## Appendix 4

Overview mechanisms identified in the included articles and their description.

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| **Comparing and combining, as well as broadening, perspectives** |
| **Broadening their perspective (personal level)** | **Learners broaden their perspective through an awareness on their own emotions, exploring new territories and reflection on their experiences.**  |
| Being more focused on and aware of their own emotions and feelings | …learners focus on their own emotions and become aware of their own emotions.  |
| Exploring new territories and trying out things unknown before | …learners are challenged, in a positive manner, to explore new possibilities because things are more open-ended. |
| Reflecting on what they have encountered during the intervention | ….learners reflect on their experiences, not because they were required to (for an assignment), but because they experienced something new. This could be also the feedback they receive from teachers, or facilitators, or patients. Fragments in which one could see that the learner reflects are also coded here, for example “I came to the realisation…”.  |
| **Contrasting and connecting different perspectives (interpersonal)** | **Learners compare perspectives. This could be between different professionals, between patient and physician, between rational thought and feelings, between being a lay person and a medical professional.**  |
| Experiencing (lack of) common ground | …learners are (no longer) able to find common ground, topics in which they have a shared interest with others.   |
| Integrating different perspectives | …learners try to connect different perspectives. In fragments coded with this code something must be mentioned about connecting or integrating, not only pointing out differences (for example between psychosocial and biomedical aspects).  |
| Looking at and reflecting on different perspectives and challenging assumptions | … learners are challenged to observe patients from a different angle/perspective and challenge assumptions. In one of the papers this is called cognitive disequilibrium: *when encountering new or unfamiliar ideas, beliefs or experiences, an individual is forced to ‘‘step outside’’ of him or herself and critically reﬂect on his or her personal thoughts, feelings, attitudes, and experiences.*  |
| Reflecting on the contrast between the ideal or expected situation vs. reality | …learners reflect in an explicit manner on the difference between what they thought beforehand and what they see now. The difference between the code ‘Socialisation’ is that these fragments speak about unconscious processes while here we look at explicit, conscious behaviour. |
| Reflecting on the difference between being human vs. being doctor | …learners reflect in an explicit manner on the difference between being a medical professional and being human. In some fragments coded with this code is mentioned that ‘behaving like a medical professional’ is not always necessary, being there is sufficient. That just ordinary conversations become possible then.  |
| **Developing narratives and engagement with patients** |
| **Contributing to narratives (interpersonal level)** | **Learners develop their inner narratives about themselves and about patients.** |
| Articulating your thoughts and reflections in interaction with others | …learners express their own thoughts during interactions with other people. These other people may be supervisors, peers of family members. In fragments coded with this code something is mentioned about talking/telling/discussing with others about what they experienced while participating in the intervention. In talking with others you build your own story about your experiences.  |
| Contextualising disease with the life stories of real people | …learners build a different story around disease(s), with the help of what patients tell them. In fragments coded with this code, the focus is on a different image the learners got about a disease. For example, atopic eczema which does not sound as a ‘big disease’ until you have met with someone who has to salve the whole day and cannot do much else.  |
| Contributing and developing meaningful narratives | …learners develop stories which are meaningful for themselves or contribute to those stories. In fragments coded with this code something ‘active’ has to be present, the learner has to do something in order for the story to become meaningful. And the focus is on meaning for the learner, not for others (e.g. the patient). |
| Imagining a patients’ life more completely | ….learners imagine a more complete story about the life of a patient. Often this is related to ‘the patient is more than the disease’.  |
| Imagining to be someone else | …learners imagine what they would do when they would be in the position of the patient. Walking in their shoes.  |
| Remembering stories better due to their emotional value | …learners remember stories better. New experiences with real-life patients motivates students to incorporate concerns into their approaches as future clinicians. This shift in perspective may influence the manner in which they view new patients - so the students’ experiences may act as a type of empathic memory whose recall, conscious or unconscious, may influence the students future approaches to patients and their medical care. Empathic memory. |
| **Engagement with patients (interpersonal)** | **Learners engage with others, especially patients, and feel engaged.**  |
| Active observation and listening | …. Learners observe and listen in an active manner. Besides, fragments are coded with this code when, as a result of visual language in quotations, we as researchers assume that active observation took place.  |
| Being curious about their patients | …learners learn to be become more interested, curious, in the patient. In fragments coded with this code something relational is present, otherwise the code ‘exploring new territories’ is used.  |
| Being emotionally involved with others and showing affective identification | ….learners become emotionally involved with patients. Besides, fragments are coded with this code when, as a result of emotional language in quotations, we as researchers assume that such involvement took place. |
| Building relationships | … learners build a relationship with patients. Besides, fragments are coded with this code when we as researchers assume that relationships were developed which had not been there to start with, based on quotations in the included papers.  |
| Changing relationships | ...learners have a changed relationship with patients, for example because power relations changed.  |
| Take time and making an effort to think about patients' lives | …learners put in time and/or an effort to image. In fragments coded with this code the presence of the patient at this moment in time is not necessary, it is about standing still afterwards. Fragments which mention just the time aspect, without referring to the use of that time for reflection, are not coded here or as a negative expression of the code. People spend more time with the patient but are still in the ‘doing’ mode.  |
| **Socialisation (organisational)** |
| **Socialisation (organisational)** | **Learners see their (social) environment in a different manner.**  |
| Experiencing a sense of comfort with a stressful environment | …learners feel more at ease with complex situations. They do not lock away their feelings but acknowledge that the situation is stressful but still remain involved.  |
| Experiencing to be part of a health care team | …learners feel part of the team, more than just safe, they belong. In one of the papers this is described as follows: *“Being part of a health care team (not just a passing student)”.*  |
| Feeling pressure (or not) to live up to expectations in their environment | … learners are no longer busy with how they are seen by others. As a result, they become less ego-centered. In the formal curriculum, learners are often busy with their grades, with filling in the electronic health record in a proper manner and therefore do no listen carefully enough.  |
| Seeing and assimilating role models | …learners see role models consciously and decide in a conscious manner whether they want to behave similarly or not. The difference with socialisation is in the conscious observation and decision.  |
| Socialisation through a patient-centred learning environment | …learners adjust to their environment. This is more about nudging than socialisation.  |
| Self-actualisation |
| **Self actualisation (personal level)** | **Learners develop their own identity, their feelings of competency, and feel empowered.** |
| Developing your professional identity | …learners feel personal growth and develop their professional awareness/awareness about, professionalism within, their profession. This is more than just competence, even when feeling competent one could not feel to have an identity as a patient-centred clinician.  |
| Feeling competent in doing what you yourself do | …learners feel competent to perform a certain task  |
| Feeling empowered (or not) | …learners feel empowered, which is broader than the task at hand but more related to their future profession. |
| Understanding yourself better | …learners understand themselves better |
| Making own choices and thus feeling responsible | … learners feel more autonomous and thus feel more responsible. Fragments with this code contain expressions such as ‘own choices’, ‘elected’, ‘ownership’. Also, fragments in which not everything is determined by others (management, designers of a course) which helps learners to make their own choices. ‘open ended’. |
| Feeling inspired | …learners get inspired to think about aspects of patient-centredness |
| Feeling useful, significant, meaningful or valued | …learners feel useful, significant, meaningful or valued, which helps them to have (mental) room for thinking about other people. In fragments with this code the role of others is present often: someone else helps to make them feel this way.  |
| Feeling welcome, safe and secure | …learners feel welcome, safe and secure in their learning environment. The difference with ‘sense of comfort’ is in fragments coded with this code there is a focus on the work/learning environment, while in the other code there is a focus on situations in which a learner feels (not) at ease with medical complex or unpleasant situations.  |