

Utilisation d'exercices de réflexion sur des cas par des résidents

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RÉSUMÉ

OBJECTIF Exploration qualitative de l'expérience de résidents en médecine familiale qui ont utilisé des exercices semi-structurés de réflexion sur des cas comme moyen d'apprentissage.

TYPE D'ÉTUDE Étude qualitative à l'aide d'entrevues en profondeur.

CONTEXTE Programme de résidence en médecine familiale de la Memorial University à St. John's, Terre-Neuve.

PARTICIPANTS Diplômés du programme de résidence ayant participé à un projet où ils devaient effectuer des exercices de réflexion sur des cas comme façon d'améliorer l'apprentissage.

MÉTHODE Des entrevues en profondeur ont été effectuées auprès de diplômés qui avaient utilisé les exercices de réflexion durant leur formation postdoctorale. Tous étaient en pratique active. Les enregistrements des entrevues ont été transcrits intégralement. L'analyse thématique s'est poursuivie jusqu'à l'obtention d'une saturation.

PRINCIPALES OBSERVATIONS Cinq femmes et 3 hommes ont été interviewés. L'analyse des données a fait ressortir 3 thèmes: effet sur le processus d'apprentissage, effet sur la relation médecin-patient et effet sur l'apprenant.

CONCLUSION Il semble que le fait d'avoir utilisé les exercices de réflexion modifie la façon d'apprendre des résidents en médecine familiale. Trois thèmes principaux sont ressortis: les exercices de réflexion comme moyen de formation continue offrent aux participants une stratégie pour continuer leur apprentissage durant leur pratique; ces exercices proposent une vue différente de la relation médecin-patient, dans laquelle le médecin doit chercher des indices pour en arriver à une meilleure compréhension; ces exercices amènent l'apprenant à mieux se connaître en découvrant certaines de ses qualités. Ces stratégies de réflexion sont pertinentes pour tout médecin qui cherche à incorporer des connaissances et une compréhension nouvelles dans leur pratique. Les ouvrages scientifiques sur l'apprentissage encouragent de telles stratégies et cette étude confirme que la réflexion sur des cas est une méthode d'apprentissage idéale pour le médecin de famille.

POINTS DE REPÈRE DU RÉDACTEUR

- L'apprentissage par réflexion consiste à réfléchir sur les expériences passées pour en tirer des leçons. En encourageant une analyse soigneuse et une meilleure compréhension, les exercices de réflexion écrits sont susceptibles d'aider à faire le lien entre l'expérience clinique et les plus récentes connaissances.
- L'apprentissage par réflexion est de plus en plus utilisé dans la formation continue; cet article en vérifie l'utilité durant la résidence en médecine familiale. Même si cette étude portait seulement sur des problèmes de santé mentale, les participants croyaient que ce type d'exercice était efficace pour plusieurs des questions qui se posent en pratique.
- La pratique de ces exercices de réflexion durant la résidence en médecine familiale peut amener le médecin à utiliser ce mode d'apprentissage dans sa pratique future.

Cet article a fait l'objet d'une révision par des pairs.
Le texte intégral est aussi accessible en anglais à www.cfpc.ca/cfp.
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Residents' use of case-based reflection exercises

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ABSTRACT

OBJECTIVE Qualitative exploration of the experience of family practice residents in using semistructured case-based reflection exercises as a learning medium.

DESIGN Qualitative study using in-depth interviews.

SETTING Memorial University's Family Medicine Residency Program in St John's, Newfoundland.

PARTICIPANTS Graduates of the residency program who had taken part in a pilot project that involved completion of case-based reflection exercises as a medium for enhancing learning.

METHOD In-depth interviews were conducted with graduates who had used the reflection exercises during their postgraduate training. All participants were in active practice. All of the audiotaped interviews were transcribed verbatim. Thematic analysis continued until saturation was reached.

MAIN FINDINGS Eight interviews were conducted that included 5 women and 3 men. Three themes emerged from the data analysis: effect on the learning process, effect on the patient-doctor relationship, and effect on the learner.

CONCLUSION The experience of using the reflection exercises appeared to affect how family practice residents learned. Three major themes emerged: the reflection exercises as a continuing education process offered participants a strategy for future learning in practice; the exercises offered a different perspective on the patient-doctor interaction that had doctors looking for cues to deeper meaning; and the exercises engaged the learners in a reflective process that revealed qualities about themselves that gave them personal insight. These reflective strategies have relevance for all physicians in their attempts to incorporate new knowledge and understanding into their practices. Similar dimensions are articulated in the educational literature, and this study supports the usefulness of case-based reflection as a catalyst in the education of family physicians.

EDITOR'S KEY POINTS

- Reflective learning is the exercise of thinking about experiences retrospectively in order to learn from them. Written, reflective exercises can help to bridge the transition between clinical experience and current knowledge by encouraging thoughtful analysis and deeper understanding.
- While reflective learning is being increasingly used in continuing education, this paper explores its usefulness in family medicine residency. Although this study was limited to mental health issues, participants thought that reflective learning exercises were effective for many issues that emerged in practice.
- Reflective learning by family medicine residents can form a foundation for future learning in their medical practices.

This article has been peer reviewed.
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Reflection has become a dominant issue in the literature regarding professional learning.¹⁻⁵ The writings of Schon³ and Kolb⁶ prompted educators to emphasize understanding how adults learn. Professional colleges and licensing authorities, particularly in the health professions, have focused their attention on how professionals maintain and enhance their knowledge.^{2,7-10} The emphasis on continuing education has filtered down into training environments at the undergraduate^{5,11,12} and postgraduate^{4,13} levels. In health education, and family medicine in particular, the experiential nature of the learning process demands that attention be paid to how the learners extract meaning from their experiences.¹³⁻¹⁵

Reflective learning is the exercise of thinking about experiences retrospectively in order to learn from them.^{11,16-18} Reflection can build greater understanding of the experience, thus helping learners incorporate new information into their existing knowledge.^{4,17}

Written reflection, in the form of a retrospective learning exercise, can help to bridge the transition between clinical experience and existing knowledge by encouraging thoughtful analysis and deeper understanding.^{7,8,14,16,18,19} Similar tools include personal diaries, critical incident reports, portfolios, and autobiographies.^{11,14,18,20-22} Obstacles to reflective learning include lack of teacher commitment, lack of trust within the educational environment, and ethical dilemmas that emerge as learners are encouraged to reveal personal issues.^{4,17,23,24} Reflecting on one's work is an essential component of family practice. Educational programs at all levels struggle to discover effective strategies that promote reflection. This case-based exercise, designed initially as a method of learning about mental health issues, became a catalyst for deeper reflective learning that extended beyond residency training into practice.

The purpose of this study was to gain understanding of family medicine residents' experiences of using case-based reflection exercises.

METHODS

Case-based reflection exercise program

The Family Medicine Training Program at Memorial University introduced a case-based reflective exercise to help integrate lessons from behavioural science and psychiatry. Each resident was expected to complete a mandatory 10 case-based reflective exercises in his or her 2-year program. Each exercise focused on a clinical

case that captured the resident's attention and contained a behavioural or psychiatric dimension. Each learner identified a question from a clinical situation, researched it using a variety of resources, summarized the research, and then considered future application of the new knowledge. The clinical situation could be drawn from any clinical rotation. Each entry was limited to 1 written page.⁹ Residents submitted their case-based reflection exercises to the program director. The process included peer discussion halfway through the first year. A total of 57 residents were involved in the program.

Study design

The design involved qualitative in-depth interviews exploring residents' experiences doing case-based reflection exercises. A qualitative method was selected to best capture the real experience of the participants, their views and perceptions, in using this educational tool.^{25,26} At the time of the interviews, participants had graduated and were in practice. Purposive sampling was used to deliberately include a maximum variation sample with respect to sex, experience, opinion, and years in practice since completing the reflective exercises. Residents whom we knew had expressed negative comments as well as those who had positive comments about the reflective exercise process were invited to be interviewed. Similarly men and women were invited; and those who had recently completed residency as well as those who had been in practice for 2 years. This built sample diversity to improve data robustness.²⁵ Participants were personally recruited by the first author (C.B.). Participants were not compensated. Ethics approval was obtained through the Human Investigation Committee of Memorial University.

Data collection

The interviews followed a semistructured interview guide and were audiotaped. The first author conducted the interviews and completed field notes. The interviews were transcribed verbatim. Each transcription was considered in depth before the next interview was undertaken in an iterative process. Saturation was considered to have been achieved when no new themes were introduced in the interviews. This occurred after 8 interviews and was what determined our final sample size.

Examples of questions that were used to explore participants' experiences included "Would you give me an overall impression of the diary?" "How did using the diary exercise change how you viewed a particular case or situation?" and "What did reading or writing about this case offer you beyond the patient encounter?"

Data analysis

Using crystallization and immersion techniques,²⁷ both researchers analyzed the data independently. Transcripts were read in detail by both researchers, who searched

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and coded themes that emerged. Following several independent readings the researchers came to an agreement on themes. Further rereading and immersion in the data resulted in a conceptual framework that captured the themes in a coherent process.

FINDINGS

Eight interviews were conducted over 2 years. Seven of the participants were in practice when the interviews took place. One participant was on maternity leave. The length of time in practice varied from 3 months to 2 years. Three men and 5 women participated.

Three major themes regarding case-based reflection exercises emerged from the analysis: effect on the learning process, effect on the patient-doctor relationship, and effect on the learner.

Learning process

Several issues emerged about the learning process itself. At the outset it was seen as time-consuming and a burden. Participants had not been given additional time to complete the exercises, which were added to an already overfull curriculum: "I'll be honest, starting out it seemed like something added to my to-do list; ... it was a bit of a weight about my neck that I carried around."

Once participants attempted some reflection exercises, they described how, in spite of the extra work, they valued the experience. As one participant noted: "when I actually did them, and particularly when they were real issues and real problems that I really wanted to know the answer to, then I really did get a lot out of it."

How did participants choose their cases? They universally chose situations that were somehow different and had meaning for them. Meaning was construed in different ways. Meaning could relate to the learner's desire or need to know something relevant for future practice: "Doing my reflective exercises helped me learn things that were of interest to me and that I felt I was going to use when I got into practice." For others meaning was related to the clinical situations that were more personal and compelling: "I wanted to do things that were outside of what would be normal everyday experiences, ... the ones you struggle with, ... with no algorithm." Most participants found that the type of cases or questions they chose to write about changed over time: "My cases changed through residency, or at least my reflection on them changed. You started off more medical and you developed the ability to find the issues, and then you reflect on those."

Learners gradually embraced the exercises as they became more comfortable identifying and pursuing their own learning issues. This effect appeared to linger beyond residency training. Many participants described how the exercises became a practical learning tool that

could be applied to other areas beyond behavioural issues. This gave them not only a method of identifying their learning issues but also a structured way of thinking about, researching, synthesizing, and organizing knowledge relevant to their patients.

[T]he reflection exercise would be a good teaching tool for us...to look at all those things inside a certain framework;...are there questions that I can ask to help me solve this? ...I do it when I'm dictating;...you have to tell a story and you can't just jot down an outline....I have to be thinking, "What's my next step?" and I have to summarize...just to help myself, so I'm doing the reflective exercises every day.

Effect on patient-doctor interactions

The exercise appeared to affect interaction between participants and their patients. In completing the reflective exercises, participants looked for more in each patient encounter, reaching for hidden or poorly defined issues. This perhaps could be referred to as "depth of field."

You go through medical school and residency, and all you deal with is the medicine, the facts, and the treatments. Sometimes I think you forget everything else about the people and that they have lives....The diary brought me back;...it opens you up a bit so you look more broadly, and then you realize there is more. There always is. I always thought it was kind of funny: people would come in with a complaint but really they'd want to talk about something else. I never really believed that, ... but in practice it is true, it is completely true.

Participants commented on their lack of appreciation of the nature of family practice during their residency training. The reflective exercise gave them a "little window on practice" that they fully understood only once they were in practice.

I'm just amazed by all the family dynamics. My mind is racing to follow the different things that are going on there. If you didn't ask the questions, you wouldn't really know, you wouldn't have found out;...it's just the tip of the iceberg, ...it's not just that one case. So many others where you know that something else is there which, as a family doctor, you're going to have the privilege of actually trying to find all that out.

Interestingly, one participant thought that doing the reflective exercises during his clinical rotations outside of family medicine provided an ongoing link to family medicine: "[w]hen you're doing those other rotations, especially in your intern year, you're not doing family

practice largely....This keeps you [connected] to the family practice side of things;...even though you're doing medicine or doing obstetrics,... you're still thinking family practice."

The knowledge participants gained from reflection, research, and writing appeared to make them more confident in their relationships with patients. For example, it enhanced their ability to listen and to value this aspect of their professional work: "I don't remember doing anything too wrong....I probably just listened...because I didn't feel comfortable with what to say....But then you learn after you do all the reading [that] a lot of the time all you need to do is listen. So you realize...that what you're doing is the right thing."

Effect on learners

This final theme was linked to participants' growing confidence in their skills as physicians and an emerging sense of who they were as professionals. One participant thought that the reflective exercises helped her grasp the nature of the relationship with her patients she now enjoys in her practice as a family doctor. Participants described how their attention to their patients and to issues emerging from the encounters gave them a feeling of continuity with the patients that extended beyond the first encounters. They gained a greater recognition of the complexity of people's lives and had a newfound respect for the role they might have as family doctors in attending to these people as patients: "I feel a bit more well rounded;...maybe I'll be able to help someone in a way that I definitely wouldn't have been able to do before. A bit more versatile:...maybe I'm just not so afraid to venture into areas I really don't know much about."

Many participants explained how they discovered something about themselves and what interested them in medicine, with a better definition of the kinds of practices they would enjoy. They appeared more confident in finding their professional and perhaps personal identities after engaging in this exercise: "I'm finding I know what I want to look up now, stuff that is really important to me."

The second dimension of the effect on participants was the incorporation of a professional ethos, feeling the responsibility of a family physician who "goes to bat" for his or her patients by attending to challenging issues and taking responsibility for acting as a resource to patients: "I found myself on a critical playing field where this is serious; this is something that is affecting me; ... if this patient leaves without understanding,...I'm not going to feel good about that."

One participant, a mother of 2 small children herself, disclosed the effect of one exercise on her own fears of sickness and death. This prompted her to face some serious issues and discuss them further with her spouse.

She also described a faith in the process the reflection exercise offered her, to go with greater confidence into unknown and frightening situations:

[E]veryone hopes they never do, but I'm going to have patients who are going to be terribly sick, going to have small children; they're going to be dying and eventually die....When they are sitting in front of me,...what do I do?... I thought a lot about that case, and I actually spoke to my husband about it...what does a family do? It's just unbelievable....I read about death and dying for terminally ill children....I read a lot...I got a better sense of the bigger picture,... all the things I mentioned with the mother and the children. I got some sense of comfort;...now at least [I] know how to approach things a bit better.

DISCUSSION

Case-based reflection exercises appear to affect residents' learning processes. The exercises influenced their ability to extract relevant questions from their clinical experience and then to research and reflect on their questions in ways that enhanced their confidence as physicians. Engaging in the case-based reflection exercise affected patient-doctor relationships and gave the learners new insights into the complexity of patients' lives. This different way of seeing patients affected the physicians themselves in both professional and personal roles.

The outcome of case-based reflection exercises was appreciated by the learners because it came from their own experiences and put them in control of their learning. This self-direction in learning is the cornerstone of effective adult education and increasingly the focus of the transition between the learning needs of undergraduate and graduate students.^{1,10,13,28} Incorporating evidence from the literature encourages students to read more widely and gives them a process to ask and answer questions in practice, integrating new with the old.^{8,11,17,29} Writing and presenting to peers enhances this learning experience, as they must synthesize their conclusions.^{11,16,18,29} This process is recognized as a way to deepen learning and promote change. Feedback and discussion with peers or mentors invites further exploration and refinement of concepts.¹² Case-based reflection exercises are an effective education strategy.^{2,9,10,21} In residency training programs where learners can be some distance from the training centre, finding methods to stimulate and document both effective case-based learning and the capacity for reflection is a constant challenge. This format is a pragmatic strategy to assist trainees in their thinking and reflection on their experiences in order to develop as professionals.

These steps of identifying learning needs and having an organized mechanism to research and synthesize new information is also an identified need in continuing education wherein practising physicians struggle with ways to translate new knowledge into their practices.¹⁰ Participants in this study could have an important strategy to assist them in their future continuing education. This study might also illustrate a mechanism for increasing reflective practice in continuing education as a strategy in family physicians' knowledge transfer into practice.

Case-based reflection exercises also helped learners look for more in the encounters beyond the initial "offer"³⁰ of the patients, seeking other factors that influence their understanding of patients. Case-based reflection appeared to encourage this depth perception, as these learners had not yet looked at patients through the eyes of a family doctor. Participants reflecting back on the process thought the reflection exercise helped catalyze this perceptual change. Hiemstra¹⁸ refers to this new knowledge as attention to one's intuition or tacit knowledge. Others, such as Epstein³¹ and Novack et al,³² suggest that the learners begin to see the situation with greater clarity or "mindfulness" as they attend to many nuances within their patients and themselves that enrich their understanding of the relationship.

Case-based reflection exercises enhanced self-knowledge through an understanding of what interests participants in practice, what caught their attention and made them think. Reflection exercises somehow altered their perception of the clinical encounter, contributed to their appreciation of the complexities of their patients' lives, and facilitated emergence of their own personal and professional identities.²⁸

The 3 themes that emerged from this study parallel those articulated by others, such as Hiemstra¹⁸ and Mezirow¹ who, in the education literature, discuss the effect of reflective writing on the learner. They identify 3 levels of learning as synthesis, new knowledge, and personal growth. Literature on using case-based exercises to promote reflective learning in family medicine, however, is limited.¹³ Use of a case-based method in clinical practice appears to have multiple benefits for learners in their maturation as professionals.


Case-based reflection exercises have limitations. The literature addresses the need for time dedicated to reflective learning.^{9,13,16,18,25} The potential for the reflection process to catalyze new ways of thinking is achieved through trusting learner-mentor relationships that model how reflective learning contributes to growth of a professional.^{17,28,33} The essential components of a reflective learning environment include role models, commitment to the educational exercise, and time.⁴ Our own experience echoes the need for greater teacher involvement as audience, mentor, and role model to this learning

process. Inadequate attention to building these components into the process could have limited the effect of reflection exercises in our program.

The limitations of this study are that it was limited to 1 residency training program and was a retrospective recollection of an educational experience. The conclusions, therefore, could be limited to the specific context and experience. The first author not only conducted the interviews but also was involved in creating the case-based reflection exercises and materials, and this involvement could have introduced bias into the interviews. It was the process of case-based discussion, however, that made the first author aware of the different dimensions of this approach and stimulated her exploration of how this exercise affected learners. Her close relationship with participants made her aware of the learners' struggles to complete the exercises. Finally, the presence of a "trusted other" as the interviewer could have increased the participants' willingness to reveal important personal issues that were integral to the reflective process. Her role as the witness to these experiences modeled the importance of the role of mentorship in the process of reflection.

CONCLUSION

This study suggests that case-based reflection exercises affect learners in at least 3 ways. Exercises help them enhance their clinical knowledge, contribute to greater understanding of the patient-doctor relationship, and provide learners with personal insights as they develop as professionals. We have come to understand through this study how case-based educational exercises could be enhanced with the opportunity for guided discussion with a trusted teacher or peer.

This educational tool or strategy using case-based reading, writing, and reflection on issues pertinent to the learners has much broader application in medical education. Although limited to mental health issues in our setting, participants thought that this strategy was effective for many issues that emerged in practice. This tool therefore has relevance at all levels of medical education where we must integrate new knowledge into our daily practices leading ultimately to improved quality of care. 

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Contributors

Dr Bethune recruited subjects, conducted interviews, and took field notes. Both **Drs Bethune and Brown** conceived and designed the study, analyzed the data, and prepared the manuscript for submission.

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