BMJ Open

Teachers' experiences of adolescents' pain in everyday life: a qualitative study

Gudrun Rohde,[1] Thomas Westergren,[1] Kristin Haraldstad,[1] Berit Johannessen,[1] Magnhild Høie,[2] Sølvi Helseth,[1,3] Liv Fegran,[1] Åshild Slettebø[2]

To cite: Rohde G, Westergren T, Haraldstad K, *et al*. Teachers' experiences of adolescents' pain in everyday life: a qualitative study. *BMJ Open* 2015;**5**: e007989. doi:10.1136/bmjopen-2015-007989

▸ Prepublication history for this paper is available online. To view these files please visit the journal online (http://dx.doi.org/10.1136/bmjopen-2015-007989).

Received 17 February 2015
Revised 12 August 2015
Accepted 14 August 2015

[1]Faculty of Health and Sport Sciences, University of Agder, Kristiansand, Norway
[2]Faculty of Health and Sport Sciences, University of Agder, Grimstad, Norway
[3]Oslo and Akershus University College of Applied Sciences, Faculty of Health Sciences, Oslo, Norway

Correspondence to
Dr Gudrun Rohde;
gudrun.e.rohde@uia.no

ABSTRACT

Objectives: More adolescents report pain now than previously. In Norway, episodic pain problems have been reported by 60% of children and adolescents aged 8–18 years, with 21% reporting duration of pain of more than 3 months. Since adolescents spend much time at school, the attitude and behaviour of teachers play important roles regarding the experience of pain felt by adolescents in everyday life. Yet research on how teachers perceive the pain experienced by adolescents in a school setting is limited. We therefore seek to gain insight to teachers' classroom experiences with (1) adolescent's self-reported pain symptoms; (2) adolescents management of their pain and (3) how to help adolescents manage their pain.

Setting: Teachers in 5 junior high schools in Norway representing municipalities in 3 rural areas and 2 cities.

Research design: A qualitative study with an explorative design comprising 5 focus group interviews. Each group consisted of 3–8 junior high school teachers. A semistructured interview guide was used to cover the issues. The transcribed text was analysed with qualitative content analysis.

Participants: 22 teachers participated (5 men, 17 women; age range 29–62 years) with teaching experience ranging from 3 to nearly 40 years.

Results: The main theme describing the experience of teachers with adolescents' pain in everyday life is that pain and management of pain is a social, physical and psychological interwoven phenomenon. Through empirical analyses, 3 subcategories emerged:
(1) everyday pain—expressing strenuous life;
(2) managing pain—escaping struggle and
(3) strategies of teachers—support and normalisation.

Conclusions: Teachers have a biopsychosocial understanding and approach to pain experienced by adolescents. This understanding influences the role of teachers as significant others in the lives of adolescents with regard to pain and management of their pain in a school setting.

Strengths and limitations of this study

- The study adds knowledge about how classroom teachers consider the experience of pain by adolescents in a school setting, and how they can guide or assist adolescents in managing pain.
- Input from teachers from both rural and urban areas, and a variation in age and experience as a teacher.
- The topic was addressed to the teachers and not the adolescents. This approach might be questioned because these causes and consequences may not be the experience of the adolescents.

BACKGROUND

The number of adolescents who experience pain is increasing and this implies challenges for the adolescent individuals and society in general. In international studies, the prevalence of persistent pain in adolescents is 15–25%,[1–5] and studies show associations between pain and social and psychological problems, such as limitations in social function, psychological distress, anxiety, sleep problems and absence from school. Moreover, self-reported pain increases with age, and older children report more pain than younger children do.[1 3 5–7] In a cross-sectional study of 569 Norwegian children (10–15 years old), 73% reported problems with episodic pain.[7] Haraldstad *et al*[3] found episodic problems with pain in 60% of children and adolescents aged 8–18 years, with 21% reporting duration of pain of more than 3 months. Disturbed sleep because of pain was reported by 59% of the girls and 45% of the boys. The most frequent triggers of pain were the school situation, schoolwork, lack of sleep, cold/illness and feeling sad.[3] In Norway, the use of pain medication by young people has increased.[3 8 9] One study reported that 50% of boys and 72% of girls had used pain medication without prescription in the previous month, while 26% of adolescents used pain medication 1–7 times per week.[8] Poorer health, more pain, higher incidence of headache, abdominal pain and back pain have been identified among adolescents in families with low education and low household income.[10]

Pain might be defined as 'whatever the person experiencing it says it is, existing

whenever they says it does'.[11] For the past decade, the main approach to pain in healthcare has been biopsychosocial, that is, including all biological, psychological, and social causes and consequences.[12 13] A biopsychosocial model or approach might include a reciprocal influence or circle of (1) life events or stress; (2) injury, trauma or disease; (3) lifestyle, for example, inactivity and stress and (4) psychological factors, for example, stress, family, relations and friends.[12]

Any understanding of the experience of pain by adolescents should include an understanding of the social context within which the adolescent experiences pain, and the way in which the response of family, peers and teachers contributes to the knowledge, attitudes and behaviour of adolescents. The family's response to pain and variability in coping influences the degree of functional disability that accompanies the pain experienced by the adolescent,[14–19] and a statistical correlation between the parents' experiences of pain and the adolescents' pain rating has been shown.[20] How peers communicate attitudes and perceptions of pain, analgesics and management influences the adolescents with pain,[21] including school absenteeism.[9 22] Meldrum *et al*[23] suggest that significant adults, such as parents and teachers, may help children and adolescents to manage their pain.

Adolescents spend much time at school, and teachers must relate to the adolescents' behaviours, attitudes and experiences of pain and stressful events. Teachers' support and understanding of pain might influence the adolescents' management of pain and school-related functioning.[5] Logan *et al*[24] found that teachers tended to endorse a dualistic (eg, physical or psychological) model for pain rather than a biopsychosocial model, which implies that the teachers viewed the causes of illness as either physical or psychological. In another study, the teachers reported wide individual variation in presentation of symptoms and impairment by adolescents' pain, and balancing individual accommodation, parent's expectations and school demands was extremely challenging. Furthermore, they reported a need for more knowledge and guidance from healthcare professionals regarding how to manage pain symptoms and pain-related behaviour in a school setting.[9] How teachers describe pain may affect how they understand the pain and respond to the adolescents' pain in a school setting, which might influence how adolescents themselves experience and manage pain.[25 26] Teachers are significant adults in the lives of adolescents and their roles in the everyday lives of adolescents are important. Teachers have to deal with the expression of pain by adolescents, pain management and other consequences of the pain, for example, school absenteeism.[22]

Pain problems in adolescents are well known. However, little research has been conducted into how teachers consider the experience of pain by adolescents in a school setting, and there are scarce documentations or plans into how to handle the problems in a school setting. The aims of this study are therefore to gain deeper insight into teachers' classroom experiences with (1) adolescents' self-reported pain symptoms, (2) adolescents' management of their pain and (3) how to help adolescents manage their pain.

METHODS

To explore the multifaceted complexity of teachers' perceptions of adolescents' pain and experience of pain, we chose a qualitative approach with focus group interviews. Since research on teachers' perceptions of the experience of pain by adolescents and its management is scarce, we chose an exploratory design and not a theory-generating design. We conducted five focus group interviews with teachers in five junior high schools in southern Norway, representing municipalities in three rural areas and two cities. A qualitative analysis of the transcribed data from the interviews was performed.[27 28]

RECRUITING AND SAMPLE

To obtain maximum variation, a purposive sample of junior high schools with adolescents aged 12–16 years from various cultural and sociodemographic backgrounds and urban/rural areas was chosen. The school principals were contacted and they requested the teachers' voluntary participation. We have no information about teachers who may have declined to participate. The inclusion criterion was a minimum of 2 years' experience of teaching adolescents in junior high schools.

Of the 22 teachers who participated, 5 were men and 17 were women. The age range of participants was 29–62 years, with teaching experience ranging from 3 to nearly 40 years. In addition to their roles as classroom teachers, the teachers had roles as specialist teachers, such as language teachers, physical education teachers and school counsellors.

DATA COLLECTION

The focus group interviews were conducted during the spring semester in 2013. The interviews took place at the teachers' respective schools at a time convenient for them, with interview sessions lasting 70–90 min. Each group consisted of three to eight participants. Two researchers moderated the group sessions, one as a moderator, and the other as a co-facilitator. The sessions were formed by a semistructured interview guide. The main points in the guide were the teachers' experiences with the pain problems of adolescents, how adolescents expressed pain, differences between sexes in expressing pain, how adolescents managed pain themselves, what the teachers did when confronted with adolescents' pain, and co-operation with school nurses and parents. Each interview was digitally recorded and transcribed verbatim by a professional transcriber. Transcripts also included notes and logs taken by the moderator and co-facilitator during the sessions.

DATA ANALYSIS

The interviews were transferred to NVivo V.10 software, to organise the transcripts into codes and units of meaning.[29] Data were analysed through an inductive approach starting with meaning condensation, categorisation and thematisation. Steps of analysis were: (1) reading all the material to obtain an overall impression and bracketing preconceptions; (2) identifying units of meaning, representing different aspects of the teachers' experiences and coding for these; (3) condensing and abstracting the meaning within each of the coded groups and (4) summarising the contents of each coded group to generalise descriptions and concepts to a main theme reflecting the most important experiences reported by the teachers.[28]

The researchers were nurses who had a health-promotion perspective. Our preconceptions were that teachers are significant others who guide or assist adolescents in managing pain and how pain influences school performance and everyday life

ETHICAL CONSIDERATIONS

Throughout the conduct of the study, the ethical principles of autonomy, beneficence, non-maleficence and justice were assured,[30] in addition to following the Helsinki Declaration.[31] According to Norwegian law, the study was exempted from approval by the Regional Ethical Committee because it was not asking for health data and did not include patients. Participants were given written and oral information, and written informed consent was obtained for participation. All participants agreed to have the interviews recorded and none withdrew during or after the interviews. The voluntary nature of the study and confidentiality were assured during the collection, handling and reporting of the data.

FINDINGS

The main theme of our findings concerning teachers' experiences with adolescents' pain is that pain in everyday life is a social, physical and psychological interwoven phenomenon. Through empirical analyses, three subcategories emerged: (1) everyday pain—expressing strenuous life; (2) managing pain—escaping struggle and (3) strategies of teachers—support and normalisation.

EVERYDAY PAIN—EXPRESSING STRENUOUS LIFE

The teachers report that although most adolescents express physical pain as a way to enter into contact with their teacher about their pain, in most cases, there are also psychological and social components—the physical reason is used as a gate opener. The teachers' understanding is that the strenuous life lived by adolescents is manifested in their bodies and causes pain. They need to talk with a known adult:

> Stomach pain and feelings like that, after a while it's shown that they're caused by problems they're struggling with.

The teachers think that they should have more time for conversation with adolescents, including time to discuss problems concerning the pain they experience. However, when teachers use time for such conversation, it encroaches on the time available for teaching.

Teachers report that they receive more complaints about physical pain now than they used to, and in many cases they relate this to a lower pain threshold. Experienced teachers comment that adolescents in previous generations tolerated more pain, and this might be a reason why adolescents nowadays express more pain:

> Previously the finger could be nearly cut off. Now it's enough if there's a splinter in the finger.

The teachers experience the group of adolescents with pain as heterogeneous. Adolescents from all socioeconomic classes express pain, both in families with and without known psychosocial problems. The teachers consider that more girls than boys express pain. However, they also report that boys have become more like the girls in that they complain more about pain. In addition, the boys have changed how they express their problems from being more physical and sometimes violent to expressing greater apathy and more complaints about pain.

The teachers express their concern that more adolescents have a medical diagnosis and question the reason for such diagnoses. Ordinary life hurts and small crises —common in this age group—are given diagnoses:

> Pupils, and not least the parents, actually wish to have a diagnosis. It's easier to hide behind a diagnosis.

The teachers report that adolescents today want immediate relief when they experience pain and everyday challenges, which implies that such challenges are hard to accept when they occur. The teachers describe an ideal of no harm or pain. The adolescents have limited experience in managing resistance to pain. Some parents willingly do what they can to help their adolescent children avoid experiencing pain and also learn to resist (deal with) pain. The teachers explain this as a general trend in society:

> Everything is fixed, everything is served up on a silver plate, and you just have to click on the internet to find solutions.

Teachers note that today's adolescents have to deal with many demands, even more than previous generations. In the school setting, they have to perform academically, such as in tests and oral presentations. At school, adolescents are constantly visible and are continuously being measured and evaluated. They compare

themselves with their peers and desire to be like them. To avoid expectations, adolescents might blame failure on pain, which is seen as a legitimate excuse according to the teachers.

The teachers claim that adolescents have to succeed in all arenas, including academically and at sports and leisure activities, and to have a perfect and fit body. Pain relieves stress and excuses failure for some of the adolescents. There is limited space and time when adolescents can just relax and chill out. Their increased presence on social media such as Facebook, Twitter and Instagram increases the demand to be visible and perfect all the time. The teachers believe adolescents are afraid of being discredited. One of the teachers characterises this as like riding a rollercoaster and being bombarded with expectations and further explained:

> I don't know how much pain all the information from the mobile phone creates, but it implies enough harm to make pupils not pay attention in class because they're thinking about what's going on in the internet or in the last break.

MANAGING PAIN—ESCAPING STRUGGLE

Next, we present the teachers' experiences of how adolescents manage strenuous lives and pain. Teachers note that adolescents are using more painkillers now than before, both with and without prescriptions. Teachers are not permitted to give students painkillers; however, the students bring painkillers themselves or obtain them from friends at school:

> They bring painkillers in their lunchbox.

The problems adolescents have with pain receive attention from a number of individuals, including teachers, school nurses and school counsellors. The teachers see apathy and avoidance being used as strategies to cope with situations that produce pain. Apathy is manifested as a lack of enthusiasm in most situations and thereby a way to escape. According to the teachers, the escape is experienced by the adolescents as pain related and as an escape from responsibilities:

> The enthusiasm is no longer there. It seems like they give up, many of them. They quit, they feel there is no point in doing anything.

According to the teachers, some adolescents avoid situations where they have to perform and be visible to others, such as in tests, oral presentations and physical education. In some cases, they avoid vulnerable situations and skip school when they feel exposed:

> They stay home, they go home. They go home and parents accepts it.

STRATEGIES OF TEACHERS—SUPPORT AND NORMALISATION

Teachers put forward a number of suggestions when asked how they can guide or assist adolescents in managing pain. Their main strategies are to assist adolescents manage strenuous lives and pain by helping them to relax and normalise uncertain situations. The teachers spend time with the adolescents talking about unrealistic life expectations and normal lives. Furthermore, they can tell them that it is normal to feel insecure and not to be able to handle all situations at their age. The teachers try to create a safe environment in the class. They also want to have fewer pupils in classes to create more time for individual talk. Relaxation and meditation techniques are mentioned by teachers as ways of assisting the adolescents to manage pain.

Co-operation with school staff and parents is crucial. The teachers have experienced close co-operation with most of the parents when handling adolescents' pain, and this is emphasised as a necessity:

> It is important to make the parents safe. If you are able to create a good relationship with the parents, make them feel that their children are number one, then you have come a long way with the parents.

School nurses and the social counsellors are essential partners in handling the adolescents' pain; school nurses, in particular, are highlighted as a fundamental resource in helping adolescents with pain.

DISCUSSION

The aims of this study were to explore teachers' experiences with adolescents' self-reported pain symptoms, and also how to help adolescents manage their pain. The main findings show that the teachers perceive the pain experienced by adolescents as a social, physical and psychological interwoven phenomenon, with a focus on social aspects. They report that an increased focus on academic performance and physical education at school, and a continuous presence on social media contribute to a greater experience of pain by adolescents, along with a lower pain threshold. The main pain management mechanisms of adolescents seem to be painkillers, avoidance, apathy and endurance. The teachers' main approaches to helping the adolescents manage pain are taking time to talk with them; guiding them to relax more and spend less time on their computers; and fostering co-operation between parents, school nurses and other teachers.

Physical, psychological, and social causes and consequences of pain all contribute to the teachers' experiences of the adolescents' pain and influence how they approach the problems. This can be interpreted as a biopsychosocial approach, and its application is seen

throughout our findings with regard to teachers' perceptions of the pain experienced by the adolescents. Our findings add nuance to those of Logan *et al*[24] who report that teachers tend to have a dualistic focus on either physical or psychological causes for pain. Among our teachers, there is a special focus on social and psychological causes and consequences of the pain experienced by adolescents, in addition to the physical aspects. The variation between the two studies may be explained by the different cultural context between schools in the USA and Norway, and the interval between the two studies. In general, a greater understanding of pain as a biopsychosocial phenomenon in general has developed.[12 13] However, although this model has been dominant among healthcare professionals over the past decades, this is not the case to the same extent among educators.[24] A biopsychosocial approach is consistent with the way adolescents see psychosocial problems as causes of pain, as described by Haraldstad *et al*.[3]

The teachers in our study claim that the social context of the adolescents can cause pain and influence pain expression and management in positive and negative ways. The adolescents compare their academic and physical performance and appearance with their peers, and get feedback from both peers and teachers. The media and society in general accentuate this stress. Hatchette *et al*[17] also emphasise that knowledge of the social context of the adolescents is a prerequisite for understanding pain and pain management mechanisms. This knowledge is necessary to understand the phenomenon and how these experiences influence the adolescents' attitude and behaviour.[17] Furthermore, peer communication and expectations are also shown to influence the attitudes and perceptions of pain and pain management mechanisms.[21]

Our findings show that the teachers adopt the role as a significant other for the adolescents to help them with their pain and do so willingly.[25 26] They try to contribute to the relief of the pain and improve health in line with Meldrum *et al*,[23] and partly in contrast with Logan and Curran,[9] where the teachers revealed challenges related to working with adolescents with pain in schools. Most teachers in our study willingly accept the challenge of deeper conversations with the adolescents about their problems with pain, although this might be attributed to selection bias because the teachers who participated in the interviews did so willingly. Other teachers in our study look on these conversations as a task for the school nurses.

Current Norwegian national guidelines require adolescents to be more visible and perform better in a school setting than before, and this might cause the feeling of stress and pressure among adolescents. As shown in our findings, teachers employ a number of strategies to relieve the pressures experienced by the adolescents to some extent by giving students tools to manage pain and stress. Few studies have looked at the role of teachers in helping adolescents manage their pain. According to Logan *et al*,[24] a dualistic approach by teachers to the pain experienced by adolescents may shape the role teachers adopt when responding to the pain shown by adolescents, and this approach may differ from the biopsychosocial approach of teachers in our study. Vervoort *et al*[5] report that teacher support of students increases competence and autonomy to directly facilitate school-related outcomes, as well as to potentially protect vulnerable children, particularly those with the most severe pain problems, from poorer school-related outcomes (eg, increased absenteeism). This shows that the teacher plays an important role in supporting the adolescents, and in helping them to cope with the pain problems.

The teachers in our study want to be what Mead called 'a generalised other',[25 26] a significant adult in the adolescents' lives with regard to their pain. The response of the teachers to and evaluation of the pain experienced by the adolescents influence the behaviour of the adolescents towards their pain and social interaction in general. The adolescents learn different social roles in accordance with the references or sanctions given by others, their surrounding social milieu and society in general.[25 26] Furthermore, these roles might influence the conscious way that adolescents look on themselves and their own behaviour. In our study, the teachers appear to be aware of their role as a significant other in the lives of the adolescents—including helping them manage their pain—and willingly take this role.

METHODOLOGICAL CONSIDERATIONS

There are some limitations to our study. The researchers in the group are all nurses and had a health-promotion focus in the interviews, even though they attempted to separate their preconceptions, especially in the analysis process. A health focus might therefore influence our findings and discussion. We addressed the topic with the teachers and not the adolescents. The teachers clearly express the causes and consequences of the pain experienced by adolescents, and their perceptions and thoughts may be seen as too categorical. Further, this approach might be questioned because these causes and consequences may not be the experience of the adolescents. Conversely, the teachers in our study have spent many hours with the adolescents with pain, and reveal a broad and complex understanding of the pain experienced by adolescents throughout the interviews. The teachers participating in the focus group interviews might be considered as a homogeneous group with a special insight into the complexity and consequences of pain. Focus groups as a means of data collection may have weaknesses, for example, not all participants may get an equal time to talk. Then again, focus groups may stimulate reflection on the topic among teachers, and thereby enrich the data.

The strength of our study is the input from teachers from both rural and urban areas, which might be

interpreted as a heterogeneous group; however, this was done to ensure richness and variation in the data. Furthermore, it is a strength of our study that the ages and experience of the teachers vary broadly and they are interested in the issue. To validate the findings, the entire research group participated in the analysis process. Although our findings are not broadly generalisable, they may be transferrable to similar cultural contexts and settings.

IMPLICATIONS FOR PRACTICE

The findings from the present study imply that including classroom teachers in management of everyday pain experienced by adolescents is beneficial. The teachers experienced everyday pain as an expression of a self-perpetuating cycle of struggle, of which adolescents escape through painkillers, apathy and school-absenteeism. Teachers may, as significant others of adolescents who spend much time with them during the day, contribute to reciprocal development of expression and management of strenuous life beyond physical pain expression and escape. School settings offer opportunities to promote health and well-being in adolescents. However, more knowledge about how pain is experienced by adolescents and how adolescents manage their pain is needed before designing health interventions in a school setting. Nevertheless, collaboration with teachers when designing pain management interventions may be beneficial.

CONCLUSIONS

Teachers mainly perceive the pain experienced by adolescents as a self-perpetuating cycle of stress, trauma or illness, lifestyle and sociopsychological factors. The teachers note that the adolescents might benefit from spending less time connected to the internet and social media, and taking more time to relax. An acceptance of challenges and the normality of not being perfect and without pain is also desirable. The teachers willingly consider themselves as significant others for the adolescents in helping them better manage their problems with pain.

Contributors GR was responsible for the study design, participant recruitment, data analysis and manuscript preparation. She was the focus group moderator. TW was the focus group co-facilitator in three of the focus groups, and contributed to data analysis and manuscript preparation. KH and BJ were focus group co-facilitators in one of the focus groups, and contributed to a critical appraisal of the research design and manuscript preparation. MH, SH and LF contributed to a critical appraisal of the research design and manuscript preparation. ÅS contributed to the ethics clearance, data analysis and manuscript preparation. All authors contributed to a critical appraisal of the research design and manuscript preparation, and have read and approved the final version of the manuscript.

Funding This research was funded by the Regional research fund Agder, and the University of Agder, Faculty of Health and Sports Sciences.

Competing interests None declared.

Patient consent Obtained.

Ethics approval The study was approved by the Norwegian Social Science Data Services (NSD) (approval number 32829) for safe handling and storing of data.

Provenance and peer review Not commissioned; externally peer reviewed.

Data sharing statement No additional data are available.

REFERENCES

1. Roth-Isigkeit A, Thyen U, Raspe HH, *et al*. Reports of pain among German children and adolescents: an epidemiological study. *Acta Paediatr* 2004;93:258–63.
2. Petersen S, Hägglöf BL, Bergström EI. Impaired health-related quality of life in children with recurrent pain. *Pediatrics* 2009;124:e759–67.
3. Haraldstad K, Sørum R, Eide H, *et al*. Pain in children and adolescents: prevalence, impact on daily life, and parents' perception, a school survey. *Scand J Caring Sci* 2011;25:27–36.
4. Hoftun GB, Romundstad PR, Zwart JA, *et al*. Chronic idiopathic pain in adolescence—high prevalence and disability: the young HUNT Study 2008. *Pain* 2011;152:2259–66.
5. Vervoort T, Logan DE, Goubert L, *et al*. Severity of pediatric pain in relation to school-related functioning and teacher support: an epidemiological study among school-aged children and adolescents. *Pain* 2014;155:1118–27.
6. Petersen S, Bergstrom E, Brulin C. High prevalence of tiredness and pain in young schoolchildren. *Scand J Public Health* 2003;31:367–74.
7. Bruusgaard D, Smedbraten BK, Natvig B. Bodily pain, sleep problems and mental distress in schoolchildren. *Acta Paediatr* 2000;89:597–600.
8. Lagerlov P, Holager T, Helseth S, *et al*. [Self-medication with over-the-counter analgesics among 15–16 year-old teenagers]. *Tidsskr Nor Laegeforen* 2009;129:1447–50.
9. Logan DE, Curran JA. Adolescent chronic pain problems in the school setting: exploring the experiences and beliefs of selected school personnel through focus group methodology. *J Adolesc Health* 2005;37:281–8.
10. Groholt EK, Stigum H, Nordhagen R, *et al*. Recurrent pain in children, socio-economic factors and accumulation in families. *Eur J Epidemiol* 2003;18:965–75.
11. McCaffery M, Beebe A. Making the best of inadequate analgesics. *Nursing* 1994;24:32C–D.
12. Kozlowska K, Rose D, Khan R, *et al*. A conceptual model and practice framework for managing chronic pain in children and adolescents. *Harv Rev Psychiatry* 2008;16:136–50.
13. Gatchel RJ, Peng YB, Peters ML, *et al*. The biopsychosocial approach to chronic pain: scientific advances and future directions. *Psychol Bull* 2007;133:581–624.
14. Claar RL, Baber KF, Simons LE, *et al*. Pain coping profiles in adolescents with chronic pain. *Pain* 2008;140:368–75.
15. Smart S, Cottrell D. Going to the doctors: the views of mothers of children with recurrent abdominal pain. *Child Care Health Dev* 2005;31:265–73.
16. Simons LE, Claar RL, Logan DL. Chronic pain in adolescence: parental responses, adolescent coping, and their impact on adolescent's pain behaviors. *J Pediatr Psychol* 2008;33:894–904.
17. Hatchette JE, McGrath PJ, Murray M, *et al*. Maternal influences in adolescents' pain self-management: a qualitative investigation. *Vulnerable Chil Youth Stud* 2006;1:159–69.
18. Logan DE, Simons LE, Carpino EA. Too sick for school? Parent influences on school functioning among children with chronic pain. *Pain* 2012;153:437–43.
19. Logan DE, Claar RL, Scharff L. Social desirability response bias and self-report of psychological distress in pediatric chronic pain patients. *Pain* 2008;136:366–72.
20. Schanberg LE, Anthony KK, Gil KM, *et al*. Family pain history predicts child health status in children with chronic rheumatic disease. *Pediatrics* 2001;108:E47.

21. Hatchette JE, McGrath PJ, Murray M, *et al*. The role of peer communication in the socialization of adolescents' pain experiences: a qualitative investigation. *BMC Pediatr* 2008;8:2.
22. Sato AF, Hainsworth KR, Khan KA, *et al*. School absenteeism in pediatric chronic pain: identifying lessons learned from the general school absenteeism literature. *Chil Health Care* 2007;36:355–72.
23. Meldrum ML, Tsao JC, Zeltzer LK. "I can't be what I want to be": children's narratives of chronic pain experiences and treatment outcomes. *Pain Med* 2009;10:1018–34.
24. Logan DE, Catanese SP, Coakley RM, *et al*. Chronic pain in the classroom: teachers' attributions about the causes of chronic pain. *J Sch Health* 2007;77:248–56.
25. Collins R. *Four sociological traditions. Rev. and expanded ed. of three sociological traditions*, ed. New York: Oxford University Press, 1994.
26. Mead GH. Thought as internalized conversation. In: Collins R, ed. *Four sociological traditions: selected readings*. New York: Oxford University Press, 1994:298–303.
27. Malterud K. *Kvalitative metoder i medisinsk forskning: en innføring*. 3. utg. ed. Oslo: Universitetsforl., 2011.
28. Crabtree BF, Miller WL. *Doing qualitative research*. Thousand Oaks, CA: Sage, 1999.
29. http://www.qsrinternational.com/products_nvivo.aspx [program].
30. Beauchamp TL, Childress JF. *Principles of biomedical ethics*. 7th edn. New York: Oxford University Press, 2013.
31. WMA Declaration of Helsinki. Ethical Principles for Medical Research Involving Human Subjects. Secondary Ethical Principles for Medical Research Involving Human Subjects 2013. http://www.wma.net/en/30publications/10policies/b3/