Families' and children's postoperative pain: literature review

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CRD summary
This review summarised family members' views about the assessment and management of post-operative pain in children. The authors concluded that parents were dissatisfied with instructions and found the pain difficult to handle, and that further research is required. A limited search and poor reporting of review methods and the quality assessment mean that the reliability of the authors' conclusions is unclear.

Authors' objectives
To summarise the viewpoint of family members on the assessment and management of post-operative pain in children.

Searching
CINAHL and PUBMed were searched for studies published in English using the reported search terms.

Study selection

Study designs of evaluations included in the review
The authors did not state any specific inclusion criteria for study design. Reviews and studies that did not ‘meet the criteria for scientific presentation (i.e. only findings were presented)’ were excluded. Controlled clinical trials, observational studies, and qualitative studies were included in the review.

Specific interventions included in the review
Inclusion criteria for the interventions were not explicitly defined, but the review included studies on the assessment and management of post-operative pain.

Participants included in the review
Studies including children (aged 2 months to 18 years) undergoing various types of surgery, including tonsillectomy with and without adenoidectomy, orthopaedic and day surgery, were included; one study included chronically-ill children. Studies that focused on adult pain were excluded, as were studies that did not mention family or family members in the abstract. The included studies described the views of family members (predominantly mothers), children and nurses.

Outcomes assessed in the review
Inclusion criteria for the outcomes were not explicitly defined. The review evaluated pain and pain management after surgery or other services, as perceived by the child, family members, or a combination of the child, family members or nurses. The included studies collected data using structured questionnaires, semi-structured interviews, drawings, daily journals, telephone interviews with open-ended questions and observation.

How were decisions on the relevance of primary studies made?
The authors did not state how the studies were selected for the review, or how many reviewers performed the selection.

Assessment of study quality
The authors did not state that they assessed validity.

Data extraction
The authors did not state how the data were extracted for the review, or how many reviewers performed the data extraction.
Methods of synthesis
How were the studies combined?
The studies were combined using qualitative deductive content analysis, in which studies were grouped by informant (children, parents, and a combination of parents, children and nurses) and individual studies were described with respect to the authors’ discipline, informants, study focus, participants, methods used for data collection and analysis, and main findings. Underlying family theories and definitions of the family used in the individual studies were discussed separately.

How were differences between studies investigated?
Differences between the studies were evident from the description of individual studies in the text and tables.

Results of the review
Eleven experimental studies (n=1,227) were included: 3 controlled clinical trials (n=372), 2 studies described as quantitative (n=334), 3 observational or audit studies (379 children, parent and nurses combined) and 3 qualitative studies (n=142). The sample size ranged from 6 to 303.

Viewpoint of children's perspective (1 qualitative study, n=6).
This study reported that children sought support from family members, and that families provided emotional and physical support.

Viewpoint of family members (3 non-randomised controlled studies, 3 quantitative studies and 2 qualitative studies).
One qualitative study (n=129 parents) reported that parents of children undergoing day surgery were critical of instructions received from hospital staff, were unable to adhere to advice due to tiredness and hunger, and some had inadequate skills to assess or deal with their children's pain.

One quantitative study (n=303) reported that parents of children undergoing ambulatory surgery were not satisfied with instructions received from hospital staff and reported more children's pain than expected, but most felt adequately prepared for discharge. (A family definition was used as a study framework.)

One qualitative study (7 mothers) reported assessing the child's pain based on behaviour and physical signs, but they were unsure if the child's verbal report of pain could be relied upon. They reported fears about addiction. (Family theory - Mead's theory of interaction between family members - was used as a study framework).

One quantitative study (31 parents) reported that only half of the parents wanted to give the child analgesia themselves during hospitalisation.

One controlled study (180 parents) reported that children whose parent received extra preparation, support and education began to drink earlier after tonsillectomy and adenoidectomy than a control group given no additional instructions.

Two controlled studies reported that there was either no relationship between instructions and post-operative diet and children's pain (100 parents), or no differences in children's post-operative pain and activity between advice given to parents about a restricted versus an unrestricted diet (92 parents).

Viewpoint of a combination of informants (parents, children or nurses).
One observational study (129 nurses and 93 parents) reported that parents rated the children's pain higher than nurses and that some parents wanted better information about post-operative care.

One observational study (50 children and 50 parents) reported a higher rating of pain in adolescents from controlling and conflicting families.

One observational study (22 parents, 11 children and 24 nurses) reported that parents used comforting measures and
nurses used technical care, parents valued children who tolerated pain, and nurses thought quiet children were good. The study also reported misconceptions about analgesic use in children in both parents and nurses, and little interaction between parents and nurses about pain management.

Family theories and definitions.

Two studies defined a 'family' or based the study on theory.

**Authors' conclusions**

Families provide support for children with post-operative pain. However, the parents were not satisfied with instructions provided by hospital staff and they found it difficult to identify and manage the children's pain at home. Further research is required.

**CRD commentary**

The review question seemed clear but the inclusion criteria were broadly defined; this lack of explicit inclusion criteria could have increased the likelihood of subjective decisions in selecting studies for the review. The search strategy was limited to English language reports listed in two databases, which might have resulted in the omission of other relevant studies; this raises the possibility of publication and language bias. The methods used to select studies and extract the data were not described, so it is not known whether any efforts were made to reduce reviewer errors and bias. The study design was not always clear and study validity was not assessed, thus the results from these studies and any synthesis may not be reliable. Given the nature of the review, the methods used to combine the studies were appropriate. A limited search, lack of reporting of review methods and the lack of a quality assessment mean that the reliability of the authors' conclusions is unclear.

**Implications of the review for practice and research**

**Practice:** The authors stated the following.

More attention should be paid to the parents' physical and emotional needs during children's hospitalisation to develop family-centred nursing care.

There should be opportunities for parents to eat, rest and discuss anxieties with the nurses.

Instructions about dealing with pain should be given before hospitalisation.

More diverse methods, such as drawing, videotapes and Internet-based programmes, should be used to inform the parents.

**Research:** The authors stated that there is a need for further research. Such research should address nursing studies of children' post-operative pain based on theories of family nursing; informants that include children and fathers; and the influence of siblings, marital relationships, parents' cultural values and attitudes. In addition, future studies should use larger sample sizes.

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This is a critical abstract of a systematic review that meets the criteria for inclusion on DARE. Each critical abstract contains a brief summary of the review methods, results and conclusions followed by a detailed critical assessment on the reliability of the review and the conclusions drawn.