

Seeing the Other: How Residents Expand Their Perspective by Learning With the Arts

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ABSTRACT

Background Engaging with the arts can enrich medical education by fostering transformative learning, reflection, and a holistic view of the patient.

Objective To explore the development of professional competence of residents in prolonged arts-based medical education.

Methods We followed residents (n=99) of various specialties as they engaged in arts-based learning through creative and reflective assignments such as painting, sculpting, and formal analysis. Participants were interviewed about their learning process and experiences, one-on-one and in small groups, by independent researchers using short, semistructured interviews. We used grounded theory to inform an iterative process for data collection and analysis over the course of 3 years (2016-2018).

Results Seven themes were constructed, which showed that (1) slowing down education provides room for reflection; (2) absence of judgment and rules sparks experimentation; (3) engaging with emotions fostered reflection and motivation; (4) the artists' methods provided a perspective change; (5) a holistic view on the patient emerged; (6) residents understood the need to take control over their professional development; and (7) there were barriers to overcome in terms of hierarchy and expectations. Our investigation shows that interns and residents undergo a perspective transformation. Key to the development of the physicians in training is the open and affective nature of the arts in education.

Conclusions Arts-based learning results in a new perspective for physicians in training in line with patient-centered health care and self-directed learning.

Introduction

Over the last decade, medical schools reformed their programs to better prepare future physicians for the complex field of health care.¹ It is important for physicians to develop professional competency in terms of being adaptive, reflective, and sensitive to the context of the patient.¹ Arts-based pedagogies may aid in developing this competency.² The value of arts-based pedagogy for current medical education reforms can be understood in relation to 2 different concepts: (1) self-directed learning and (2) patient-centeredness.

Self-directed learning involves critical reflection, adaptivity, and proactive problem-solving behavior.³⁻⁵ Increased autonomy and responsibility makes students engage in critical reflection.⁶ The open attitude and reflective skills integral to self-directed learning are also crucial for patient-centeredness. Patient-centeredness means seeing the person in their broader

social context instead of medicalizing them and having empathy.⁷ Fostering an educational culture that embraces a more holistic perspective on the patient requires rethinking its core concepts like quality of care⁸ and human-centeredness.^{9,10} To bring about such change, many medical education institutes see a role for the arts.¹¹ Arts in medicine programs may contribute to this path by bringing about critical and reflective learning processes.¹²⁻¹⁴ We therefore explore the value of arts-based pedagogy in this study.

Arts-based learning has the ability to establish more democratic environments in which the learner's and teacher's knowledge and skills are seen as different but equally valuable.¹⁵ As such, arts-based learning is closely related to self-directed learning, promoting learner ownership, authenticity, and practice-based learning.¹⁶⁻¹⁹ Due to its potential for openness, perspective taking, and critical thinking, arts-based learning taps into intelligences that are valued in medical education.²⁰⁻²²

Research on arts-based medical learning focuses on 3 areas: (1) observation skills; (2) patient-centered care; and (3) personal development and well-being.²³ First, arts-based medical learning improves pattern recognition, for instance in interpreting x-ray images

DOI: <http://dx.doi.org/10.4300/JGME-D-22-00140.1>

Editor's Note: The online version of this article contains an overview of the Art of Seeing for Healthcare Professionals, the questionnaire, interview guidelines, and coding categories used in the study. The addendum to this article is created by the artist Rob Johannesma.

and recognizing facial expressions.²⁴⁻²⁷ Second, arts increase openness to other perspectives, the capacity to cope with ambiguity,²⁸ and consideration of the wider patient experience,^{26,29,30} thus humanizing practice.²⁰ Third, engaging with artistic processes makes students explore their own feelings which fosters personal development and well-being.³¹⁻³⁴ Students develop self-awareness, experience stress reduction,^{14,25} and build psychological resilience.³⁵

For decades, the arts have been used to aid medicine in dealing with human concerns in the widest sense.^{36,37} However, many studies on arts-based medical learning tend to focus on only one outcome measure or have a limited timeframe, and may therefore miss out on critical and reflective learning processes. So, we want to explore in depth how medical students learn and develop professional competence, specifically regarding attitude and skills,¹ when they engage with the arts and artists themselves for a longer period of time. Our research question is: *How do senior medical students and residents develop in terms of professional competence in prolonged arts-based medical learning?*

Methods

Setting

The Radboud University Medical Center is located in Nijmegen, a city in the eastern section of the Netherlands. It is 1 of 8 academic hospitals in the Netherlands, and combines health care, research, and education. The Radboud University Medical Center houses the medical faculty of the Radboud University and is responsible for initial to postgraduate medical training. Around 12 500 employees and 3300 students learn and work here.

The extracurricular learning track The Art of Seeing for Healthcare Professionals (TASH) combines arts and medical learning.^{38,39} TASH took place on 8 consecutive Saturdays, in the artists' studios, museums, and other off-campus locations. It extended on the format of observing artworks during museum visits³⁰ by having participants join artists in their arts practices (see online supplementary data for an overview of the track). For more information about the contents of TASH and first evaluations, we refer to 2 previously published articles.^{38,39}

Participants

TASH was followed by 32 (2016), 30 (2017), and 37 (2018) interns (master's students in their senior year, around 80%) and residents (specialists in training, around 20%), who voluntarily signed up after recruitment through internal communication in the institute and an informational meeting. Internal

Objectives

To explore the development of professional competence of residents in prolonged arts-based medical education.

Findings

The residents underwent a perspective change in line with self-directed learning and patient-centered care.

Limitations

Overcoming hierarchy is difficult, even in an arts-based learning setting.

Bottom Line

The value of arts-based learning in medical education lies in embracing art as valuable in itself.

communication involved messages on a digital message board accessible to all interns (n≈1300) and residents (n≈100) in the hospital, of which the headline is automatically included in a notification email. The information meeting aimed to motivate potential participants by sharing results of other arts-based programs in terms of empathy and observation skills.

Design

In this study we employ qualitative research methods informed by a constructivist paradigm. We used elements of grounded theory methodology for data collection and analysis, namely iterative data collection and steps of the coding process, informed by Starks and Brown Trinidad.⁴⁰⁻⁴⁴ We used transformative learning theory and arts-based learning theory to further structure our analysis. We performed this study in 3 consecutive years (2016-2018), making it possible to iteratively gather data and perform analyses.

Data Collection and Analysis

During the workshops, participants (n=99) were interviewed one-on-one and in small groups. These short interviews, along with group reflections during the day, were audio recorded and transcribed. Identifying information was removed before analysis. The process of gathering data through multiple short interviews allowed for member checking in subsequent interviews. We included a pretest and posttest of skills and experiences in 2016 and 2017 (online supplementary data). The answers to the 2017 questionnaire were used as a narrative framework for the interviews.

Since data collection took place over 3 years, we were able to analyze parts of the data to inform subsequent collection and analysis. We explored aspects of participants' professional attitude and skills (see interview guidelines in the online supplementary data).¹ The first interview questions focused

Activity	2015 sem2	2016 sem1	2016 sem2	2017 sem1	2017 sem2	2018 sem1	2018 sem2
Set-up interview							
Questionnaire							
Interviews							
Open coding							
Axial coding							
Selective coding							

FIGURE**Visualization of Research Activities^a**

^a Timeline of research activities. Questionnaires were used to construct interview questions. Stages of open and axial coding were used to further specify the interview questions.

Abbreviation: sem, semester.

on expectations and learning goals in 2016. In 2017, we asked about reflection on medical practice and the participants' personal leadership (ie, Till et al⁴⁵). In 2018, we explored hierarchy and openness in the workshops, and transferred what was learned in TASH to medical practice. The FIGURE provides a visualization of the research activities.

In a qualitative and iterative research design, data saturation is an indicator of the validity of the results. Data saturation is reached when no new information or codes relevant to the research objective emerge from the data, and when the analysis has resulted in a comprehensive narrative without leaps or gaps.⁴³ Upon reaching this point for the interviews and group reflections, we stopped transcription. We selected 36 out of 103 recordings for transcription. Some of the recordings were not audible, contained random conversations, or (in 2017/2018) provided the same information we already had.

Three authors (T.W., R.R., J.K.) open coded the 5 first recordings using ATLAS.ti. After this, they discussed the codes until consensus was reached. Following axial coding strategies, this resulted in 254 codes divided over 17 code categories. These codes and code categories were used for further analysis of 5 recordings and discussed by 4 authors (T.W., T.S., R.R., J.K.). More codes were added, which led to the addition and shifting of code categories, resulting in 31 code categories. These code categories were used to alter the interview guidelines to dive deeper into themes that came up during analysis. These interviews were transcribed to inform the final stage, selective coding. Again, in this stage we discussed the outcomes of the process. The final codebook is shown in the online supplementary data.

Reflexivity

T.W. is a researcher in the field of higher education and has a background in educational sciences and philosophy of behavioral science. T.S. is a PhD candidate in transformative learning and arts-based

research. G.J.W. is head of the department of health technology assessment and a coaching participant in the TASH program. R.R. has a background in philosophy and health technology and is director of the biomedical sciences master's program. Both G.J.W. and R.R. are major stakeholders in the medical faculty's educational programs. J.K. has a background in philosophy and neuroscience and, together with the hospital's arts committee, initiated and set up TASH, and participated as a coach.

Ethical Considerations

Participants of TASH received an email with information about the research 1 week before TASH started and were asked to consider participation. On the first day, they received the information on paper and could sign informed consent if they wished to participate in the research project.

The protocol for this study was approved by the ethical review board of the Netherlands Association of Medical Education.

Results

The codes reflect the learning mechanisms present in this track of workshops and can be divided in 7 themes: time and space, openness, emotion, multiple perspectives, the other, proactive learning, and barriers (TABLE). Below we elaborate on the themes and the relationships between them.

1. Time and Space

Leaving the rigor of the weekdays behind is not easy, but participants commented that the workshops, located in different venues, helped them to do this. The practice of medicine is often experienced as rushed, without much time to reflect. The education method of the workshops is based on artistic methods, which involve playing, letting go of preconceived ideas, having the courage to fail, and encountering other perspectives. This way of working helps participants to slow down. *"With courses like this and practice like this, you learn to think differently [...] and you can take your time. We are not in a rush."*

Many of the assignments, like observing a work of art, have a 10-minute duration, causing the participants to reflect on the standard time they have with patients. What normally seems like a limited amount of time now seems like a wealth of opportunity to both listen to a patient's story and be conscious of one's own frame of reference. Another time dimension is the duration of the track. Having the track take place over a longer period of time also helps to

TABLE
Themes and Descriptions of Arts-Based Medical Education

Theme	Description
1. Time and space	Describes processes in which participants reflect on what they have done earlier and relate this to insights of the workshop. Also deals with thinking about the future self as a physician.
2. Openness	Different kinds of openness can be distinguished as a character trait of the participant, developing a growth mindset, open or experimental thinking in the workshop and related to medical practice.
3. Emotion	Describes feelings of confidence and self-efficacy, as well as motivating emotions such as liking things, being positively challenged, or surprised by emotions that come up during the workshop.
4. Multiple perspectives	Describes how participants are confronted with other perspectives or actively seek other views or others' way of looking at things, inspired by the artist's perspective. Also includes observation skills such as looking in more detail or holistically.
5. The other	The theme describes developing a sense of relatedness to patients and understanding more about the context of the other. The other can be different kinds of persons, including peers, artists, supervisors, or patients.
6. Proactive learning	Refers to understanding how learning situations can be created by setting out goals or by actively reflecting. It also includes the understanding that transfer to practice needs proactive behavior.
7. Barriers	Participants can show unhelpful behavior such as narrow-minded thinking. Other restrictions for learning can be a hierarchical or negative learning environment or medical practice.

expand perspective: *"If you would do that only once, the whole effect would be less. Because we do this for several weeks, a number of sessions after each other, you can think it over and view things from another perspective."*

2. Openness

The open structure of the program and letting go of learning objectives means that participants must abstain from thinking in terms of "good" and "bad." For some, this comes as a breath of fresh air: *"This is what I missed in the bachelor program [...] there was no course to help you think freely."* During one assignment about categorizing dozens of photographs of tribal shields from Papua New Guinea based on patterns and other similarities, participants were desperate to know whether they had done a good job, as if it had been a contest. Although the artist pointed out characteristics of different tribal shield coloring traditions, he admitted not being sure himself about many of the shields.

The artist explained how the tribesmen themselves only discriminate between "our tradition" and "not our tradition," which is the one meaningful distinction to be made from their perspective. The participants concluded that they had been directed by their own frame of thinking, dominated by a desire to separate correct from incorrect. This leaves a profound impression on participants: *"I will try to implement more often that it is alright to do it another way, not entirely according to other people's standards, slightly different from the mainstream."*

And *"I think it is fun to just let go and see what comes up when I think about it freely, and not try to comply with demands I set for myself in advance."* One participant said: *"Here, it's more about 'Oh, let's try something' and then you arrive at completely different things than you would in your normal education."*

3. Emotion

Many of the activities of TASH tap into emotions, which help the participants to reflect on how they usually do things. For instance, some participants had trouble putting the first line on paper during a drawing assignment (see photos in the online supplementary data), commenting that they are afraid the line would be wrong: *"I have an idea of what I want to put on paper, but something blocks me..."* The participant reflects on this with peers: *"I didn't have an eraser, so everything you draw stays like that."* Participants comment that they recognize this fear for failure in their medical training. They explain that this is a combination of their own perfectionism and the pressure of medical practice: *"You have to be the best, you can't make any mistakes because lives are at stake."* Later, the participants loosen up: *"I finally don't feel the urge to do everything perfect anymore."*

Sometimes exercises triggered personal or professional issues. This is particularly visible during the final workshop, when the participants create a story about a personal secret with pictures from an archive (see photos in the online supplementary data). They share intimate stories about divorced parents, the

grief of losing a childhood pet, and other fears and frustrations. A focus on affect (ie, the experience of emotion and emotional influence on behavior), sharing stories and room for organizing their thoughts helped participants cope with emotions they faced during their internships. *“During the track I noticed that I felt much more relaxed the days after the meeting, I felt less tired, and I could organize my thoughts much better. This helped me enormously during my internships.”*

4. Multiple Perspectives

Participants realized that not everyone sees things the same way and understands the importance of moving beyond platitudes. For instance, during a visit to the Van Abbemuseum participants were asked to find art works that had the label *“Untitled,”* to look at each one of them carefully, describe them and come up with a title (see photos in the online supplementary data). *“We were looking at the same thing, but saw something completely different. Why is that?”* They also experience the difficulty of putting their observation into words: *“It was actually very difficult to describe the entirety of that painting.”*

Participants later reflect on the intricate relationship between language, perspective, and emotion. They share their doubts about their own communication with patients: *“I realized that also when I see my patients, I tend to project my own feelings onto them.”* Participants discuss that having different perspectives, a different understanding of the world, and jargon may put a barrier between the physician and the patient.

5. The Other

By interacting with others, new learning processes may emerge. In traditional education, every student has to reach the same learning objective, regardless of the person they are or the talents they have. This leads to disregard the potential of *“otherness.”* The arts bring otherness to the surface as a major source for self- and frame reflection. For instance, it helps participants understand that different perspectives may reflect truth, and allowing for pluralism can be valuable to person-centered care: *“We may see the same pictures with a completely different association, but if you keep that in mind and voice it to the patient [...] I think that is one of the key things we learned today.”*

Participants voice a deepened understanding of how important it is to really listen to the patient and make time for them. *“I think you can make a really strong connection with that [art] [...]. It's like what you do with patients, of course, you have to make a*

connection with them too, even only briefly, otherwise I don't think you can help people.” Participants share their experience with peers and discuss transfer to medical practice, realizing that perspective taking is difficult but crucial for understanding patients.

6. Proactive Learning

The format of the workshops allows for a stimulating learning environment, in which the participants can set their own learning goals and explore things they value. Teachers and artists influence how the assignments are approached by participants: *“Sometimes I wouldn't strictly follow the assignment and then I thought I should feel guilty, but the artist would come up and say it's alright like that.”*

It was sometimes difficult for participants to grasp ownership over their own learning. We asked them to prepare the final meeting which resulted in doubts: *“I have no clue about what the intention is for this final meeting and what the goal and reason behind it are. That makes it difficult to organize something.”* Participants gradually realize that they are in a self-directed learning environment and need to make an effort themselves if they want to learn things that are valuable to them: *“You can come here of course and think that this is something fun, something new, something different. But if you add to that an instinct for thinking like, ‘What can I really get from this and what do I want from this anyhow?’ Well, that will definitely add another layer.”*

They link this to medical practice, and see how they will have to take control of their own learning to grow professionally. *“What is it all about? It is about developing myself and becoming a good doctor in the way I think is right and fits me.”* Medical practice and the very system of working is not an abstract thing but depends on and consists of the very actions of people working in it: *“We do it to ourselves.”*

7. Barriers

Participants dealt with some barriers in the transition to a more self-directed learning environment, in which they experienced an entirely new way of working and thinking. During workshops, participants struggled to break free from their old habits and medical protocols. Insecurity, false expectations, and pressure plagued them even when they were far away from medical practice. When we gave participants a journal for writing down their impressions, some of them commented: *“That's difficult for me. I would feel pressured to write something down.”* When we enthusiastically shared our experiences from the year before the new participants told us: *“The previous*

edition was amazing, and we feel that now it has to be like that again.”

In TASH, teachers and artists tried their best to help participants overcome the mindset of obligations and pressure. However, reading back through the transcripts we did find that even in an open education environment it was difficult to overcome hierarchy. For instance, a coach says: “*Residents, do you recognize the need for space in your mind? Because you are the experienced ones...*” After that seemingly innocent remark the master students refrain from partaking in the conversation for a while. In general, coaches have difficulty not taking the lead during plenary sessions. However, they do become co-learners because they participate in the artists’ assignments as well. Although hierarchy persists under the surface, participants do view the learning environment as more open to vulnerability: “*What art does to you is actually something special. Because it is not accepted for doctors: to be vulnerable or show your weakness.*”

Discussion

This research project shows that during a 2- to 3-month period the participants in arts-based education undergo a perspective transformation that makes them reconsider what kind of physician they want to be, particularly with respect to their patients.

Three main principles of the learning environment are of crucial importance: openness, increased autonomy, and room for emotion. The openness is co-constructed by the artists, who approach the participants in a way that differs from what they are used to in their regular learning environment. This difference has to do with high levels of improvisation and creativity and presupposing that students of all levels have the ability to excel.⁴⁶ The open nature of the program empowers participants, so that they dare to question themselves and their thinking in line with previous findings^{25,47} and in line with theory on slowing down education.⁴⁸ At the same time, it was challenging for participants to let go of patterns such as hierarchy or pressure to perform. The track had no predefined learning goals, so as to increase learner autonomy. This approach was new to the participants and they eventually described it as “*liberating.*”⁴⁹ The liberating experience led to proactive learning behavior, which aligns well with the concept of self-directed learning.⁵⁰

Another distinguishing feature of the track is its focus on affective learning (ie, understanding the influence of emotion on the learning process). Supervisors and artists would mitigate insecurities by asking questions and sharing their own experiences, which helps learners understand more about

themselves as persons and as future medical professionals.⁵¹ In doing so, participants become role models for one another as lifelong learners.⁵² Moreover, this enhanced participants’ sensitivity for the context of the patient. The track thus helped participants reflect on patients beyond an empathic understanding per se, namely toward “*epistemological multicompetence.*”⁵³ It means that participants develop an understanding of and a true interest in others’ personal decisions and conceptualizations and how all of that matters to practicing medicine.⁵⁴

The value of the arts in medical education goes beyond a means-to-an-end approach to curriculum development. The artistic process provided space for perspective taking and reflection on the self and professional practice. The collective learning experience participants go through during the track may be best framed as a perspective transformation. Transformative learning is instantiated by a “*disorienting experience,*” or at least a confrontation with a different perspective that clashes with one’s worldview.⁵⁵ In a transformative learning process, the layer of personal identity that forms an interaction between one’s core identity and social environment is challenged.⁵⁶ As such, transformative learning and professional identity formation go hand in hand.⁵⁷ The arts hold a unique position in setting this kind of learning in motion.^{53,58,59} These transformative learning experiences can also have an emancipatory nature with regard to patients and their perspective. Johnson-Baily and Alfred argue that inclusion can be reached through transformative learning.^{60,61} The current study shows that through prolonged arts-based medical learning, reflection on emotion and perspective taking are promoted. Expanding on the voluntary and extracurricular nature of this track, it will be interesting to find out how our design can be transferred to different settings, to build a body of evidence on the value of arts-based learning.

Both a major outcome and difficulty of this study was that participants found it challenging to let go of certain patterns in medical education and practice, which involve hierarchy and dependency on junior employees.⁶²⁻⁶⁴ At the same time, many of the participants appreciated the atmosphere that felt more safe and open than they were used to. Still, future tracks should invest in understanding more about hierarchy and breaking down hierarchy in medical education, and how the arts may help in this process.¹⁵ More research could be conducted on ways the arts encourages self-directed learning and its relation to perspective taking.⁶⁵ At the same time, one should be constantly aware of the pitfalls of goal orientation in design, given that one of the major strengths of this arts program, paradoxically, was that

it was not “meant for anything,” embracing art as valuable in itself. This realization is important to ensure its value.⁶⁶

Conclusions

Our study shows that (1) openness in arts-based learning sparks experimentation and perspective taking; (2) residents understand the need to take control of their professional development; and (3) engaging with emotions fosters reflection and motivation, in line with self-directed learning and patient-centered health care.

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Funding: This study was partially funded by Mondriaan Fonds/The Art of Impact (Dutch Ministry of Education, Culture and Science) under grant number 101914119.

Conflict of interest: The authors declare they have no competing interests.

This work was previously presented at Onderwijs Research Dagen, Nijmegen, the Netherlands, June 13-15, 2018.

Many people were involved in the project, and the authors would like to thank everyone who had a small or large role, because this project is a great example of the value of interdisciplinary research and education. The track has been made possible by the art program of the Radboud University Medical Center, Radboudumc Health Academy, Radboud University, and Mondriaan Fonds/The Art of Impact. The education program was very thoughtfully facilitated by Let Geerling and Marscha van Benthum. The authors would also like to thank the program initiators: Let Geerling, Jan Keunen, Jur Kokksma, and artists Hans Aarsman and Roy Villevoey; the coaches, among others: Baziel van Engelen, Anne Speckens, Martijn Stevens, Gert-Jan van der Wilt, and Ton Rijke; the artists for their support and inspiration: Hans Aarsman, Ruth van Beek, Agi Haines, Rob Johannesma, Frank Koolen, Lernert & Sander, Johan Rijpma and Carola Rombouts, Jan Rothuizen, Roy Villevoey, and Wouter Wijers. Last but not least, the authors express their gratitude to the participating students, nurses, patients, and residents for sharing their learning journey.

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Received February 11, 2022; revisions received July 8, 2022, and October 25, 2022; accepted October 26, 2022.