Title of the project: Responsibility development – an initiative to establish a responsible system**.** A study of medication and errors or adverse events with drugs among clinical nurses in hospitals.
Keywords: medication errors, nurse, adverse events, culture, safety culture, responsibility.
Reseach prosject: Master research in Health Science
Research organization: Norwegian University of Science and Technology. Trondheim. Norway. Molde University College. Specialized University in Logistics. Norway.
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Background: Medication errors are among the most common and serious errors that occur in health care (Cohen 2001:, Connor et al. 2002:, Davidhizar & Lonser 2003:, Leape 2000:, Statens helsetilsyn 2002, 2005, 2007:, Ödegård 2006, 2007). Patient injuries in connection with medication are the visible proofs that errors have occurred and the incidents recorded are described as the tip of the iceberg. These errors are unwanted results of medication. The thought of making mistakes and adverse events is a significant fear among nurses.

Goal of the project: The goal of this study was to highlight how the nurse related to the nursing culture in connection with errors and adverse events, and how errors and adverse events were handled. With this as a starting point, the following research question was formulated:

> *What can be found in the nursing culture in connection with errors and adverse events in hospitals?*

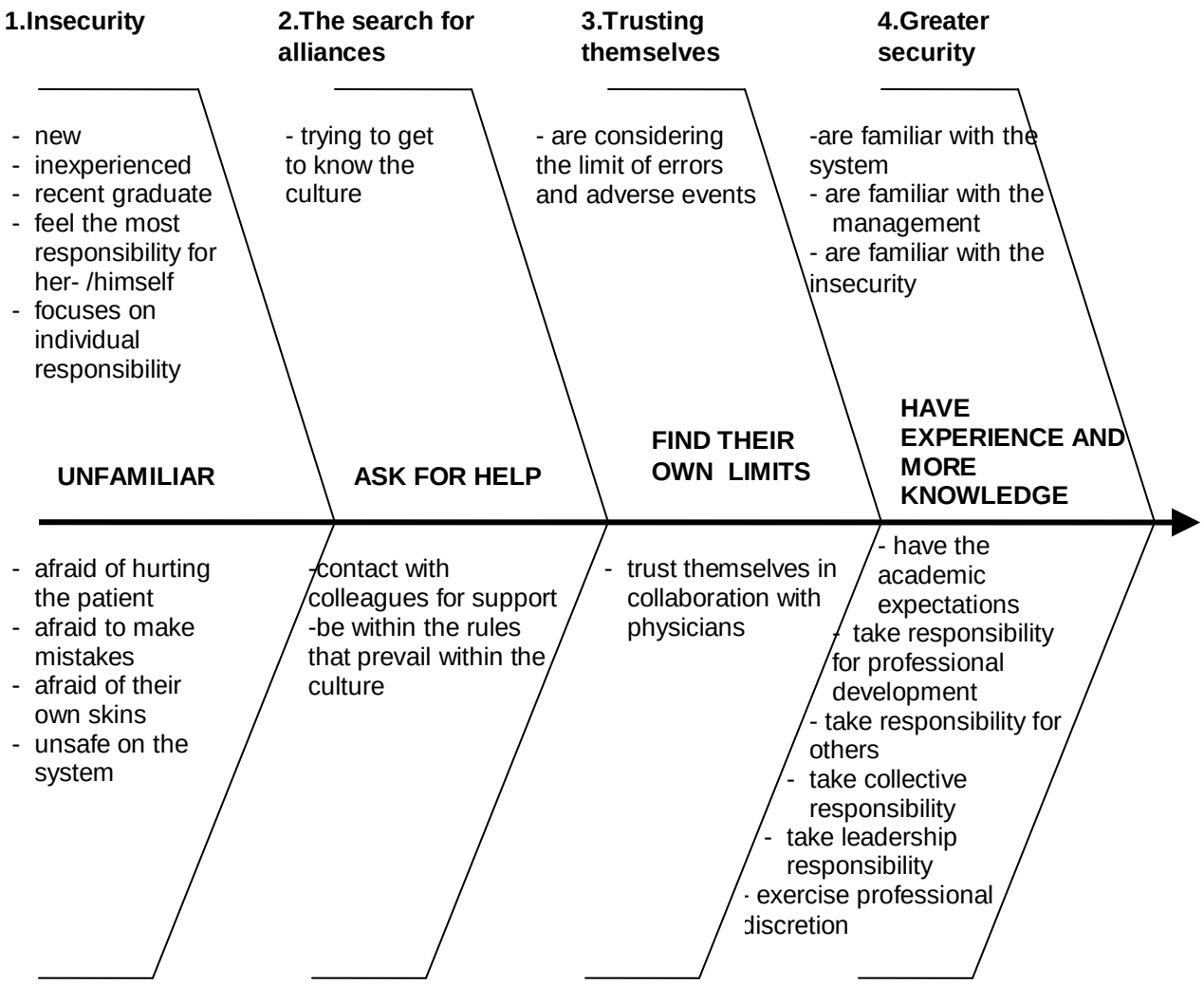
Research method: This was a qualitative study consisting of ten semi-structured individual interviews. The informants were nurses who work in hospitals involving substantial amounts of medication. The research method used was the Grounded Theory, inspired by Glaser and Strauss' original version from 1967 (Glaser & Strauss 1967, Glaser 1978, 1992). The data are from three hospital wards at two hospitals in Norway.

Results: The nurses felt great responsibility when medication errors occurred. They wanted to contribute to improvements that address this issue. The main dilemma for the nurses was time pressure. A lot of work had to be done at the same time with constant interruptions. This gave unfortunate consequences and involved sources of error.

The findings highlight a basic social process; *Responsibility of Development Process* (RDP) among nurses. The process reflects what happens in connection with errors and adverse events before, during and after an error or adverse events has occurred. The development of RDP theory has shown that there is a complex interaction between the nurse as an individual, the nursing culture and the system.

RDP consists of four phases that nurses undergo, based on experience and knowledge;

Responsibility of Development Process (RDP)



The nurses' main concern was when an error occurred and something must be done to prevent negative consequences. The nurses described how near-mistakes, errors, adverse events and serious errors with medication occurred in the hospital where they work. But it was not often that there were serious errors since they were prevented by the nurses themselves. There were different perceptions among nurses what medication errors involve. The following points reflect what produced insecurity among nurses in relation to medication:

- Errors and adverse events occur on a regular basis - and this can have serious consequences
- Errors and adverse events are easily associated with individuals who do not do a good job
- Time pressure, stress, and constant interruptions cause errors
- Dissatisfaction with the system/management in relation to taking responsibility and following- up errors and adverse events

- There is a gap between the nurses on the front line and the administrative management and the overall system. It implies a lack of information and communication related to medication errors
- Training and refreshing skills are inadequate
- There is a need for improved dialogue and academic cooperation between nursing education and the field of practice
- This generates a negative attitude towards nursing
- More and new synonymous medication with different and difficult names, unclear written medication, verbal messages, when the medicine is placed on the bedside table, when it is given to the wrong patient after two nurses have checked the medication

Summary: The Responsibility of Development Process (RDP) is a substantive theory that reflects patterns of reactions and experiences related to errors and adverse events and shows what nurses consider to be problems and challenges. Thus, the theory can give guidance about what it should focus on in relation to achieving improvements in medical management in hospital wards. Although the data in this study are limited to three units, the theory provides a picture of some common patterns that can be illustrative for other hospital wards. At the same time, it is clear that a theory only gives a limited picture of a situation and that the practice is much more varied and complex than theories, so it may be appropriate to modify the theory to the area where it is to be applied.

The findings show the central context of what is happening in nursing culture in relation to errors and adverse events in three hospital wards. The RDP approach makes important *connections* visible between human, technical and system-related interactions in these error and deviation problems.

Conclusion: This study has surveyed some of the existing fields concerning errors and adverse events in medication management. The development of the Responsibility of Development Process theory has shown that there is a complex interaction between the nurse as an individual, the nursing culture and the system. In the interpretation of the findings, different factors have been found that can contribute to improvements. Nevertheless, this study is not intended to be a recipe for how medication errors can be eradicated. However RDP is a theory that reflects upon the nurse's competence within a system that has great potential for improvement in terms of transparency and resources, both in time and space. RDP is intended to be a theory that contributes to increased awareness of the nurse's point of view in a system that will ensure great responsibility: *human life.*

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