This thesis deals with the development of patient education in the community pharmacy. The research questions concentrate on the determinants of technicians’ patient education behavior and the effects of a one-year lasting intervention program on the patient education activities in the pharmacy. This summary reports about the research methodology and the results.

**Research methodology**

The studied patient education behavior concerned the provision of verbal drug information to pharmacy visitors. Audiotapes of patient contacts were made and the studied patient education behavior concerned the verbal drug information given to patients at the counter. The determinants of technicians’ patient education behavior have been studied by analyzing their patient education behavior in relationship with their personal variables and their pharmacy variables. A survey was used to collect information about technicians’ views on patient education, subdivided into three categories: their outcome expectancies of patient education, their abilities to practice patient education (including their educational level) and their experiences with this behavior. Information about their pharmacy was collected in a survey addressed to the pharmacist, which included questions about the pharmacist’s views on patient education on the one hand and questions about the staff meetings in the pharmacy on the other hand. Multiple regression analysis has been used to determine the variables which explain the differences in technicians’ patient education behavior at the counter.

The effects of an intervention program on the patient education activities in the pharmacies were studied with a quasi-experimental design, including an experimental and control group of community pharmacies. Audiotapes were made before and after the intervention program was submitted to the experimental group. The main objective of the intervention program was to increase pharmacists’ expertise in supervising patient education activities in their pharmacies. The program lasted for a period of 1 year and consisted of pharmacists’ meetings about supervising the development of patient education, staff meetings in the pharmacy and communication courses.
Results
Audiotapes were made in 20 community pharmacies totalling 200 hours in the pretest, which concerned 6784 patient contacts about drugs. In 24% of these drug contacts, patients were given verbal drug information, in addition to the written drug information they received by means of drug labels and patient package inserts. Large differences were found in the distinguished encounters, as patients were seldom given verbal information when they offered a prescription (2% of these contacts), whereas in the case of prescription drug deliveries and OTCs patients more frequently received verbal drug information (respectively 36% and 30% of these contacts).

Determinants of patient education behavior
We analyzed the patient education behavior of 50 technicians and found that the frequency of verbal drug information given to patients was predicted by the number of drug questions technicians received. When analyzing the numbers of drug questions technicians received, we found that the percentage of OTC contacts in their patient samples predicted to what extent they received drug questions. The analysis of technicians’ prescription drug delivery contacts only, revealed that patients more frequently asked drug questions in the contacts with those technicians who had attended more patient education courses. In comparison with their colleagues, these technicians also demonstrated higher levels of role beliefs and positive outcome expectancies of patient education (proper drug use) and demonstrated lower levels of other outcome expectancies of patient education. These expectancies concerned the influence of patient education on an increased patient autonomy, reduced barriers for patients to ask their drug questions and increased customer registration in the pharmacy. Possibly technicians fear these effects of patient education, which may influence their communicative behavior, thereby decreasing the number of drug questions they receive at the counter.

Effects of the intervention program
We analyzed the variance of the patient education activities in the pharmacies - such as observed in the audiotapes collected in the posttest- thereby correcting for their pretest scores and the differences in their patient samples (percentage of Over-The-Counter contacts, percentage of drug questions, percentage of female patients). As the community pharmacies differed in the extent to which they participated in the intervention program, a separate analysis was carried out with the results of the 3 experimental pharmacies whose technicians and pharmacists participated in all activities organized. These analyses demonstrated a significant effect of the intervention program on the frequency of the verbal drug information given with prescription drug delivery contacts, in only those pharmacies whose technicians participated in activities organized.
Conclusions

1. Patient education in community pharmacies mainly concerns a one-way communication process, in which technicians tell patients how to use their drugs. In this respect we should rather talk about patient instruction than about patient education.

2. Patients - who asked few drug questions themselves- were seldom invited verbally to ask drug questions or to give feedback on the information given. Patients asked most frequently drug questions in OTC contacts.

3. Patients’ informational needs may not be satisfied by the verbal drug information given in community pharmacies, which is limited to the repeating of logical drug label instructions whereas patients’ interests may concern other drug aspects.

4. Patients’ behavior in asking drug questions is the most important factor to explain differences in the verbal drug information technicians provide to patients at the counter.

5. Patients asked more drug questions while communicating with technicians who had attended patient education courses more frequently, while these technicians also reported higher outcome expectancies of patient education and role beliefs.

6. A one-year lasting intervention program, consisting of pharmacists’ meetings, staff meetings and communication courses was found to be effective in increasing the verbal drug information given to patients in community pharmacies.