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Medical students' reflections on emotions concerning breaking bad news

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Abstract

Objectives:

To gain a deeper understanding of fourth year medical students' reflections on emotions in the context of breaking bad news (BBN).

Methods:

During the years 2010–2012, students reflected on their emotions concerning BBN in a learning assignment at the end of the communications skills course. The students were asked to write a description of how they felt about a BBN **case**. The reflections were analysed using qualitative content analysis.

Results:

351 students agreed to participate in the study. We recognized ten categories in students' reflections namely empathy, insecurity, anxiety, sadness, ambivalence, guilt, hope, frustration, gratefulness and emotional detachment. Most students expressed empathy, but there was a clear tension between feeling empathy and retaining professional distance by emotional detachment.

Conclusions:

Students experience strong and perplexing emotions during their studies, especially in challenging situations. A deeper understanding of students' emotions is valuable for supporting students' professional development and coping in their work in the future.

Practice implications:

Medical students need opportunities to reflect on emotional experiences during their education to find strategies for coping with them. Emotions should be actively discussed in studies where the issues of BBN are addressed. Teachers need education in attending emotional issues constructively.

Key words

Breaking bad news; emotions; empathy; medical students; reflection; undergraduate medical education; content analysis

1. **Introduction**

Breaking bad news (BBN) is considered one of the most difficult tasks of a physician [1] causing emotional stress for both physicians [2] and undergraduate medical students [3]. It is a situation where the physician needs to inform the patient about her/his negatively altered condition, e.g. about a diagnosis or failure in treatment [4]. This burden of BBN is widely studied especially among the specialty of oncology [5-7]. Findings of an interprofessional study indicated that in difficult healthcare conversations clinicians most often report the emotions of anxiety, sadness, empathy, frustration and insecurity [8].

Emotions have importance for several reasons. Emotions are responses to events that relate to an individual's inner thoughts and goals and provide guidance in the social world [9]. Emotions influence cognitive processes such as perception, recall and decision-making [9-11], impacting also learning, motivation [12] and perceived self-efficacy [13]. In addition, emotional experiences contribute to the development of medical students' professional identity [14-16].

Studies about medical students' patient care experiences demonstrate strong emotions [14,17-20]. Clay and her colleagues identified six themes of emotions: sorrow, gratitude, personal responsibility, regret, shattered expectations and anger [18]. Other findings establish the feelings of uncertainty [14,19,20], helplessness [17]

and empathy that is explored with predominantly quantitative methods [21-25] but also qualitatively [26]. However, the knowledge on medical students' perspectives about emotions related to BBN is sparse.

At the University of Helsinki, medical students address BBN as part of their communications skills studies in the fourth study year. These studies, applying several experiential learning methods, start at the beginning of the education and continue across the studies. We used a qualitative research method to explore medical students' reflections on emotions concerning BBN to gain a deeper understanding of the phenomenon [27,28]. We will look at emotions in broad sense, which involves all affective and emotional experiences the students describe in their reflective writings. We presuppose emotions are states that the students are aware of and able to express explicitly by naming or describing them. The aim of our study was to explore (1) what emotions BBN provokes in students and (2) how these emotions are reflected.

2. Methods

2.1 Study context

The Finnish undergraduate medical education of 360 ECTS (European Credit Transfer and Accumulation System) is completed in approximately six years. The objectives are to prepare students for the legally regulated practice of medicine in primary health care and to provide students with the knowledge and skills needed to seek, critically assess and apply scientific information. Communication skills studies for medical students at the University of Helsinki were first introduced in 1994. These studies begin in the first study year and continue throughout the curriculum (Table

1.). The main focus of the studies is doctor–patient communication. Facing emotional challenges in clinical encounters is one of the topics.

(Table 1. Communication skills studies in undergraduate medical education)

Several experiential learning methods are used in the communication skills studies. These methods include role plays, simulations with actors, recorded patient interviews and real patient encounters. Communication skills are formatively assessed along the studies and summatively in an OSCE (Objective Structured Clinical Examination) station. In addition to these courses, students have early patient contacts during preclinical years.

BBN forms an integral part of the communication skills studies during the fourth study year. The mandatory course starts with two introductory lectures followed by small group sessions with simulated patients. The simulated patients are professional actors. A clinical teacher guides the sessions. The simulations are based on patient scenarios concerning challenging situations such as BBN. After each simulation, there is a reflective discussion. At the end of the course, the students reflect on their learning of communication skills in a web-based assignment.

2.2 Participants

The participants of this study were fourth year medical students completing the mandatory communication skills course during the years 2010-2012. All students were asked to join the study. At the end of the course students reflected on their emotions concerning a case of BBN in a learning assignment. The assignment as

such was a compulsory part of the course, but participation in the study was voluntary. Informed consent was obtained from all the participating students. The research was conducted separately from the evaluation of the course. Taking or not taking part in the study had no effect on the evaluation. Altogether 351 (94%) of the total of 374 students took part in this study (Table 2.).

(Table 2. The participants of the study)

The research protocol was introduced to the planning committee of basic medical education prior to the data collection. The guidelines of the Finnish Advisory Board on Research Integrity were applied in all parts of this study [29,30].

2.3 Data collection and analysis

In the learning assignment, we asked the students to read the case carefully and write freely about their reflections concerning the case. We posed open-ended questions to guide the reflection (Table 3). We gathered the data via an electronic questionnaire. English is not the native language of the researchers or the participants of this study. The data is in Finnish or Swedish. We translated parts of the data into English. These parts were revised for language, to be used as an illustration in this report. We labelled the data with letters and numbers to assure the anonymity of the respondents. The initial coding and analysis of the data were conducted by one researcher (AT). The analysis was reviewed by another author (EP) at several stages: firstly, during the analysis of the first dataset (2010), secondly, when combing two additional student cohorts (2011-2012) and thirdly,

when creating the categories. The process of the analysis and the categories were discussed with the co-authors (SLY and PL).

(Table 3. The learning assignment)

We analysed the data with qualitative inductive content analysis. We began by reading the data several times to become immersed in it [31,32]. The units of analyses were then identified [31]. Meaning units [33] were the parts of the answers or the whole answers where students described emotions, either mentioning emotions directly by name or describing them metaphorically. We followed the process of open coding and created categories from the data [31]. The categories created, labelled and counted in the preliminary analysis were revised during further analyses. The data analysis and coding were repeated with the qualitative data analysis software Atlas.ti. We quantified the data to count the frequencies of the categories identified in the analysis.

3. Results

The students wrote about emotions directly by name or describing them metaphorically. We created ten categories referring to these reflections. Most often students described the feelings of empathy, insecurity, anxiety, sadness and ambivalence in their reflections. Interestingly, many of the students described emotional detachment in their writings and this formed one of the categories in this study (Table 4).

(Table 4. The categories by frequency)

The categories illustrating students' reflections are reported with examples from the data. All students' expressions included in categories are displayed in Table 5. We begin reporting the results concerning empathy, emotional detachment, sadness and ambivalence. Empathy, the most common category, often appeared in the reflections together with the other categories in this section. We advance presenting categories of insecurity and anxiousness that were often interconnected in the reflections. Then we proceed presenting positive feelings, ending up with categories mentioned only a few times.

(Table 5. Coding scheme: expressions included in categories)

3.1. Reflections on empathy, emotional detachment, sadness and ambivalence

Students most commonly expressed the feeling empathy (79%). Empathy was described directly by using the words 'empathy' (*I feel empathy for the patient [F77]*), 'compassion' *(the situation makes me feel compassion [M117])* or 'sympathy' *(you feel nothing but sympathy [M07])* in the text. Empathy was also expressed indirectly by noticing the patient's difficult situation, by the willingness to help the patient and by acknowledging the patient's emotions. Empathy was described in both cognitive and emotional terms. The former, cognitive perspective-taking refers to recognizing the patient's situation but maintaining a professional role, without affective reaction. The latter refers to the student's personal emotions, the feelings of sympathy and strong identification with the patient: *The situation described makes me feel great sadness*

and strong sympathy, for I am a mother of two small children myself. It would be extremely hard for me not to share the patient's agony and feelings (F134).

Empathy was described in the majority of the reflections, but it is worth noticing that one-third of the students expressed emotional detachment in their reflections, mostly in the name of self-preservation. This indicates that students feel like they have to distance themselves from the patient's feelings in order to protect themselves from distress. In the following quote, e.g., there is first an identification with the patient and then distancing to the professional's role: *The woman is the same age that I am, and she has two kids like I will have soon. In real life, this kind of situation would most likely be very touching to me. In my work as a physician, I will probably have to push aside my feelings. If I become too involved, my own life becomes too distressing. The most difficult thing for me in BBN may be keeping up "the professional role", not getting too involved in the patient's feelings. Being empathetic and understanding of the patient's emotions will probably not be difficult for me (F1).*

In their reflections, students described emotional detachment considering that BBN is part of their duty as a physician, that it is the patient who is suffering not the physician, who should remain strong and supportive. The students mentioned that sometimes nothing can be done, and that they just need to learn to accept that these things happen. Students suggested that they should keep a professional distance because becoming emotionally involved might put their objectivity at risk: *You feel nothing but sympathy in this kind of situation. The patient has already had hard times, especially recently. This sympathy may help to establish the doctor–patient relationship, but you can't give sympathy too much room. You can't live your patient's*

life, otherwise the work load becomes too heavy, not to mention that you might lose your objectivity (M7).

Due to the context of BBN, the feelings of sadness and empathy were often closely related. Nearly third of the respondents reflected sadness because of the tragic nature of the situation. Identifying with the patient and her grief was another source of sadness: *I don't think I'm going to be distressed in the situation. Surely, I would feel sad and empathetic, especially for the children's sake. Further, it could be more difficult when it comes to dealing with approaching death (F80)*. Sadness was also described by feeling sorry for the patient: *This kind of a situation makes me feel sorry for her (M51).*

Ambivalent feelings (29%) were expressed when the students reflected on circumstances in which they must find a balance between being empathetic and keeping a professional distance, or attempt to cherish hope without being dishonest. Ambivalence indicated that some tension or discrepancy exist between the students' feelings and their ideas about the expectations they will meet as professionals: *Finding a balance between a professional and a humane perspective is difficult. You have to be tough enough and believe in what you're doing, but you have to be able to give the patient hope, too. It is always difficult to break bad news to a patient since you would like these things not to happen at all (M132).*

3.2. Reflections on insecurity and anxiety

Nearly half of the students described feeling insecurity in their reflections. The category of insecurity consists of students' reflections on uncertainty, inadequacy and

overall helplessness. These reflections concerned, e.g., the students' own behaviour in the situation, the patient's reaction to the news, and her prognosis. In general, BBN seems to provoke many questions that are left unanswered. The writings indicate that uncertainty is related to the lack of experience. *BBN is difficult because the patient's reactions are unpredictable, and she might not be receptive to the information. In this situation there is not much to do but to listen to the patient and let her pull herself together. Not knowing what to say, what the patient would want to hear or what would help this particular patient is surely difficult (F46)*. Students described willingness to help but not being able to do so: *Breaking this kind of news would make me feel kind of powerless. I would think that I can't do anything for the patient. I will tell her news that will change her life completely, but there are no ways to ease the pain that follows (M2)*. This inability to help caused the feeling of inadequacy: *The situation is extremely difficult, and I would probably feel inadequate, wanting to help the patient but having no means to do that (F56)*.

Another common feeling was anxiety. The category of anxiety included the expressions of general discomfort, fear and distress. Anxiety was also described with deeply worrying about the patient's situation, hopelessness and being nervous. Anxiety was provoked by the encounter with the patient and her distress, her reaction to the news, the seriousness of the situation, inexperience, uncertainty, and the student's personal history and inability to help.

Students expressed anxiety directly using the word 'anxiety': *Anxiety. The patient has small children and she is so young. The patient's distress and fear are difficult to face when BBN, because those are the very same feelings that you have in the situation*

(F194). This quote also reveals the indirect reports of discomfort, distress and fear. Fear was provoked by the severity of the cancer and for the reactions the situation provokes both in the patient and in the student. ‘Feeling terrified’ was one expression used and the fear of death was also mentioned in students’ writings. *Fear. Has the cancer already spread? Is it already impossible to find a complete cure? (M49).* Some students described despair or the fact that nothing positive could be found in the patient’s situation: *I would feel despair about the patient’s difficult situation (F108)*. Few students’ described feeling stressed about the actual event of BBN: *It feels challenging because at this point of the studies even conducting a normal consultation is demanding and feels stressful in itself (M64).* Inexperience was often mentioned as a cause of the stress.

3.3 Positive emotions of hope and gratefulness

Due to the nature of the context, the majority of the emotions students expressed in their reflections were negatively oriented. However, the positively tuned emotions of hope and gratefulness were mentioned. Gratefulness was conveyed as feeling privileged for being able to share the situation with the patient: *I think I would also feel sort of grateful that I can share this path with the patient, be involved in supporting the patient all the way till the end, if that is where it is going. Life and death are great journeys that I would like to share with my patients (M37).*

Hope was referred to as optimism arising from the diagnosis of the cancer and the start of treatment. General knowledge of the improved prognosis of cancer contributed to these hopeful feelings: *I would still be optimistic, for the prognosis for*

cancer has improved, and more treatment options are available. This situation would make me feel sad, of course, but obviously there is some hope, too (F6).

3.4. Feeling guilt and frustration

Students wrote about feeling guilty. This feeling was provoked by causing sadness and pain to the patient: *[F]acing the other person's grief is very difficult, especially if you sort of have to cause the pain by being the one who delivers the bad news (F4)*. The students described that they would feel guilty for wrecking the patient's life and in a way giving her a death sentence: *It would be difficult to think about the patient's situation in life and the consequences of this disease. Am I guilty for ruining this patient's life? (M6)*

Students' reflected frustration towards BBN directly by using the word 'frustration' in their writings: *I would surely feel frustrated (F52).* Indirect descriptions included descriptions of unfairness: *[I]t feels totally unfair and overwhelming (F127)* and anger *I would feel seriously annoyed not to be able to handle things properly with the patient (OM14).*

4. Discussion and conclusions

4.1. Discussion

In this study, we explored medical students' perceptions on emotions related to BBN. The students either referred to emotions directly or indirectly by metaphorically describing their feelings about the BBN case. They reflected both their personal feelings and extrinsic expectations they thought they are facing as medical students. The students described different kinds of emotions and emotional detachment **in**

their reflections which together formed ten categories. These were in order of frequency: empathy, insecurity, anxiety, emotional detachment, sadness, ambivalence, guilt, hope, frustration and gratefulness. BBN is an emotional and stressful event not only for the practicing physicians [2] but for medical students as well [3]. The fact that the students have strong emotions, is hardly surprising considering the course context of learning the delivery of bad news. The stressful situation causes unsureness and helplessness even in physicians with long experience [8].

In our study, students most commonly described empathy when reflecting on delivering bad news to a patient. Empathy is considered a highly important part of practising medicine [21-23,26,34,35]. In our results, students described the cognitive dimension of empathy, e.g., by describing their understanding of the patient's situation and perspective. When describing the affective dimension of empathy, the students seemed to involve themselves deeply and emotionally, identifying strongly with the patient. Students' expressions on empathy were often closely related to the feeling of sadness because of the tragic nature of the situation.

In our findings, there was clear tension between feeling empathy and retaining a professional distance by emotional detachment. Emotional detachment was often described as contradictory to students' empathetic thoughts. Previous research supports this finding of the difficulty of finding balance between empathy and professional distance [26]. It is assumed that the emotional suppression and purposeful reduction of empathy are used as coping mechanisms [26,34,36]. Distancing is also considered a strategy for managing the stressfulness of BBN [2].

Emotional detachment was also described in our results in the name of objectivity. This kind of detachment has been explained by equal and objective care for patients and prioritising medical care over the relationship issues [37]. These observations might indicate lack of proper coping strategies when facing challenging encounters.

Our study shows that students feel ambivalent in the context of BBN. They struggle in balancing between personal emotions and the expectations they hold for themselves. On one hand students wrote that as professionals, they should distance their feelings in order to be good physicians. On the other hand, students considered this kind of detachment extremely difficult. Perplexing feelings should be addressed and students' should receive support with these challenges. Meitar and her colleagues [38] have suggested that physicians' coping in challenging encounters could be promoted by self-awareness and by addressing the difficulties with reflective practices. Other strategies identified for coping with BBN situations have been problem-focused strategies emphasising the controlling of the situation, emotion-focused strategies for managing negative emotions [2,3] and meaning-focused strategies for reappraising negative experiences [2]. These meaning-focused coping strategies included cognitive reframing in a more positive way, thus helping doctors with the burden of BBN. Educational means to support empathy and coping are found e.g., in experiential learning, medical humanities, mindfulness-based interventions, reflective writing [39] and Balint groups [39,40].

Our findings concerning insecurity and anxiousness related to BBN are not surprising, these emotions have been reported before among practicing clinicians during difficult healthcare conversations [8]. Uncertainty and anxiousness have

previously been associated with students' first patient encounters [17]. The challenge of living with uncertainty and the fear of making mistakes follows students, however, throughout the curriculum [20]. In our study, the feelings of guilt about being the news bearer and frustration for the unfair situation were also mentioned in students' reflections. The stressfulness of BBN will not necessarily lessen by experience but the coping strategies for solving these situations develop over working years [2].

This study uncovers the complex emotions medical students face during their education, underlining the tension between two important aspects of professional growth, namely empathy and emotional detachment. Students' emotional experiences are important for several reasons. Firstly, emotions have an impact on cognitive processes [9,10] and on behaviour which is of great importance in patient care. Secondly, emotions contribute to students' professional identity development [14-16]. Thirdly, stressful situations, such as heavy workloads, demands and distress might cause decline in empathy, the suppression of emotions, depression and even burnout [26,34,36,37]. Awareness of one's own emotional reactions provides cognitive tools for handling the emotions [35] and supports healthcare professionals in challenging encounters, thus, promoting their professional well-being. There is indeed a need for identifying and reflecting on emotional experiences in medical education [38,41,42].

4.2. Limitations of this study

In qualitative research, the question of trustworthiness is evaluated in terms of credibility, dependability, transferability and authenticity. It is intertwined in the

process of the method, including the preparation, organization and reporting phases [43-45]. Considering these, this study has some limitations.

Firstly, it was carried out in a single university. The results are context specific. However, the response rate was high (94%) and the data was well saturated with three cohorts and 351 participants. Secondly, we concentrated solely on self-reflections on emotions. Emotions might exist that the students do not recognize or wish to reflect on in a learning assignment. Thirdly, the data was based on reflections concerning a written patient scenario. An alternative method could have been interviews, but then the sample size would have been considerably smaller. The results draw a picture of undergraduate medical students' emotions concerning BBN in the context of Finnish medical education. The results might be transferable to similar contexts, namely undergraduate medical education programmes that include communication skills training throughout the studies.

The question of the rigour of qualitative research is addressed as a potential limitation of this study. The analysis in qualitative research is outlined by the researchers' viewpoint and experiences [46] and involves interpretation [33]. The analysis in this research constituted both the manifested (directly named) and latent contexts (descriptions and metaphors) [33]. The translations of the categories and parts of the data were done by the first author and discussed with the others. These parts were revised for language. The results of the analysis were opened to debate by presenting the findings in an international conference of the Association for Medical Education in Europe (AMEE) in 2011 and 2013 and in an academic seminar about teachers' and students' emotions (The Centre for Research and Development

of Higher Education at the University of Helsinki). The peer review in these contexts provided an external check of the research process and the credibility of research results [47].

4.3. Conclusions

BBN elicits perplexing feelings. Students express feeling empathy and sadness in their descriptions but at the same time they struggle with retaining professional distance by emotional detachment. BBN also provokes the feelings of anxiety, insecurity, guilt and frustration. Some students manage to reframe the situation positively, feeling hope and gratefulness. Medical students need support with these complex feelings in constructing their professional identities. Emotions should be explicitly incorporated into medical education and students should be supported in coping with these emotions in order to reinforce their professional growth and well-being.

4.4. Practice implications

Taken together, these results have several practice implications. Educators need to understand that BBN and other challenging encounters evoke many complex emotions in students. Firstly, emotions should be actively discussed in communication skills studies where the issues of BBN are addressed and practiced. Students should be encouraged to accept their emotional experiences and supported in finding strategies for coping with them. Secondly, emotions rising in the authentic clinical education should be systematically reflected. Thirdly, teachers involved in aforementioned practices need education in reflecting on emotions as part of their teaching practices to be able to constructively attend to emotional issues. Identifying

and normalizing uncomfortable emotions and developing new ways to help learners cope and adapt while remaining empathic and emotionally available to their patients is very important.

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References

[1] G.K. Vandekieft, Breaking bad news, Am.Fam.Physician 64 (2001) 1975-1978.

[2] J.M. Shaw, R.F. Brown, S.M. Dunn, A qualitative study of stress and coping responses in doctors breaking bad news, Patient Educ.Couns. 91 (2013) 243-248. doi.org/10.1016/j.pec.2012.11.006

[3] F.M. Jones, J.L. Fellows, D.J. Horne, Coping with cancer: A brief report on stress and coping strategies in medical students dealing with cancer patients, Psycho-Oncology 20 (2011) 219-223. DOI:10.1002/pon.1751

[4] R. Buckman, Breaking bad news: why is it still so difficult? Br.Med.J.(Clin.Res.Ed) 288 (1984) 1597.

[5] W.F. Baile, R. Buckman, R. Lenzi, G. Glober, E. Beale, A.P. Kudelka, SPIKES - A six-step protocol for delivering bad news: Application to the patient with cancer. The Oncologist 5 (2000) 302-311. doi:10.1634/theoncologist.5-4-302

[6] R. Buckman, Breaking bad news: The S-P-I-K-E-S strategy. Community Oncology 2 (2005) 138-142. DOI: 10.1016/S1548-5315(11)70867-1

[7] A. Surbone, M. Zwitter, M. Rajer, R Stiefel (Eds.), New challenges in communication with cancer patients, (2013) Springer Science & Business Media. DOI: 10.1007/978-1-4614-3369-9

[8] E.B. Martin Jr., N.M. Mazzola, J. Brandano, D. Luff, D. Zurakowski, E.C. Meyer, Clinicians' recognition and management of emotions during difficult healthcare conversations, Patient Educ.Couns. 98 (2015) 1248-1254. doi:10.1016/j.pec.2015.07.031

[9] D. Keltner, K. Oatley, J.M. Jenkins, Understanding Emotions (3rd Ed.), USA: Wiley (2014).

[10] V.R. LeBlanc, M.M. McConnell, S.D. Monteiro, Predictable chaos: a review of the effects of emotions on attention, memory and decision making, Adv. Health Sci. Educ. 20 (2015) 265-282. DOI:10.1007/s10459-014-9516-6

[11] N. Schwarz, Emotion, cognition, and decision making. Cognition & Emotion 14 (2000) 433-440. dx.doi.org/10.1080/026999300402745

[12] R. Pekrun, T. Goetz, W. Titz, R.P. Perry, Academic emotions in students' self-regulated learning and achievement: A program of qualitative and quantitative research. Educational psychologist 37 (2002) 91-105. DOI:10.1207/S15326985EP3702_4

[13] A. Bandura, Self-efficacy: The exercise of control. W H. Freeman, New York, 1997.

[14] E. Helmich, S. Bolhuis, T. Dornan, R. Laan, R. Koopmans, Entering medical practice for the very first time: Emotional talk, meaning and identity development. Med.Educ. 46 (2012) 1074-1086. DOI:10.1111/medu.12019

[15] E. Helmich, S. Bolhuis, R. Laan, T. Dornan, R. Koopmans, Medical Students' emotional development in early clinical experience: a model. Adv. Health Sci. Educ. 19 (2014) 347-359. DOI:10.1007/s10459-013-9477-1

[16] T. Dornan, E. Pearson, P. Carson, E. Helmich, C. Bundy, Emotions and identity in the figured world of becoming a doctor. Med.Educ. 49 (2015) 174-185. DOI:10.1111/medu.12587

[17] K.H. Pitkälä, T. Mäntyranta, Feelings related to first patient experiences in medical school: A qualitative study on students' personal portfolios. Patient Educ.Couns. 54 (2004) 171-177. DOI:10.1016/S0738-3991(03)00209-X

[18] A.S. Clay, E. Ross, S.M. Chudgar, C. O'Connor Grochowski, J.A. Tulsky, D. Shapiro, The emotions of graduating medical students about prior patient care

experiences. Patient Educ. Couns. 98 (2015) 344-349. DOI:10.1016/j.pec.2014.11.023

[19] M.K. Nevalainen, T. Mäntyranta, K.H. Pitkälä, Facing uncertainty as a medical student - a qualitative study of their reflective learning diaries and writings on specific themes during the first clinical year, Patient Educ.Couns. 78 (2010) 218-223. DOI:10.1016/j.pec.2009.07.011

[20] M.K. Nevalainen, L. Kuikka, L. Sjöberg, J. Eriksson, K.H. Pitkälä, Tolerance of uncertainty and fears of making mistakes among fifth-year medical students. Fam. Med. 44 (2012) 240-246.

[21] R. Pedersen R. Empirical research on empathy in medicine - A critical review. Patient Educ.Couns. 76 (2009) 307-322. DOI:10.1016/j.pec.2009.06.012

[22] M. Hojat, J.S. Gonella, T.J. Nasca, S. Mangione, M. Vergare, M. Magee, Physician empathy: definition, components, measurement, and relationship to gender and specialty. Am. J. Psychiatry 159 (2002) 1563-1569. DOI:10.1176/appi.ajp.159.9.1563

[23] M. Hojat, D.Z. Louis, F.W. Markham, R. Wender, C. Rabinowitz, J.S. Gonella, Physicians' empathy and clinical outcomes for diabetic patients. Acad. Med. 86 (2011) 359-64. DOI:10.1097/ACM.0b013e3182086fe1

[24] T.A. Quince, R.A. Parker, D.F. Wood, J.A. Benson, Stability of empathy among undergraduate medical students: a longitudinal study at one UK medical school. BMC Med. Educ. 11 (2011) 90. DOI:10.1186/1472-6920-11-90

[25] H.B. Paro, P.S. Silveira, B. Perotta, S. Gannam, S.C. Enns, R.R. Giaxa, R.F. Bonito, M.A. Martins, P.Z. Tempski, Empathy among medical students: is there a relation with quality of life and burnout? PloS one 9 (2014) e94133. DOI:10.1371/journal.pone.0094133

[26] H-L. Eikeland, K. Ørnes, A. Finset, R. Pedersen, The physician's role and empathy - a qualitative study of third year medical students. BMC Med. Educ. 14 (2014) 165. DOI:10.1186/1472-6920-14-165

[27] M. Tavakol, J. Sandars, Quantitative and qualitative methods in medical education research: AMEE Guide No 90: Part I. Med. Teach. 36 (2014) 746-756. DOI:10.3109/0142159X.2014.915298

[28] C. Ringsted, B. Hodges, A. Scherpbier, 'The research compass': An introduction to research in medical education: AMEE Guide No. 56. Med.Teach. 33 (2011) 695-709. DOI:10.3109/0142159X.2011.595436

[29] Finnish Advisory Board on Research Integrity, Ethical principles of research in the humanities and social and behavioural sciences and proposals for ethical review. http://www.tenk.fi/sites/tenk.fi/files/ethicalprinciples.pdf , 2009 (accessed 30.09.2015)

[30] K. Varantola, V. Launis, M. Helin, S.K. Spoof, S. Jäppinen (Eds.), Guidelines of the Finnish Advisory Board on Research Integrity. Responsible conduct of research and procedures for handling allegations of misconduct in Finland, 2012.

[31] S. Elo, H. Kyngäs, The qualitative content analysis process. J. Adv. Nurs. 62 (2008) 107-115. DOI: 10.1111/j.1365-2648.2007.04569.x

[32] H-F. Hsieh, S.E. Shannon, Three approaches to qualitative content analysis. Qual. Health Res. 15 (2005) 1277-1288. DOI: 10.1177/1049732305276687

[33] U.H. Graneheim, B. Lundman, Qualitative content analysis in nursing research: concepts, procedures and measures to achieve trustworthiness. Nurse Educ.Today 24 (2004) 105-112. doi.org/10.1016/j.nedt.2003.10.001

[34] M. Neumann, F. Edelhäuser, D. Tauschel, M.R. Fischer, M. Witrz, C. Woopen, A. Haramati, C. Scheffer, Empathy decline and its reasons: a systematic review of

studies with medical students and residents. Acad. Med. 86 (2011) 996-1009. DOI:10.1097/ACM.0b013e318221e61

[35] I. Preusche, C. Lamm, Reflections on empathy in medical education: What can we learn from social neurosciences? Adv. Health Sci. Educ. 21 (2016) 235-249. DOI:10.1007/s10459-015-9581-5

[36] D.J. Burks, A.M. Kobus, The legacy of altruism in health care: the promotion of empathy, prosociality and humanism. Med. Educ. 46 (2012) 317-325. DOI:10.1111/j.1365-2923.2011.04159.x

[37] J. Halpern, What is clinical empathy? J. Gen. Intern. Med. 18 (2003) 670-674. DOI:10.1046/j.1525-1497.2003.21017.x

[38] D. Meitar, O. Karnieli-Miller, S. Eidelman, The impact of senior medical students' personal difficulties on their communication patterns in breaking bad news. Acad. Med. 84 (2009) 1582-1594. doi: 10.1097/ACM.0b013e3181bb2b94

[39] Z. Kelm, J. Womer, J.K. Walter, C. Feudtner, Interventions to cultivate physician empathy: a systematic review. BMC Med. Educ. 14 (2014) 219. DOI:10.1186/1472-6920-14-219

[40] K. Van Roy, S. Vanheule, R. Inslegers. Research on Balint groups: a literature review. Patient Educ.Couns. 98 (2015) 685-694. doi.org/10.1016/j.pec.2015.01.014

[41] J. Sandars, The use of reflection in medical education: AMEE Guide No. 44. Med.Teach. 31 (2009) 685-695. doi.org/10.1080/01421590903050374

[42] J.M. deVries-Erich, T. Dornan, T.B.B. Boerboom, A.D.C. Jaarsma, E. Helmich, Dealing with emotions: medical undergraduates’ preferences in sharing their experiences. Med. Educ. 50 (2016) 817-828. doi: 10.1111/medu.13004

[43] E.G. Guba, Criteria for assessing the trustworthiness of naturalistic inquiries. Educational Communication and Technology 29 (1981) 75-91. doi:10.1007/BF02766777

[44] Y.S. Lincoln, S.A. Lynham, E.G. Guba, Paradigmatic controversies, contradictions, and emerging confluences, in: N.K. Denzin, Y.S. Lincoln (Eds.), The handbook of qualitative research (2nd Ed.), Sage, London, 2011, pp.163-188.

[45] S. Elo, M. Kääriäinen, O. Kanste, T. Pölkki, K. Utriainen, H. Kyngäs, Qualitative Content Analysis: A Focus on Trustworthiness. SAGE Open 4 (2014) 1-10. DOI:10.1177/2158244014522633

[46] H. Noble, J. Smith, Issues of validity and reliability in qualitative research. Evid. Based Nurs. 18 (2015) 34-35. DOI:10.1136/eb-2015-102054

[47] J.W. Creswell, Qualitative inquiry and research design: Choosing among five approaches (2nd Ed.), Sage Publications, Thousand Oaks, 2007.

Highlights

- We explored medical students' reflections on emotions concerning breaking bad news
- Breaking bad news elicits strong, perplexing and ambivalent emotions in students
- Students feel empathetic, but they struggle with retaining professional distance
- Emotions should be discussed in education to support students' professional growth
- Learning to identify and cope with emotions while remaining empathetic is crucial

Table 1. Communication skills studies in undergraduate medical education

Study year	**Name of the study unit**	**ECTS**
1st	Professional development (Communications skills as part of the content)	1
2nd	How to conduct a patient interview	1
3rd	Video-recorded patient interview	1
3rd	Multicultural aspects of healthcare	0.5
4th	How to tell the test result, the diagnosis and the treatment **(BBN as part of the study unit)**	1
5th	Encountering a child, an adolescent and his or her family	0.5
6th	Objective structured clinical examination	
6th	Me, the physician (optional seminar in communication: A doctor's good communication skills)	1

Table 2. The participants of the study

Year	All students	Non-participants	Participants by gender (male/female)	Participants
2010	130	7	43/80	123
2011	124	10	48/66	114
2012	120	6	47/67	114
	374 (100%)	23 (6%)	138/213 (39%/61%)	351 (94%)

Table 3. The learning assignment

The learning assignment of delivering a cancer diagnosis to a patient
Instructions for the students: Read the patient scenario carefully, reflect on the case and describe: 1. *What aspects of the case would need special attention when delivering the news and why?** 2. *How would you act in the situation? How would you prepare in advance, deliver the news and take the patients reactions into account in the situation?** 3. *How do you think the case would make you feel? Try to determine what kinds of emotions would be provoked if this happened in actual practice. What do you find difficult in delivering bad news in this case or in general?* You work as a general practitioner in public health services. Your patient is a 38-year-old woman called Maria. She works as a human resources officer in the banking sector. You are meeting Maria for the second time. Maria is a single mother of two. The children are aged three and seven. She takes care of her elderly parents by supporting their ability to live at home. Maria came for a consultation for the first time about a week ago. The reason for the consultation was that she had noticed a lump in her breast in the summer that had not disappeared. She told you she had started to examine her breasts regularly after her friend had been operated on for a lump in a breast. Even though the lump that had been found in her friend's breast, half a year ago, was found to be benign, Maria now admits that she is feeling anxious. She is certain about the malignity of the finding, and she is sure that it is going to be cancer. She tells you she has felt much stressed **at times, recently**. She had also started smoking. About a year after her divorce, she had to increase her working hours due to the family's financial situation. Because she has no time for herself, she does not exercise. She tends to eat irregularly despite her lunch break at work. Health food products and vitamins have supported her in coping with everything. A family anamnesis shows that there is a history of cancer on her mother's side of the family (her aunt has recently been diagnosed with breast cancer, and her mother's mother died of cancer). When examining the patient, **you noticed a lump the size of a couple of centimetres, during palpation.** The lump was not sore; it was solid and attached to its surroundings. During the first consultation, you wrote her a referral for a mammography and ultrasound examination with a biopsy if needed. After a week or so you are in the middle of a busy day at work when your patient's results arrive. All the consultations for the day are scheduled and fully booked. A biopsy was taken along with the mammography and the ultrasound. A malignant tumour, the size of two centimetres, was found. The tumour was further examined by an incisional biopsy. The histopathological examination shows a malignant tumour, and the prognosis does not seem good. Maria needs to be urgently referred to

the Surgery Outpatient Clinic for surgical estimation. The transmission and possible metastasis will become clear only from the biopsies from the surgery. This also determines the treatment solutions.

* Answers to these questions were not included in this analysis

Table 4. The categories by frequency (n=351)

Categories	**Frequency of expressions**	**(%)**
Empathy	277	79%
Insecurity	163	46%
Anxiety	161	46%
Emotional detachment	115	33%
Sadness	105	30%
Ambivalence	103	29%
Guilt	36	10%
Hope	35	10%
Frustration	31	9%
Gratefulness	3	1%
Total of expressions	**1029**	**100%**

Table 5. Coding scheme: expressions included in categories

Empathy	Insecurity	Anxiety	Sadness	Ambivalence	Guilt	Hope	Frustration	Gratefulness	Emotional detachment
Empathy	Uncertainty	Anxiety	Sadness	Tension discrepancy	Guilt	Optimism	Frustration	Gratefulness	Getting used to the situation
Sympathy	Uncontrollability	Discomfort	Disappointment	Balancing between being empathic vs. acting professionally	Causing sadness/pain	Positive attitude	Anger	Feeling privileged	Accepting
Concern	Unpredictability	Worry	Sorrow	Cherishing hope vs. being dishonest	Letting the patient down	Hopefulness	Unfairness	Curiosity about facing the situation	Managing the situation
Compassion	Inadequacy	Feeling upset		Staying calm and controlling one's emotions vs. being strong and professional	Wrecking the patient's life				Keeping distant
Understanding	Helplessness	Distress		Acting compassionately vs. being busy with other things					Keeping a professional role
Identifying	Powerlessness	Nervousness		Balancing between one's own emotions vs. expected behaviour as a physician					Dealing with one's duties
Recognition	Not being able to find the right words, having no answers	Hopelessness							Self-protection and coping
	Lack of experience and confidence	Fear							
	Feeling small								