Noise is a general stressor and should be avoided in the operating room (OR). However, over the last 10 years, while the focus has been on preventing air pollution and maximizing sterility in the OR, very little attention has gone toward preventing noise pollution. Meanwhile, there is more and more noisy technological equipment in the OR, and it can be assumed that problems with noise in the OR have not decreased.

The authors conducted a literature search in August 2009. There were no limitations with regard to the search period. They searched Medline (Medical Literature On Line), CINAHL (Cumulative Index to Nursing), and Cochrane (The Cochrane Library) databases using the following search terms: noise, operating room, operating theatre. The authors assessed each study according to the strength of the evidence and the quality of the study. They identified 18 relevant articles and categorized them as follows: noise levels, noise sources, staff performances, and patient’s perception of noise. The authors assessed each study according to the strength of the evidence and the quality of the study.

Findings

The article found that OR noise levels, mostly due to equipment and staff behavior, generally exceed recommended levels. Further, the noise effected staff performances by impairing communication, resulting in a negative effect on patient safety. The authors found that the literature on patients’ perception of noise is both limited and inconsistent.
The authors report that the average noise levels were between 51 and 75 dB(A) and the maximum noise levels were between 80 and 119 dB(A). They found that the primary noise sources were:

- Opening and preparing for operation
- Moving trolleys and equipment
- Doors opening and slamming
- Moving and dropping metal tools
- Suction
- Anesthetic monitors
- Alarms from anesthetic and operating instruments and monitors
- Conversation among staff and on the intercom

Further, the noise sources can be categorized into two groups: (1) noise sources related to equipment and (2) noise sources related to staff behavior.

Five studies reported that the main effect on staff performance was due to impaired communication. Only two studies focused on the patients’ perspective and asked the patients whether they perceived noise in the OR. The literature suggests that more than one-third of patients experienced the OR as noisy, and that 16% of the patients actually felt stressed by the noise. Furthermore, it would be relevant to investigate whether there is a correlation between the actual noise levels that patients are exposed to and patients’ perception of noise because the present literature actually indicates that this is not the case.

**Limitations**

Authors identified no limitations of the study.