Role modeling in clinical practice: A whirlpool around master and apprentice in lifestyle interventions for obesity in general practice

van der Leeuw, Ria

Citation for published version (APA):
Chapter 1

General Introduction
General Introduction

In order to become a professional capable of treating patients, a trainee physician receives guidance from a master physician in a master-apprentice relationship, a practice that has existed since the fifteenth century. This clinical trainer functions as a role model for the trainee, that is, as “a person considered as a standard of excellence to be imitated.” Although educational methods have changed over time, role modeling remains an important component of professional development. Role modeling in medical education is especially important in helping the trainee with the transition from student to colleague, facilitating the trainee to establish a professional identity and to work in accordance with all written, and especially all unwritten, rules, regulations, and customs. This thesis provides insight into the role modeling of clinical trainers in general and of general practitioner (GP) trainers, in particular regarding the treatment of obesity.

Theoretical background

Irby (1986) described role modeling as a powerful teaching technique and the primary teaching strategy of clinical education. Irby's description helped us understand how trainees become professionally competent.

To make effective observational learning accessible, Bandura (1989) developed his social cognitive theory and described the four steps that are involved in the observational and modeling process from observing a role model to using that observation as a guide for action:

- Attention: Attentiveness to what has been modeled.
- Retention: The ability to store information.
- Reproduction: Imitating the behavior that has been modeled.
- Motivation: Becoming motivated, in which reinforcement plays an important role.

This process is reciprocally influenced by environmental, behavioral, and personal factors (Figure 1). Bandura’s theory provided us with a basic model on the role modeling process to further build on, using our results.
Eraut (2000) analyzed informal learning in the workplace. This is important, because working alongside others allows people to observe and listen to others, and to gain some sense of other people’s tacit knowledge. Eraut explained to us how workplace learning leads to professional development.

More recently, Stegeman and colleagues (2012) distinguished between theoretical and practical knowledge. Trainees acquire the latter – that is, “professional knowledge and competence” – by observing their trainers as models, followed by a personal interaction between master and apprentice. These scholars argue that one should view clinical workplace learning as an interactive master-apprenticeship model that encompasses modeling and feedback as natural educational routes. This is not a static but an ongoing interaction between trainers and trainees, because there is doubt that there is a homogenous set of values, norms, and behaviors within the medical profession. The results of Stegeman’s study allowed us to better analyze the ways in which “phronesis” (practical wisdom) is conveyed from role model to trainee.

**Local context**

In order to work independently as a GP in the Netherlands, a physician must complete three years of specialty training at one of the country’s eight institutes for GP specialty training. During the first and the third year of this training, each trainee spends three or four days a week working at a GP practice, where he or she is supervised by at least one GP (the clinical trainer). In their second year, trainees work in a variety of clinical settings. Throughout the specialty training, they spend one day a week following the education program at one of the institutes for GP specialty training. The program is taught by GPs and behavioral scientists (all of whom are referred to as ‘teachers’, not to be confused with trainers).

Figure 1. Social learning theory according to Bandura: Observation, reinforcement and imitation.
Each year, the clinical trainers attend eight teach-the-trainer days at the same institute as the trainee, in the expectation that these educational interventions of Continuing Professional Development (CPD) and/or Faculty Development (FD) will improve the quality of the trainees’ training in clinical practice.

Although previous studies\(^8\)\(^-\)\(^10\) have led to agreement on the importance of training the clinical trainers as teachers, it is not known whether training them as role models will be effective.

A CPD combined with an FD subject can be effective, however, according to the self-evaluation of the trainers after earlier interventions.\(^11\)\(^-\)\(^14\) Because a combined intervention takes into account the already known barriers that GPs face, such as the limited time available and the need to update medical knowledge,\(^11\)\(^,\)\(^12\)\(^,\)\(^14\) we chose a field of medicine in which professionals encounter difficulties in acquiring the correct competences — namely the treatment of obesity\(^15\) — to convey the FD subject, that is, role modeling.\(^1\)\(^-\)\(^7\)

**Obesity**

Overweight (or ‘pre-obesity’) and obesity in clinical practice are assessed by the Body Mass Index (BMI), which is calculated as body weight (kg) divided by height squared (m\(^2\)). Overweight is defined as a BMI of between 25 and 29.9 kg/m\(^2\), and obesity as a BMI of \(\geq 30\) kg/m\(^2\).\(^16\) Overweight and obesity are associated with serious health problems predisposing to cardiovascular diseases, diabetes mellitus type 2, certain cancers, musculoskeletal disorders, sleep apnea, and reproductive and psychological health problems.\(^16\) In the Netherlands in 2012, overweight prevalence in adults (\(\geq 19\) years) was 53.0% for males and 43.7% for females, and obesity prevalence was 11.3% for males and 13.9% for females.\(^17\) Over the previous four years, the increase had been flattening. The overweight prevalence in children and young people (2-21 years) continued to rise and reached 14% in 2010.\(^18\) A recently published study in the Netherlands showed a stabilization of the prevalence of overweight and obese children, but the numbers vary in children of different origin.\(^19\)

According to several studies,\(^16\)\(^,\)\(^20\)\(^-\)\(^22\) GPs are in the best position to treat obesity because of the easy access they have to and for their patients and because of the continuity of their contacts. Patients perceive GPs as a reliable source of weight management information,\(^21\) and 68% of patients agree with the statement that GPs can give unsolicited advice about their overweight.\(^22\)
GPs, however, face multiple barriers in providing obesity treatment, for example a lack of time, a lack of evidence-based treatment, a lack of treatment skills to address their obese patients, and the perceived lack of patients’ motivation.\textsuperscript{20,23} The personal characteristics of GPs – such as their age and their BMI (or change therein) – also appear to be related to their weight management policy.\textsuperscript{23,24} GPs who have a healthy BMI and therefore act as positive role models for their patients, will more frequently diagnose and treat obese patients\textsuperscript{23} and have more credibility among their patients.\textsuperscript{24}

Guidelines\textsuperscript{25,26} have been developed to support GPs in executing their task of treating overweight and obese patients. Furthermore, a new intervention strategy has been introduced to break down some of the barriers. This program – the Minimal Intervention Strategy for Obesity (MISO)\textsuperscript{15} – is based on an evidence-based model for obesity care in primary care (the Counterweight Programme\textsuperscript{27}) and short evidence-based interventions to help patients stop smoking, and uses patient educational materials.\textsuperscript{28} Because the MISO can be used during normal GP consultations,\textsuperscript{15} we chose to use it for our educational intervention.

\textit{Aim of the research}

The objective of the research reported in this thesis was to gain insight into 1) the influence of the clinical trainer as a role model for the trainee, and 2) methods to improve this role model function, especially in relation to the treatment of overweight and obese patients. We therefore set out to:

- Study what influences the trainee to become competent in providing lifestyle interventions for overweight and obese patients.
- Analyze how the clinical trainer, as a role model for the trainee, influences this process.
- Explore how to improve role modeling in clinical practice, in order to optimize the growth of trainees into their future role as independent and competent professionals who are capable of providing high-quality patient care.
- Evaluate the effectiveness of an educational intervention (combined CPD/FD courses) to improve the role model behavior of the trainer.
- Investigate whether this process can be effected by providing feedback on the role model behavior of the trainer.
Outline of the thesis

Chapter 2 Because there is a growing epidemic of obesity despite an increase in attention to and guidelines on reducing the problem, we focused on the trainees to study how the barriers and attitudes of the GP toward weight management arise. In our first study, we explored the factors influencing the willingness and ability of GP trainees to provide lifestyle interventions for overweight and obese patients by using focus groups with trainees and trainers.

Chapter 3 Building on the results of our first study, we assessed the influence of the clinical trainer as a role model on the trainee and, if possible, to find a way to improve the role model behavior of the clinical trainer. We therefore reviewed the literature to identify the attributes characterizing clinical trainers as role models for the trainees.

Chapter 4 We used the attributes identified in the literature review to develop and validate a tool to assess the role model behavior of the clinical trainer. Using the ability to evaluate the clinical trainer as a role model, we tried to improve the trainer’s role model behavior in two ways: by training (Chapter 5) and by using feedback (Chapter 7).

Chapter 5 We first tried to improve the role model behavior in lifestyle counseling for obesity by using an educational intervention: a combined CPD/FD course. For the CPD part of the course, we chose the subject of a new method of treating obesity in clinical practice. For the FD part, we chose the subject of conveying this new knowledge and an appropriate attitude to the trainee. After the CPD/FD course, we evaluated its effectiveness.

Chapter 6 Because of the relatively negative results of the intervention described in Chapter 5, we conducted a qualitative study. We used semi-structured interviews with GP trainers and their trainees to gain insight into the factors that influence the conveyance of the new competences that were acquired in the CPD/FD course, from master to apprentice in the clinical training practice.

Chapter 7 Finally, we tried to improve the role model behavior of the clinical trainer by means of personal feedback on their scores as provided by their trainees, and for reference compared these scores to those of the trainer’s peers.
Chapter 8  In this final chapter, we use the results of the previous chapters to give an outline for the further implementation of the assessment tool for role model behavior. We also explain how to use the “whirlpool” around the master-apprentice relationship to improve future conveyance in the clinical training practice. Finally, we give two recommendations: One for future research – namely to develop a gold standard – and one for future education, that is, to develop a “masterpiece” for the trainee in becoming aware, as a GP, of being a role model for patients, peers, and students.
References


24. Bleich S, Bennett WL, Gudzune KA, Cooper LA. Impact of Physician BMI on Obesity Care and Beliefs. Obesity 2012;20:999-1005.


