Swedish National Board of Health and Welfare (2012) the more common causes to a GP/FM resident being displeased with supervision was insufficient supervisory input, lack of structured feedback sessions or lack of time [25].

GP/FM residents' experiences of hospital rotations and mentorship during hospital rotations have been insufficiently studied within the scientific literature. Studies with an empirical holistic approach of resident doctors in Sweden are needed.

Purpose

The purpose of this study was to examine the experiences of General Practice/Family Medicine (GP/FM) residents during hospital rotations in residency programs. Another purpose was to study the experience of supervision during these rotations.

Theoretical frame of reference

This study is an empirical holistic study with Content Analysis as analytical method [26]. Content analysis is context-free and appropriate to this study, which deals with GP/FM residents' experiences of a phenomenon. The analytical method is not limited but explains the experiences and provides answers to how one can see the phenomenon one has chosen to study. After processing, a certain applicability can be found, but not generalisability. The results can be used to convey information about the studied experience.

Material and methods

Empirical holistic approach. Analysis of the text was performed using content analysis [26].

Selection

Resident physicians in family medicine employed at public and private family medicine clinics in a region in southwestern Sweden received an email invitation to participate in the study. The email addresses were

obtained from ST-forum (a web platform with information for and about resident physicians) to 342 resident physicians. An email contained the inclusion criterion of experience of at least one hospital rotation, which meant approximately 270 residents. The invitation encompassed a diverse group of participants, including both native and non-native individuals of both genders from rural and urban backgrounds. This group consisted of Swedish and internationally trained physicians with experience in hospital rotations across various specialties, including Internal Medicine, Emergency Medicine, Gynaecology, Paediatrics, Psychiatry, Ear-Nose-Throat, Dermatology, Ophthalmology, and Orthopaedics.

Data collection

GP/FM residents received a link to an esMaker questionnaire. The first question concerned consent to participate in the study. If the GP/FM residents did not consent, they were not included. Those who answered in the affirmative then received two questions to answer freely in running text. The GP/FM residents were asked to describe their feelings and thoughts concerning their experiences in relation to their expectations. Participants were informed that responses were anonymous and could not be linked to a person or workplace, and that the answers were treated so that only those with authorisation could partake of them. Fifty-nine answered the first question about consent to participate in the study and, of these, all answered the next two questions by describing their experiences. No one dropped out.

> Question 1: Consent to participate in the study.
> Question 2: Describe your experiences of hospital rotations.
> Question 3: Describe your experiences of supervision during hospital rotations.

Data processing

The whole text was read multiple times to gain a feeling of its entirety.

Meaning units, relevant to the questions, were condensed. These condensed meaning units were then coded and grouped in categories that reflected the main message. These categories formed to manifest the content. Finally, a theme was formulated where the latent information from the interviews appeared according to Graneheim & Lundman [26].

Results

Fifty-nine resident physicians in family medicine replied. Four main themes were identified from the data collection**: Structure, Resources, Effects, Constructive supervision.**

Structure

Structured and customised schedule

Many GP/FM residents experienced increased insight into hospital-based specialties and perceived them as well-organised. Residents were also allowed sufficient time for reflection. There was an established structure for welcoming the GP/FM residents to the clinic, and the remaining staff was informed that a new physician was arriving.

> What was good was that there was time for adequate shadowing and structure.

> A good system for welcoming us GP/FM residents.

Relevant patients

Many GP/FM residents experienced an even balance between acute and planned patients, and that they were assigned relevant patients with a moderate difficulty level, thus providing a sound perspective for primary care work.

> The planned visits were on a moderately difficult level.

> Good to select "primary care patients".

Unstructured or lack of plan

Resident physicians also had experiences of clinics that had neither a plan nor introduction for the residents. Several residents experienced that clinics failed to follow The Swedish National Board of Health and Welfare's guidelines for the GP/FM residents.

> The clinic seemed unstructured and ineffective. It was frustrating that everything was so unstructured. Didn't seem that anyone knew what we should take back to primary care, or better said, no one took responsibility for seeing that we were on the right track.

> Some failed to meet guidelines or goals.

> When a hospital-based specialty clinic residency is unstructured, one can be exploited, and it is very hard to be heard, in my opinion.

Be seen and involved

A welcoming and professional atmosphere meant a faster and easier start. When responsibilities were increased, they were not perceived as overwhelming due to support and supervision within the organization. When the hospital specialist supervisor met with the residents before hospital rotation began, it was considered advantageous to confirm rotation goals.

> The size of the clinic guaranteed a good connection and a feeling of being seen. A feeling of belonging and trust was established when given responsibility, allowing for growth in my physician's role and an opportunity to acquire new knowledge.

> Greatly appreciated that the supervisor arranged to meet before the placement, felt seen as a person recognising qualities and goals for the placement.

Resources

Labor

Many residents felt exploited at their residencies. Experiences such as being left alone at their hospital post, or having responsibility for an entire ward were reported. Hospital ward placements were described as noncontributory toward what a GP/FM resident needed to learn.

> The general attitude was that the GP/FM residents were a resource to be exploited to the fullest regardless of capability. There remain many things which must be reconsidered and improved.

Responsibility

Some resident physicians described excessive responsibilities. Some had contacted the hospital clinic and received routines and documents to be read beforehand. Their ambition was also to gain access to colleagues' knowledge through good relationships. The willingness to take responsibility by being sociable and self-sufficient contributed to the easier acquisition of new knowledge. This in turn affected well-being in the workplace, which also contributed to the acquisition of knowledge.

> I invested time to socialise and talk to the hospital-based doctors.

> Generally, one has to take responsibility to make the most of rotations.

Mental strain and downgrading

Many GP/FM residents experienced rotations as stressful and felt pressed for time. Some received difficult schedules and could not partake in discussions and relevant lectures arranged at the clinic. It could also be difficult to adapt to the new environment and some felt unwelcome. Some GP/FM residents experienced uncertainty within the staff concerning the educational level of the GP/FM residents. Experiences that tasks were too basic were reported. Sometimes physicians on multiple levels needed to 'fight' over patients, though medical students often got to pick patients first.

> Felt like a professional student, not a resident level physician.

> I experienced the tempo as too fast, changing "workstations" each or every other week due to different hospital ward placements, ER department, and the out-patient clinic. However, the days went quickly most of the time due to treating patients, learning to take initiative to make the work patient-safe, and then the day was over.

> Not so much time for reflection. I had developed stress symptoms by the end (of the rotation).

Effects

Professional development

Many GP/FM residents felt that placements met their expectations. They felt updated and more knowledgeable in the specialist field. Through increased self-awareness the residents became more confident, more self-sufficient in their duties and developed professionally.

> Have gotten better at making decisions when referring patients to the hospital.

> Have gotten more confident and can better assess the general condition of patients.

Disappointment

Several GP/FM residents felt they learned little, and that the placements failed to reach their expectations. They described the placements as miscalculated, disappointing, and wasted time, failing to provide the residents with what they needed.

> There have been many different types of hospital rotations: most involved observation at some specialist clinics. But at some specialist clinics you were included in the work schedule and expected to work as an intern.

> A lot of primary care questions remained unanswered during my hospital rotation, questions I had hoped would be answered.

The residents' perceptions of moderate shadowing were preferred, neither too much nor too little. Prolonged observing risked passivity. It was not uncommon for the resident physicians to shadow, but then, in but a few cases, have their own patients. This decreased responsibility and lowered motivation.

> It was almost all observation. Actually I had no patients of my own causing me to become quite passive.

> At some hospital rotations it wasn't possible to have my own patients or duties, so motivation decreased.

> There was more just observing than I would have hoped for.

> Rotations allowing me to work alone were generally more rewarding than those where I just observed.

Constructive supervision

Recurring and instructive supervision

Several residents experienced receiving recurring and instructive supervision. Supervision was described as structured, and included regular support and feedback. Many described the supervisor as engaged, and motivated, inspiring confidence.

> Had my own patients with good supervision. Wow! Great specialist supervisor.

> I had an extremely meticulous supervisor at one of my hospital posts and his way of teaching suited me like a hand in a glove.

Poor supervision

Some specialist clinics had no organised structure for resident supervision, and some never even met their supervisor during the entire period. This led to a lack of supervision, becoming a mere formality to an uninterested specialist supervisor. Sometimes the specialist supervisor was stressed or otherwise negative. There were residents that had experiences of having to fight for a supervised session, only to have the session cancelled without warning. Several lacked supervisory time because of understaffing, which lead to feelings of insecurity and of being left out.

> Above all, hospital rotation became a joke because the specialist supervisor wasn't interested in recurring supervised sessions.

> Always a specialist supervisor on paper, but not in practice for all hospital rotations.

Access to supervisory colleagues

Even during hospital clinical work the residents described a varying number of pleasant/knowledgeable/helpful/competent colleagues to ask for advice on how to handle patient cases. The residents felt they needed greater self-sufficiency, while also having access to a specialist supervisor.

> When it came to opportunities for supervision in patient cases and so on, I asked whoever was available at the time. I think it could have been done better.

> For the most part I think we doctors are good at "taking care of one another."

Discussion

Statement of principle findings

The GP/FM residents experienced rotations as informative when there was a structured schedule with adequate time for shadowing/observation. There were also possibilities for having their own suitable patients from a primary care perspective. Some residents had experiences of being placed on a hospital ward, implying considerable administrative work. With a lack of resources, the residents were considered part of the work force, which was stressful, and meant that learning was not as effective as expected. Formative assessments were rewarding when recurring and performed by an engaged and motivated specialist supervisor. Non-existent or unstructured supervision caused insecurity and a lack of confidence in clinical work, which led to decreased benefit of the hospital rotation.

Study's strengths and weaknesses

All GP/FM residents in the chosen areas having completed at least one hospital rotation received an invitation to partake in the study. The residents planned their rotations carefully, and the ambition was to gain knowledge and experience throughout the rotations. As this was a qualitative study we could choose to examine all experiences regardless of the number of completed rotations. All experience during rotation was deemed important. Questions concerning demographic information were not asked as this was not considered relevant to the study. This may have also reduced potential anxiousness about being identified and thus decrease reluctance to participate. More questions also risked considerations of residents not having enough time, thus also possibly increasing

reluctance to participate, or dropping out of the study. The residents were encouraged to freely write down their experiences and thoughts instead of being interviewed by a colleague, which increased credibility of the study's results. With this method of data collection, the risk of the residents adjusting their experiences was minimal. At the start of the study the GP/FM residents from a smaller area were invited to participate, but since replies were short in relation to an interview text in qualitative studies, residents from two more areas were invited to participating in the study. Later, when the text was analyzed there was enough relative data even in the short responses from the first studied area. The merit of the larger material was that the study's data contained experiences from more GP/FM residents from multiple hospital rotations.

The study's limitations were that the data was collected from a limited area in southwestern Sweden, and only residents training to become family practitioners were included in the study. The results cannot be seen as generalisable within areas other than those studied but add new perspective and knowledge. The results of a qualitative study such as this creates new questions on the subject.

Findings in relation to other studies

Structure

For many GP/FM residents hospital rotations provided them with knowledge that would allow them a sense of security as family physicians. Crucial for developing knowledge was a well-organised and structured workplace [27]. Experiences gained in such a workplace provided relevant knowledge from a primary care perspective, leading to personal development, knowledge, and skills needed in the process of becoming a family physician [9]. Essential to enhance residents' learning and motivation at a clinic is to have clear and concise goals. Important aspects of a well-functioning workplace that accepted physicians during their studies are: an organised environment, and cooperation and leadership. Access to the clinic staff's competence and experience and participation in social practices and activities have significance for student development [23,28].

Resources

This study showed that many GP/FM residents had experiences of being considered personnel. Reasons for this was a lack of resources, but also poor organisational structure. Not having experienced personnel by one's side caused a feeling of abandonment and having to deal with difficult situations on their own. Earlier studies show that development occurs when the resident is involved in the clinic's work and can take responsibility but can also discuss with an appointed supervisor what was experienced in the clinic [28]. This study showed that if the residents worked together with an experienced and competent colleague the chance for learning and development increased. It could be beneficial to engage in clinical work in Sweden for physicians attending medical schools outside of Sweden since medical systems vary in different countries. Despite some poorly organised workplaces some residents showed extra interest and engagement in hospital rotation resulting in a more rewarding hospital rotation experience. Results of this study match earlier studies showing that student attitudes and outlooks affect the quality of their hospital rotation experience [29].

Effects

This study showed that when a specialty clinic failed to plan appropriate patients in relation to primary care level, expectations of the GP/FM residents were not met. Hospital rotations that were often demanding were seen as stressful, and a feeling of ineffectiveness arose. For learning to occur a hospital rotation needs planning, support, and resources. Earlier studies show that uncertainty and concern should be addressed so that GP/FM residents gain the necessary measure of security and trust. The head of the specialist clinic plays an important role in the planning, active support, and stimulation of the residents to achieve an optimal learning climate [28].

Ellström and Hultman (2004) describe two levels/types of learning conditions, development and adaptation. Development-orientated learning conditions are characterised by the absence of prediction, method, task and results. However, there is a possibility for the individual or team to decide how work should be carried out. Adaptation-orientated learning conditions are characterised by the opposite. The specialty clinic's head, as well as the student's interest for learning, interact [28]. Sometimes it is difficult for less experienced colleagues to gain access to those patient groups optimal for learning. One reason can be that experienced physicians take over while those less experienced adopt a more passive stance. Another reason can be that those less experienced stand back, failing to show that they would like to treat the patient in question. It is not enough that the resident is active, it is also important that the specialist clinic is organised so that residents are invited to actively partake in

working with experienced colleagues [28]. Individual desire and will are prerequisites to learning [28].

Constructive supervision

Many GP/FM residents experienced their supervisors as engaged and driven, which created a strong environment for growth in the role of a future family physician. Formative assessments were positive if they were structured, occurred regularly and contained feedback. This matches earlier research, which shows that an effective supervisor is characterised as inspiring, supportive, actively involved and has good communication with the GP/FM residents [30–32]. If a supervisor is skilled within the medical knowledge area, and in addition is effective, dynamic and supportive, it is viewed by the residents according to earlier studies to form the model for their professional role [23]. Formative assessments that were poorly organised were seen as meaningless [33]. Research shows that the single most important factor for effective constructive supervision is the quality of the relationship between the specialist supervisor and GP/FM resident, and supportive and effective assessments led to a more qualified physician. A necessary qualification for the specialist supervisor is to be straightforward so that residents are aware of their strengths and weaknesses. It is also important that the residents have control over the assessment [29,31]. To find sufficient time for supervision was shown in studies to be a common problem, which needed to be continually dealt with. Clinic-based teaching, which implies direct teaching by a colleague, has, in some studies, shown to be effective [28,33]. In this study, it was shown that available and competent colleagues occasionally compensated for the absence of a supervisor. Earlier studies have shown that a sound environment for clinical training focuses on development of non-cognitive attributions such as motivation, teamwork and self-discipline.

Knowledge-seeking workplaces that search for new challenges are also associated with a good clinical climate [23]. Future research needs to be focused on the development of non-cognitive attributes in the supervisor and resident. An area that needs further investigation is the supervisor's attitude toward his own mentorship [24,29,31].

Meaning of the study

Research about GP/FM residents' experiences of hospital rotations has been sparse, and the results of this study can hopefully contribute to conceivable implications. The results offer a greater perspective of how residents within family medicine experience their supervisors' assessments during hospital rotations. Clinics that are well organised with a satisfactory learning climate, engaged supervisors with adequate time for their assignment, have a lot to gain. This allotted time benefited patients, but also affected the necessary cooperation between specialist and family medicine clinics. This study has hopefully highlighted the developmental potential of supervision and raised new research questions.

Conclusion

General Practice/Family Medicine residents experienced hospital rotations as effective when the specialist clinic had a well-structured schedule. Having their own well-chosen patients, which were suitable for a GP/FM resident, furthered learning. Due to lack of resources the GP/FM residents were utilised as full staff members, which was, from a GP/FM perspective, not constructive. Constructive supervision was rewarding when occurring regularly by an engaged and highly motivated supervisor. Nonexistent or unstructured supervision contributed to insecurity and uncertainty in the practical work, which led to a less rewarding rotation.

Many GP/FM residents experienced how, during their hospital rotations, they gained new knowledge and became more self-assured, which led to professional development as a future family physician. This study may contribute to a higher quality of hospital rotations during residency as a family physician. The results can be useful to the chosen specialist clinic and the teacher, as well as the educational supervisor.

This study can contribute to knowledge development in hospital rotations for GP/FM residents and generate new qualitative and quantitative research questions in the area.

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Additional information

The study is not a clinical trial. The study is registered in FoU I VGR number: 142821. FoU in Västra Götalandsregion | FoU I Västragötaland's regionen (researchweb.org)

Disclosure statement

No potential conflict of interest was reported by the authors.

Necessary ethical approval

Participants were informed that their answers were anonymous, could not be connected to a person or workplace, and that the answers were treated so that only those with authorisation could partake of them. The first question in the study was whether participants consented to participate in the study. The participants gave their approval to participate in the study digitally. They could only participate in the study once. The procedures were in accordance with the ethical standards of the committee responsible for human experimentation, and with the Helsinki Declaration of 1975, as revised in 1983.

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