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## Peer influence in clinical workplace learning

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# Chapter 1

## **Introduction**

*During lunch, when we meet each other... everybody always talks about what they did that day. And I noticed [laughs]... that I am eager to find out what the others are doing... I really pay attention to that bit, as though it is very important, because... I measure myself against them... And I think, the others are doing this too, because... otherwise they would not talk about it that much, discussing it every day.*

*Tjitske, student*

The above quote from an undergraduate medical student illustrates the tendency of students in clinical practice to compare themselves with peers. By saying 'I measure myself against them', the student also reveals some of their reasons for doing so. Students' use of social comparison is studied in this thesis about peer influence in clinical workplace learning. Before presenting the main argument and research questions, this chapter provides information about significant developments in clinical workplace learning to contextualize this research, and explains some of the main topics of social comparison theory.

### **Clinical workplace learning**

Students in clinical practice have to learn, apply and develop their professional competences in a real-life clinical context. This essential part of their training towards becoming doctors is deeply rooted in medical education. The current system can be traced back to the early twentieth century, when Flexner presented his critical report about medical training.<sup>1</sup> His recommendations inspired the organization of medical education into two main periods, a preclinical and a clinical one. The preclinical period was designed to ground medical practice in science and to teach students the scientific basis of medicine prior to its practice. The following clinical period was meant to demonstrate the art of medicine and to teach students how they could master their knowledge to the benefit of real patients.<sup>2,3</sup>

Today's clinical workplace learning is still based on the principle that the student has to spend time in a practice to become a competent doctor. However, views and understandings of this period have undergone significant shifts. One of the major changes in clinical workplace learning is the introduction of competency-based education. Many clinical programmes implemented this type of education to meet the standards of modern society for accountability and professionalism in healthcare professionals.<sup>4-7</sup> Competency-based

programmes are driven by defined outcomes which have to be mastered by the end of the programme. The emphasis on learning outcomes has increased interest in student learning activities.<sup>8</sup> Modern perspectives on clinical workplace learning, therefore, not only think about learning as the primary outcome of teaching but consider student learning experiences as a whole.<sup>9,10</sup>

The attention to the students' actual experiences opened up the sheer complexity of clinical workplace learning.<sup>11</sup> In medical education research, several social learning theories are introduced to frame this comprehensive learning process, such as the ideas of situated learning,<sup>12</sup> communities of practice<sup>13</sup> and other models of learning at work.<sup>14</sup> Within these views, student learning is inextricably tied to its context and occurs through active participation in clinical activities like patient care. Newly introduced qualitative research methods expanded the possibilities for studying all aspects of students' learning. Several studies using these techniques provided detailed descriptions of how students' learning is shaped by their interactions with patients, residents and staff.<sup>10,15-17</sup> However, little is known about the influence of student interactions with fellow students, or peers.

Students engaged in clinical practice frequently exchange their experiences with one another, as is illustrated in the quotation at the beginning of this introduction. These exchanges can be relevant to the students' learning because the acquired information can be used to evaluate their own activities or estimate their future performance. A better understanding of this use of one another's experience could reveal the influence of peers in clinical workplace learning.

### **Social comparison**

In most clinical practices, students frequently meet each other: on the ward, during handovers, in the corridors, in the clerks' rooms etc. They tend to observe each other, exchange experiences and relate their own performance to that of their peers. This common behaviour is known as 'social comparison'. The concept of social comparison has its origins in Festinger's 'A theory of social comparison processes'.<sup>18</sup> His work and that of other theorists who contributed to his ideas is used to explore and explain the influence of peers on student learning in clinical practice. Some of the main topics of the theory are outlined below with respect to a better understanding of social comparison.

*Definition of social comparison:* the definition used in this thesis is provided by Wood, who described social comparison as ‘the process in which people think about information about the other person in relation to the self by looking for and pointing out similarities and differences between themselves and the other’.<sup>19</sup> Social comparison is widely acknowledged as a central feature of human social life.<sup>20</sup> People in all kinds of situations tend to pick up on information about how others are, or what others do or do not do.<sup>21</sup> In the social sciences, this natural tendency to compare oneself with others is generally considered to play an important role in evaluating and constructing a person’s social reality.<sup>20</sup>

*Similarity:* The idea of ‘similarity’ is vital in the field of social comparison. In general, people compare themselves to a great variety of other people. Festinger himself, however, already hypothesized a similar other, or someone close to oneself, as the most preferred other to compare oneself with.<sup>18</sup> He considered such others to be the most informative to a person’s own position and abilities to perform. Later on, the notion of similarity was redefined in terms of related attributes, characteristics which contribute to position and performance, such as age and experience.<sup>22</sup> Therefore, the research in this thesis focused on comparisons with peers.

*Social Comparison Orientation:* Almost all people engage in comparison with one or more others in all kinds of social situations. Some people, however, tend to compare themselves more often than others do.<sup>23</sup> These differences in a person’s tendency to compare are labelled as ‘social comparison orientation’, or SCO.<sup>24</sup> People with a high SCO compare themselves more frequently and are more affected by their comparisons. Research has shown that people with a high SCO are characterized by three particular features. They seem to have a high activation of the self (related to ambition); a keen interest in what others feel (related to empathy); and some degree of personal uncertainty.<sup>20</sup>

*Motives for comparison:* People have different motives underlying their comparisons. In this thesis, three main motives are elaborated: self-evaluation, self-enhancement and self-improvement. These motives can serve different social comparison goals, characterized as cognitive, affective and behavioural goals, respectively.<sup>25</sup> The self-evaluation motive is already introduced by Festinger himself.<sup>18</sup> People who turn to others for social information are, in

his view, driven by a desire for self-evaluation, to establish their position. Secondly, the self-enhancement motive is identified in studies addressing the issue of downward comparison.<sup>26,27</sup> These studies showed that comparisons with others thought to be worse off are used by people to feel better about themselves or their own situation. Thirdly, the self-improvement motive is related to comparisons with other people who are perceived as slightly better off. These upward comparisons are preferred among people who want to improve their own position or abilities to perform.<sup>28,29</sup> People can use different comparison strategies for different purposes.<sup>30</sup> They may seek downward comparisons to feel better about themselves, while they may look for upward comparisons to satisfy their desire for self-improvement.

*Responses to comparison:* A person's ability to adjust the comparison strategy to his/her own needs does not mean that the response is always positive. Both upward and downward comparisons appear to have their benefits and burdens.<sup>29</sup> In this thesis, Buunk and Ybema's<sup>31</sup> model of identification and contrast is used to explain the processes underlying the responses to upward and downward comparison. People who experience *identification* with the comparison other, or who recognize the other's situation as their own actual or imminent situation, may respond positively to upward comparison and negatively to downward comparison. For example, upward identification can endow a person with a sense of his/her own potential, while downward identification could reveal how a person's own situation can deteriorate. Conversely, people who experience themselves in *contrast* to the comparison other, or who are focussed on differences with the other's situation, can respond negatively to upward comparison and positively to downward comparison. For example, upward contrast could emphasize a person's own sense of inferiority, while downward contrast could strengthen personal self-confidence.

### **Main argument and research questions**

Students in clinical practice are not alone: there are many of them and they tend to share their experiences whenever they meet. In medical education, little is known about the influence of such interactions on student learning or professional development. The research reported in this study aims to fill this gap in the literature and to provide opportunities for helping students enhance their learning. The central research question of this thesis is therefore: what is the influence of students' use of peer comparisons in clinical workplace learning?

The first study, presented in *Chapter 2*, was used to introduce social comparison into the field of medical education. Four hypotheses derived from social comparison theory were used to investigate the relevance of social comparison for clinical workplace learning. Students engaged in nine different hospitals participated in this questionnaire study to examine these hypotheses with respect to their preferred comparison 'other', their preferred direction of comparison, their response to social comparison and the influence of Social Comparison Orientation (SCO).

The study described in *Chapter 3* aimed to determine whether the students' estimates of their future clinical performance are influenced by comparisons with peers. Such estimates are considered relevant to learning because they relate to self-efficacy, aspirations and academic accomplishments. In an experimental study using written comparison situations, participants estimated their future performance after comparison with a peer who had completed the same rotation the participant was expected to undertake next. Students were divided into groups assigned to different conditions in order to investigate whether their estimates are influenced by the performance level and gender of the peers they compared themselves with.

The qualitative study presented in *Chapter 4* was conducted to investigate students' actual use of social comparison in authentic clinical settings. Twelve students who volunteered to participate kept audio diaries in which they recorded their experiences of comparison with peers over a four-week period. This relatively new data-gathering technique of audio diaries provided the opportunity to examine these students' proximate experiences of social comparison and investigate the nature of the comparisons, their mechanisms and perceived effects.

*Chapter 5* reports a questionnaire study which unravelled the relationship between social comparison and student distress in clinical workplaces. Social comparison could affect distress both positively and negatively. Because distress is known to hamper learning, the study aimed to find characteristics of a beneficial use of social comparison. Participants completed questionnaires measuring several aspects of their social comparison behaviours and levels of distress to contrast the comparison behaviours of low-distress students with those of high-distress students.



*Chapter 6* was written by invitation and presents a commentary on a study of dyad practice.<sup>32</sup> The authors of this study provided strong evidence that students practising their skills in dyads learn as much as students practising the same skills individually. The focus of their work is expanded in this commentary with some insights from social comparison theory, because dyad practice inevitably entails social comparison. In conclusion, educators are urged to be aware of the students' tendency to compare themselves with peers and of the consequences of them doing so.

Finally, *Chapter 7* provides a general discussion of the research in this thesis. The discussion includes a summary of the main findings, weighs up the strengths and limitations, considers future research, and reflects on some implications for educational practice.

*Note: Chapters 2–6 could be read separately because this thesis is based on submitted and published journal articles. Some repetition across these chapters was inevitable.*

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