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Pain and development of identity in adolescents who frequently use over-the-counter analgesics: a qualitative study

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ABSTRACT

Aims and objectives: This study aims to describe conditions that may influence the development of identity in adolescents frequently using over-the-counter analgesics (OTCAs).

Background: Frequent self-medication with analgesics among adolescents is associated with several physical pain points, low self-esteem and low ambitions for the future. Continuous use of OTCAs can keep adolescents from learning healthier coping strategies.

Design: Qualitative individual interviews with adolescents and their mothers were conducted and transcribed. Further, they were analyzed as dyads.

Setting and participants: Students aged 14–16 years in 9th and 10th grades in 10 Norwegian junior high schools self-reporting at least weekly use of analgesics were asked to participate. Those who wanted to take part took a consent letter to their parents, also inviting the parent to participate.

Results: Six girls, two boys and their mothers were included. The teenagers were highly dependent on their mothers. They had often been bullied, lacked good relationships with peers, avoided conflicts and strived to be accepted. Their mothers felt solely responsible for their upbringing and showed great concern for all the pain experienced by their child. A close relationship between mother and child influenced how the adolescent managed their pain, including their use of OTCAs. Three main themes were identified in the stories of mother and child: “Vulnerable adolescents,” “Mother knows best” and “Pain is a shared project.”

Conclusions: Pain among adolescents may be amplified by a difficult family situation and insecure relationships with peers. Strategies within the family may sustain pain as a shared project keeping the adolescent and main caregiver close together, and this might be hampering identity development. To help adolescents with pain and high consumption of OTCAs, the adolescents’ relationship with parents must be considered in designing an intervention. Guidance on pain assessment, pain management, including appropriate use of OTCAs, should be included.

What does this paper contribute to the wider global community?

High use of OTCAs among adolescents might signal that he or she is struggling with complex psychosocial problems.

In supporting an adolescent struggling with pain and high consumption of OTCAs, what should be targeted is the pain management strategies within the family.

Keywords (MeSH terms): adolescents, non-prescription drugs, over-the-counter analgesics, identity, pain management, qualitative research

INTRODUCTION

Adolescents frequently use non-prescribed analgesics, also called over-the-counter analgesics (OTCAs), and their use of OTCAs has increased in the past two decades (Wu, Pilowsky, & Patkar, 2008; Lagerl v, Holager, Helseth, & Rosvold, 2009). OTCA drug misuse is a global health challenge (Conca & Worthen, 2012; Groenewald, Essner, Wright, Fesinmeyer, & Palermo, 2014; Lessenger & Feinberg, 2008). High use of OTCAs among youth is associated with frequent pain from various parts of the body, reduced sleep, more part-time work and lower self-esteem (Skarstein et al., 2014). Continuous use of OTCAs to combat pain and to avoid stress can keep adolescents from learning healthier coping strategies. They may then be more likely to use OTCAs to cope with pain and such behavioral pattern might following into adulthood (Holmstr m, Bastholm-Rahmner, Bernsten, R ing, & Bj rkman, 2014; Koushede & Holstein, 2009). Teens' attitudes toward use of OTCAs also vary, and may range from responsible to careless (Hansen, Holstein, Due, & Currie, 2003; Holmstr m et al., 2014). The strategies of pain management within the family influence adolescents' use of OTCAs. The fact that the family interacts differently during pain seems related to adolescents' pain perception and management (Lagerl v, Rosvold, Holager, & Helseth, 2016). Furthermore, parents' and especially the mother's information about pain and pain management can influence the adolescents' perception of pain and their pain management (Hatchette, McGrath, Murray, & Allen Finley, 2006; Jensen et al., 2014; Simons, Claar, & Logan, 2008). Therefore, there might be reasons to assume that attachment to mothers in childhood and upbringing are important for future pain management, including use of OTCAs. In this perspective, mothers have a significant influence on the child's thoughts, feelings and behavior (Ainsworth, Bell, & Stayton, 1994; Allen, Moore, Kuperminc, & Bell, 1998). Erikson (1993) points out that a person's psychosocial development takes place in interaction with the surroundings. Further, Erikson points out that a person's identity is shaped and stabilized during adolescence. In this context, identity is a concept that includes self-esteem, self-worth and self-respect (Bandura, 1997). Questions like "who am I, how do I fit in and what is my direction in life?" become present. There is limited understanding of the connection between identity development, pain management and use of OTCAs among adolescents. Exploring the connection, as has been done in this study, might be useful for designing interventions to support adolescents with pain and frequent use of OTCAs.

This study aims to describe pain management and conditions that may influence the development of identity in adolescents frequently using analgesics, through interviewing adolescents and their mothers.

METHODS

Study design

A qualitative design was chosen. This included face-to-face, in-depth interviews with adolescents and their mothers, which were conducted separately. The interviews were analyzed as dyads, and each dyad included an adolescent and his or her mother.

Settings and participants

Six girls, two boys and their mothers were included. The sample was based on self-selection. The adolescents themselves contacted the researcher if they wanted to participate. The adolescents recruited their parents. All participants voluntarily participated with informed written consent.

Adolescents were 14–16 years old and recruited from 9th and 10th grades in 10 Norwegian schools in urban and suburban areas. To be eligible, both adolescents and mothers had to be able to read and understand Norwegian. The adolescents must have used OTCA on a daily or weekly basis within the past year. The exclusion criteria were acute or chronic illness requiring OTCA within the past year.

Twenty random schools were invited by a letter to the headmaster. The principals of 10 schools let us recruit adolescents from their schools and gave written confirmation to inform and recruit adolescents at their schools. The 10 schools that refused to participate were already involved in many other projects.

One researcher, a psychiatric nurse, visited all 10 schools and presented information about the project to 52 classes. The adolescents also received written information about the project and contact information to take home to their family, with a request for participation of parents whose

adolescents consented to participate. It was a requirement that adolescents younger than 16 years of age volunteered with consent at the level of parents. Adolescents and parents contacted the researcher by telephone to schedule a time for an interview.

The same researcher conducted all the interviews. The interviews were conducted either in a meeting room at the adolescents' school or in the researcher's office dependent on what each participant preferred. Interviews lasted about one hour.

Participants were recruited and interviewed until the research group was confident that no new themes emerged and saturation was reached (Morse, Barrett, Mayan, Olson, & Spiers, 2002). The audio files and the transcribed material were organized and saved in the program NVivo 11 (QSR International, 2016).

Although fathers were not excluded from participation, mothers were the common participating parent, only one father participated. Therefore, we chose to focus on mothers and adolescents in this study. Lack of participation from fathers was not unexpected and in line with a similar study, as mothers typically take charge of the issues that are related to their children's health (Hatchette et al., 2006).

Interview guides

Two thematic, semi-structured interview guides were developed: one for adolescents and a separate one for their mothers. Thematic areas in the interview guides were developed in collaboration with a team of experienced school nurses from secondary schools. Both interview guides were designed with open-ended questions to gain broad and complementary information. As far as possible and without losing relevance to the theme, the participants were allowed to speak freely and share their thoughts and experiences. The interview guide for the adolescents had prompts such as "Tell me about your life." The focus of the interviews of the mothers was primarily on their youth's life. In

advance, we had interviewed their child, but information from this interview was not brought in, referred to or in any other way used in the interview with the mothers. The mothers' interview guide also included general prompts such as "Tell me about your adolescent's life." On this basis, topics such as family, friends, school, coping strategies, feelings, leisure-time activities, health, pain, pain management and use of OTCAs were explored.

Data analysis

The dyadic analysis is inspired and structured by the theory of Brinkmann and Kvale (2008) and done within the three contexts:

- 1.) Self-understanding; this refers to how the participants reflect and understand their own expressions.
- 2.) Common sense; this refers to how people in general think critically about the statement.
- 3.) Theory; the meaning of the findings is interpreted according to a chosen framework, in this case Erik Erikson's theory of identity (1968; 1993).

TABLE 1 Example of mother–adolescent dyad statements from interviews with mothers and their adolescents who frequently used analgesics

Insert

The researchers read the transcripts several times and organized the quotes, first for each of the participants, then for pairs of mothers and adolescents. The quotes were organized into the following categories: OTCAs, pain and health, the adolescent, the mother, the father and health care support. Each researcher formed a preliminary impression of each participant's statements, and possible meaningful interpretations in the context of self-understanding were

noted. Further, the researcher used critical common sense to interpret and comment upon the participant's sayings. The sayings within each category were then analyzed as dyads; a dyad included one adolescent and his or her mother (Eisikovits & Koren, 2010). The findings from the analyses of the dyads were then analyzed across the whole material. Sometimes doubt or disagreement occurred between the researchers; in such cases they went back to the raw material and read and interpreted the meaning of the participant's expressions again. Through this back and forth process, we searched for common patterns within, or differences between, the participants' stories. These findings were organized into main themes. A broader understanding arose through this process.

Representative quotes from the interviews are presented in the results to give an accurate picture of the adolescents' and their mothers' expressions. Quotes were translated into English, then further back into Norwegian by English–Norwegian translators. This was done to ensure that the meaning of the translated quote was correctly understood. To translate the quotes from the adolescents, we chose a 17-year-old girl, and her Norwegian-American mother translated the mothers' quotes. The quotes were de-identified before being given to the translators. In addition, the translators signed a confidentiality form.

Trustworthiness

The research group was comprised of a psychiatric nurse, a general practice physician and two public health nurses. The research group addressed the potential problems related to the researchers' pre-understanding and discussed the benefits and challenges to reliability.

Ethical considerations

The study was approved by the Regional Committees for Medical and Health Research Ethics in 2012 (study number: 2012/1460). One of the parents had to give their consent for their child to participate in the study. The youths and their parents received verbal and written information about the study. The adolescents recruited their parents, and then both parents and adolescents signed the same consent form. The adolescents were always interviewed before their mothers. The researcher then ensured that the adolescent voluntarily had invited their parent to participate. Through the consent form, the participants were ensured confidentiality and the right to withdraw from the study. They were also informed that the interviews would be tape-recorded.

The school nurses in each school were informed about the study. They were prepared to give support for health risks identified in the interviews. The adolescents agreed to consult the school nurse if the interviewer deemed it to be necessary by signing a consent form. In two cases, such consultations were established. To ensure a high degree of confidentiality, we have not given gender to quotes from the adolescents that participated. On the one hand, it could be interesting to know what boys and girls said, but because we did not specifically investigate gender differences, we chose to avoid this for confidentiality reasons. The ethical principles highlighted in the Declaration of Helsinki were used as guidelines for the study (World Medical Association, 2009).

RESULTS

Sixteen participants were interviewed: eight adolescents (two boys and six girls, aged 14–16 years) and their mothers. Some characteristics are presented in Table 2.

TABLE 2 Characteristics of the interviewees in the study of adolescents frequently using over-the-counter analgesics and their mothers

Insert

Almost half of the adolescents lived with both parents, and the other half lived only with their mother as the primary caregiver. The adolescents expressed daily pain in several parts of their bodies and used OTCAs from daily to once a week. They described everyday life as a struggle to perform well, to be accepted and to fit in. Most of them had experienced being bullied or being an outsider among their peers. They all tried to avoid conflicts. The mothers had the main responsibility for the upbringing of their child, even in families with both parents present. Mothers who lived without a partner struggled financially. Mothers worried about their adolescent's health and spent much effort trying to help their child; several expressed this as a lonely struggle without support from other adults. The stories given by the adolescents and their mothers' stories described the adolescents' life, pain, use of OTCAs and treatments in the same way. The descriptions differed in terms of the mothers' and adolescents' experience of the adolescent's strengths and difficulties. The themes that emerged from the analysis were "Vulnerable adolescents," "Mother knows best" and "Pain is our project" and this will be described below.

Theme 1: Vulnerable adolescents

The stories all showed that the adolescents felt a sense of responsibility, that they focused on being successful and that they made commitments to be accepted and included both in the family and among their peers. Several adolescents said that they avoided expressing their opinions and needs so as not to be excluded or bullied.

I was bullied; they excluded me and said pretty nasty things. It wasn't physical violence, but I was hurt by what others said to me when I was a child. Nowadays, I shy away from conflicts both at school and among peers. If there are conflicts

in the family, I accept what the others say. I say OK even if I know that it's wrong and even if I know I'm right, just to end it, because I don't like conflicts.

(Adolescent 1)

Many of the adolescents described family conflicts; conflicts between parents were especially stressful. The stories from both the adolescents and the mothers revealed a series of conflicts, illnesses and bullying that put the adolescents under stress for years. Some adolescents described difficult events, such as the sudden death of a close relative, as constantly present in their mind, even if it happened years ago. Most of the adolescents mentioned longing for a close friend and feeling lonely. This, combined with the wish to spend more time with their father, may indicate a need for a broader social network. The mothers did not mention these aspects; some mothers seemed to consider themselves to be able to fulfill all the adolescents' basic needs.

Theme 2: Mother knows best

The mothers' stories revealed that they were proud of their children and their children's achievements, appearance and behavior. They also described their adolescents as socially well-adjusted with several friends. The adolescents said that they loved, admired and relied on their mothers and depended on her support in daily life. All mothers stated that they had the main responsibility for their child's upbringing, with little support from the father or the extended family.

The stories revealed that mothers and adolescents were very close and spent much of their leisure time together. Initially, they seemed to be well-informed about each other's lives. The mothers appeared to believe that their child told them everything of importance. The adolescents' stories revealed that they controlled what they told their mother and what they kept to themselves.

I just want a father like the others. My father is sick in the head, he twists everything and always makes me feel bad, that's what he's best at. He makes me feel guilty for everything that goes wrong. He twists my mind so I can't tell

what's really going on, and my mom doesn't know what's happening to me.

(Adolescent 8)

The mother said:

We talk about everything. I have taught my child that. We talk with no filter.

(Mother 8)

The mothers had strong opinions about whom the adolescents kept in contact with, how they should behave and what they should do. The adolescents seemed to have more or less accepted this control over their lives, and did not want to disappoint their mothers. Mothers made decisions that influenced the adolescents' lives, such as moving to a new home, changing schools and recreational activities. They acted as managers for their children; for example, one mother retouched a photo of her daughter and sent it to a dancing competition. Only at the very last moment did she show her daughter the photo and ask for her approval to send it. Several mothers told of taking action when their child was bullied by peers, by involving school employees or making direct contact with the bullies and their parents. Some mothers controlled their adolescent's social life by reading their mail and messages, choosing suitable friends and ending the child's association with undesirable companions.

The stories told by both adolescents and their mothers show that the mothers seem to sacrifice their own lives with the intention of taking care of their adolescent and other relatives. The adolescents were well aware of their mother's sacrifices and expressed great appreciation. The mothers said that they tried to ensure that their child had everything needed to succeed in life. However, some mothers longed to prioritize their own needs.

I've chosen not to have a boyfriend, I see no reason to. I'm not dumb enough to believe a man will love my children the way I do ... Sometimes I have to get out; I need a life of my own. (Mother 1)

Her child, like several of the adolescents, knew well that the mother sacrificed her own needs and resources to support them, and the adolescents seemed to idolize their mothers.

My mother is very, very nice; she wants just the best for me and my sister. Her own mother is very ill with multiple sclerosis and in a wheelchair; my mom is really nice to her, too. My mother hardly ever thinks of herself; she's the kind of person who takes care of everybody else first. I love my mother very much.

(Adolescent 1)

Theme 3: Pain is a shared project

Mothers and adolescents gave similar descriptions of the pain experienced by the adolescents, the consequences and treatment. Both groups said that the adolescent experienced pain almost daily and that this pain kept the adolescents from being successful at school and in sports, recreational activities and social life. Furthermore, they agreed that the adolescent's pain problems seemed to escalate over time. Doctors and therapists might be consulted, but when their recommendations differed from the mother's own view of what was best, their advice was not necessarily followed.

The stories revealed that mothers and adolescents talked about the adolescent's pain together, rated the pain and made strategies about how to manage the pain and who to involve. Neither the adolescents nor their mothers seemed to involve the fathers in the pain problems or pain management.

I always get a headache when I don't get enough sleep, and now I'm starting to see the connections. My mom said, "You get a headache every time you study for exams." And I really do. (Adolescent 5)

The stories seem to put the mother in the role as the provider of pain management and the adolescent in the role of the receiver of treatment.

On Friday, we'll go to another town ... I have heard there's a very good orthopedist there. We'll spend the day there and try to figure out what to do. (Mother 2)

The adolescents' pain and ways of finding solutions were important topics in the conversations between the mothers and adolescents. Both groups saw pain as an acceptable reason for attention and intimacy. One mother said, "The pain in her legs is often bad, and we often sleep in the same bed." (Mother 1). Several adolescents mentioned that massage from their mother gave them some relief from pain. This may indicate that the adolescents felt devotion in return for the mother's support and thus legitimized the mother's role and function.

Throughout the stories from both mothers and adolescents, it seemed clear that the adolescents were incorporated into a family pattern.

When I kick my leg, I get a headache. I have a long history of pain. I am not sure if it is genetic, but I think all women in our family respond to life like this. We experience life rather similarly, we are all sensitive, and at the same time, we are seen as very strong. We manage everything immediately, in a way. In addition, I think we always have hunched shoulders and shallow breath. The way we live our lives gives us headaches and pains. (Mother 5)

Several mothers urged their adolescent to try private health care such as homeopathy, naturopathy, chiropractic, massage and physiotherapy, and stated that they used these therapies themselves. The adolescents said rather unambiguously that none of these treatments gave lasting relief, although some seemed to have developed a close relationship with their therapist of several years and referred to “my therapist.”

Mothers and adolescents reported that using analgesics increased the adolescent’s ability to manage daily life. Mothers taught the adolescents how to take OTCAs and to ensure that OTCAs were available. Several of the mothers referred to information about highest recommended dosage in the leaflet for each variation of pain medication their child was using. Further, they stated that they knew their adolescent did not use more than was recommended. Some adolescents said that they also use their mother’s prescribed pain medication, but the mothers did not mention this. The mothers said that they controlled the adolescent’s use of OTCAs, whereas several adolescents noted that in addition to the medication that they received at home, they bought OTCAs themselves and borrowed medication from friends.

The impact of fathers in everyday life of adolescents during pain was not always prominent even among families where both parents were present, as revealed in the stories told by the adolescents and their mothers.

DISCUSSION

The adolescents in our study were vulnerable; they adjusted their behavior according to what they believed was expected from them. Their mothers played a dominant part in their lives, and the adolescents seemed to have had few opportunities to explore the world on their own. Moreover, they seemed to have a limited social network. The demands made on the adolescents throughout their childhood seemed to be more than they could handle, and they learned to adapt and adjust to

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receive attention and care. Many of the adolescents had experienced bullying and exclusion by their peers, and they continued to undermine themselves to be accepted and fit in. Pain seemed to have become an acceptable way of expressing difficulties, grief and fear. The adolescents perceived that their mother was the primary person who looked after them. Mothers engaged naturally in caregiving to alleviate pain and to improve their child's health. Relieving pain was seen as a shared project; the mother managed the pain project, and the adolescent received support and treatment. OTCAs were used as a token for giving and receiving attention and care.

Identity is formed through childhood and adolescence when the interplay between individual and surroundings has an impact on identity formation (Erikson, 1968, 1993). Especially important is the key caregiver, a role that is often culturally and historically assigned to the mother. Many of the adolescents had experienced challenges and conflicts early in life, like illness and death among close relatives, and some of these experiences seemed unprocessed and like a constant burden. Ego identity refers to a continuity with the past, meaning in the present and direction for the future (Côte & Levine, 1983). Family dysfunction has been found to have a negative effect on emotional adjustment (Eccleston, Crombez, Scotford, Clinch, & Connell, 2004; Eccleston, Wastell, Crombez, & Jordan, 2008). Unresolved crises leave individuals struggling with their identity (Schultz & Schultz, 2016). This may also influence the reactions to stress (Folkman, Lazarus, Gruen, & DeLongis, 1986; Folkman & Moskowitz, 2000). Through the interviews, it seems like reality is designed by mothers who leave the adolescents' personal experiences, feelings and thoughts unseen. Because of their fear of exclusion or conflict, the adolescents undermine themselves and adapt. This may indicate that the adolescents are not moving on from the identity diffusion status or are locked in the foreclosure status of identity development (Erikson, 1968).

The mothers in this study frequently linked the adolescents' pain to their own and their maternal ancestors' pain, and the adolescent repeated and copied these stories. It could be the mother's attempt to give their adolescent a sense of attachment and belonging. It may thus be considered a

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way of giving the adolescent an identity, albeit an identity that is not based on the adolescent's own perception and that does not sustain fidelity to his or her own identity (Erikson, 1968).

The interviewed adolescents seemed to long for closeness but mentioned not feeling attached to anyone other than their mother. In adolescence, it is important to be able to rely on others beyond the primary caregivers to test fidelity and to achieve a positive identity (Erikson, 1968). The mothers did not seem to be aware of this and did not address it. The interviewed adolescents often described that they avoided expressing their need for others, such as their father, to avoid conflict or rejection by their mother. Perhaps this produces negative emotions with no acceptable outlet. Over time, such strategies of avoidance could hamper the development of fidelity and result in a continuous striving for own identity.

The mothers of the interviewed adolescents seemed to act authoritatively; they planned and controlled their adolescent's daily life, while at the same time, they let it be known that they made sacrifices to support others. It is possible that such attitude can give the adolescents a feeling of guilt and shame when they express their own needs and feelings. Expression of pain could be an acceptable way of expressing discomfort and might elicit attention and support from the mother. It has been stated in the literature that adolescents with authoritarian parents have decreased academic self-esteem and family self-esteem compared with adolescents with indulgent parents (Martinez & Garcia, 2007). In an earlier study, we found that adolescents with high use of OTCAs had lower self-esteem and lower ambition for future education than did adolescents who seldom or never use OTCAs (Skarstein et al., 2014).

The mothers in our study played an important role in their child's upbringing and seemed to receive little support. The attitudes to their own parental role were without much reflection and correction. These family and social structures ought to be explored further.

Identity, self-esteem and self-efficacy are all mutually dependent (Bandura, O'Leary, Taylor,

Gauthier, & Gossard, 1987), and must be then considered in their entirety when treating adolescents with frequent pain and high consumption of OTCAs. Bandura (1997) defined self-efficacy as belief in one's ability to succeed in specific situations. One's sense of self-efficacy can play a major role in how one approaches goals, tasks and challenges. Bandura's social cognitive theory emphasizes the role of observational learning and social experience in personality development. According to this theory, self-efficacy also plays an important role in coping with pain (Bandura, 1997; Bandura et al., 1987). Furthermore, that training in cognitive control strengthens perceived self-efficacy both to withstand and to reduce pain (Bandura et al., 1987). People learn through observation, imitation and modeling (Luszczynska, Scholz, & Schwarzer, 2005). The adolescents in this study seemed to use coping strategies that they had learned mainly from their mother, even if these strategies were not actually effective in combating pain.

The interviewed adolescents' everyday lives were ruled by their assessment of expectations from others, mainly from their mothers but also from their school and peers. The worries of the mother restricted the child's possibilities, capabilities and resources. This may cause identity foreclosure or an identity status developed by an individual without many opportunities. Further, identity foreclosure can contribute to identity crises in adolescents when the "security blanket" of their assumed identity is removed, and a foreclosed individual may go into crisis, not knowing what to do and not be able to rely on the familiar norms and rules (Marcia, 1980). Pain and use of OTCAs might constitute a kind of substitute "security blanket" for these adolescents. Pain becomes an acceptable reason for not managing daily challenges and may trigger sympathy and understanding. Perhaps both adolescents and their mother retain some self-respect when explaining their difficulties as somatic pain.

Strengths and limitations

All interviews were conducted by the main author, who is a board-certified psychiatric nurse. In presenting herself as a researcher and not being involved as therapist, her clinical experience may have promoted the ability to obtain in-depth information.

The research group included participants from different disciplines who analyzed the findings together. Most interviewees were of the same gender as the interviewer, which may have lessened barriers of communication across genders. Only two of the eight adolescent participants were boys, and the findings may be more transferable to girls than to boys.

A limitation of this study is the small sample size. Recruitment of adolescents and their families was difficult, and only one father responded to our request for participation in this study. Adolescents who consume high amounts of OTCAs are likely to represent a heterogeneous range of “typologies”; some might lead a life quite detached from their caregivers. Such adolescents might be unlikely to accept an invitation to this type of study. Other adolescents might, in contrast, live in close (or even enmeshed) parental relationships, as suggested by the present study, where peer bullying was among the observed background factors. These latter adolescents might be far more likely to bring the study invitation home and end up as participants in dyads. We should thus be careful not to transfer the experiences from this study to all adolescents frequently using OTCAs.

In this study, we have included adolescents and their mothers. It is quite possible that we would have made other discoveries and gained a broader knowledge if we had been able to include the adolescents’ fathers.

The interviews were conducted mainly in urban and suburban areas in southern Norway. However, an earlier study of the consumption of OTCAs among adolescents did not reveal differences between urban and rural regions in Norway (Furu, Skurtveit, & Rosvold, 2005). When our findings are recognized and their usefulness is acknowledged by the reader, they are considered transferable within the framework of qualitative research (Sandelowski, 1986).

Through this study, we have identified some possible perspectives that might lead to novel approaches to identify, guide and support adolescents with frequent pain and high consumption of OTCAs. Individual tasks, family matters and bullying must be considered both in mapping and in designing interventions. However, more research is needed to design a guide for professional mapping and health interventions.

CONCLUSION

The adolescents in this study were vulnerable and struggled in their identity development. Appraisal of pain, pain management in general and the use of OTCAs seemed to be learned from mothers. OTCAs might be a token in handling difficulties, which were translated as pain. Managing stress and pain by avoiding challenges could maintain and amplify these adolescents' underlying problems. Having few opportunities to explore life's challenges by themselves, the adolescents in this study struggled to discover their own uniqueness, their similarities to others and their own strengths and weaknesses.

This is a study based on eight pairs of mothers and adolescents. Our research group will therefore be careful about generalizing the results. More research is needed to understand how family interaction affects the adolescents' pain management. Systematic interventions targeting pain, stress and frequent use of OTCAs should consider the interplay between the adolescents and other important figures, such as peers and parents. Further, guidance on pain assessment and pain

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management, including appropriate use of OTCAs, should be included. Even though this knowledge has relevance for many adolescents consuming high amounts of OTCAs, it is probable that it does not describe all such adolescents. Further research is needed to explore adolescents not reached in our study.

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Table 1 Example of mother–adolescent dyad statements from interviews with mothers and their adolescents who frequently used over-the-counter analgesics.					
Mother			Adolescent		
Saying	Self-understanding	Common sense	Saying	Self-understanding	Common sense
<p><i>I've chosen not to have a boyfriend, I see no reason to, I'm not dumb enough to believe a man will love my children the way I do ... Sometimes I have to get out; I need a life of my own.</i></p> <p>(Mother 1)</p>	<p>No one else but me can give my children what they need. I have the absolute responsibility for my children's life.</p> <p>This responsibility is limiting my own opportunities.</p>	<p>Mistrust of others.</p> <p>Worried about her children's well-being.</p> <p>Justifying own actions with regard to the children.</p>	<p><i>My mother is very, very nice; she wants just the best for me and my sister. ... My mother hardly ever thinks of herself, she's the kind of person who takes care of everybody else first. I love my mother very much.</i></p> <p>(Adolescent 1)</p>	<p>My mom sacrifices her own needs to take care of me.</p> <p>My mother knows what is best for me.</p> <p>My mother is responsible for several other people.</p>	<p>Appreciation for the mother's attention and sacrifices.</p> <p>Feeling dependent on the mother for being taken care of.</p> <p>Admiring the mother.</p>

Table 2 Characteristics of the interviewees in the study of adolescents frequently using over-the-counter analgesics and their mothers.

Adolescents (n=8)		
	Boys	Girls
	2	6
Living mainly with mother	2	3
Living with both mother and father	0	3
Living with siblings	1	5
Living in urban areas	2	3
Living in suburban areas	0	3
Mothers (n=8)		
Living without husband and unemployed	3	
Living with husband and employed	3	
Living without husband and employed	2	