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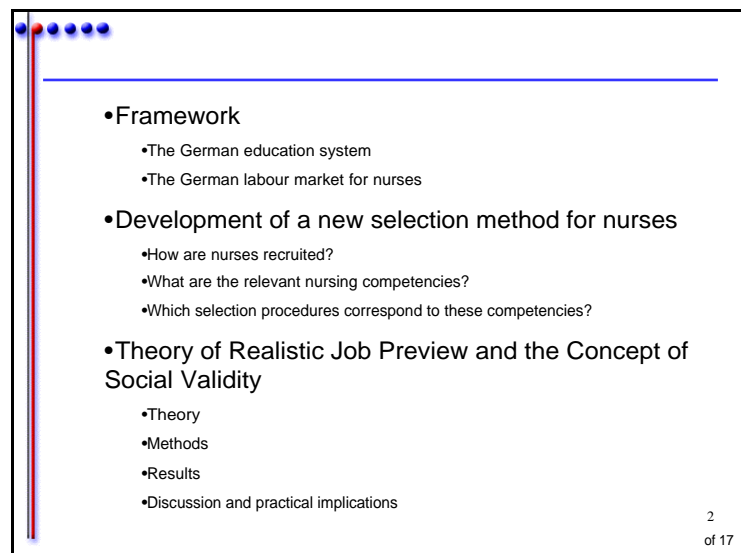
Development of a new
selection procedure for nurses
integrating the concept of
„social validity“

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1 Overview



- Framework
 - The German education system
 - The German labour market for nurses
- Development of a new selection method for nurses
 - How are nurses recruited?
 - What are the relevant nursing competencies?
 - Which selection procedures correspond to these competencies?
- Theory of Realistic Job Preview and the Concept of Social Validity
 - Theory
 - Methods
 - Results
 - Discussion and practical implications

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At present, in Germany, there is an ever-growing demand for qualified nurses. This is due in part to the German education system and also the major problems, which arise while trying to recruit nurses. This proves that it is essential to develop new selection methods, which pay particular attention to the perspective of the nursing candidate.

The following text is the result of a two year research project, which is sponsored by the German Hanns-Seidel-Foundation, Munich. The project emphasizes the problems of the current selection methods. The first part of the text deals with the stages involved in developing a new assessment technique for nurses. It is divided into 4 steps.

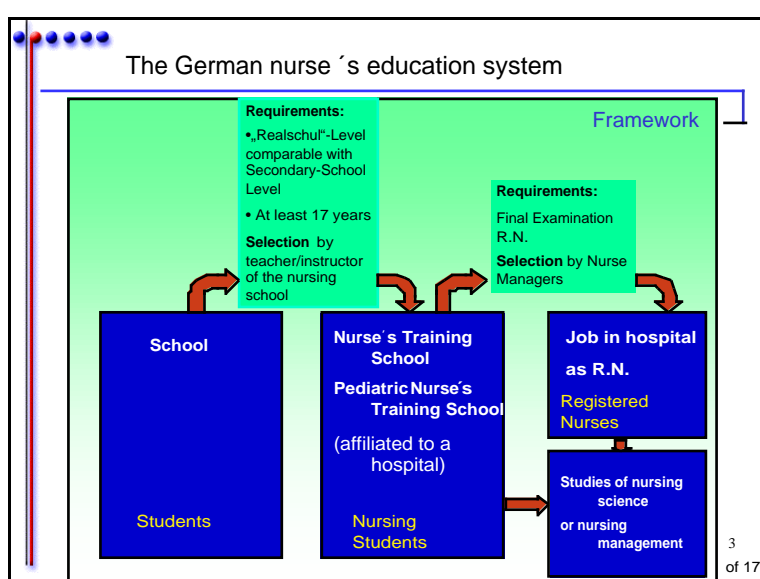
- 1) An analysis of the current methods and procedures hospitals used to recruit new employees.
- 2) An examination of the relevant competencies of nurses.
- 3) Development of new ways to reveal relevant competencies.
- 4) An evaluation of these new methods.

I want to explain in detail the problems which result when the applicant's perspective is neglected. A theoretical framework to examine the applicant's perspective is provided by the book "Theory of realistic job preview" published by Wanous (1980, 1990). From this theory, the concept of "social validity" has been deduced by Schuler. It is an attempt to explain why the demands of the test-theory (validity, reliability, and objectivity) are not sufficient factors to establish a useful assessment technique.

I want to give a summarized version of the theory and the concept of social validity and first show you data which support this theory. In the last part of my presentation I want to discuss the results and show you the implications and recommendations of these results.

2 Framework

2.1 Education system for nurses



Firstly, I want to give you a short explanation of the German education system for nurses. That is important because – unlike many Anglo-American states – Germany did not begin to build up a university system to study nursing or nursing-science until 1987. But still people learn nursing in a practise-orientated school-system which usually lasts three years.

The requirements and the content of the training are regulated by a law, which was brought into effect in 1986. This law states that students must receive 1600 hours theoretical and 3000 hours practical training. To become a nurse and to work as a nurse two selection procedures have to be passed. The first hurdle is to get a job in the nursing school. According to the law candidates must be healthy and must meet the minimum age requirement of 17 years. It is the instructor's task to recruit a suitable person and to use methods to assess whether the applicant possesses the relevant competences to perform the job. After three years of training and after the applicant has been successful in the final examination, a second selection procedure takes place.

The newly registered nurse leaves the school and applies for a job in different hospitals and different fields. It is now the task of the nurse-manager to assess which nurse fits the demands of the workplace. But the nurse can also begin to study nursing-science, nursing-management, or become a nursing-teacher. In order to study

further, the nurse must have both a high school diploma and have trained in this field for at least three years.

But there is no further assessment. In the last few years the government tried to facilitate entrance into university by abandoning these training requirements. But that is an exception. What you see here is the normal way.

A further specific feature of the German education system for nurses is that there are two parallel training systems. One focuses on adult patients and the other on children. Thus, there are special training schools for paediatric nurses. The training and content of the theoretical courses vary for the paediatric nurses and their counterparts in the adult patient field.

But both systems have something in common: A selection procedure has to be passed. And after leaving the school as a registered nurse, one has to once more apply to hospitals for a job. That's the second step and the second hurdle. That is obvious, that the assessments at these hurdles are different.

The 17 or 18 year old students do not have much experience in nursing, they are novices. Therefore the teacher/instructor can neither measure their medical know-how, nor their nursing practice.

The nurse manager on the other hand has selected a registered nurse, who has a background of three years of practical and theoretical training. The applicant is no longer a novice, but an expert. It does not matter which step of expertise in the sense of Benner he or she has reached. This gives the nurse manager the chance to test the applicants' practical skills and their theoretical nursing know-how. He or she can use methods that simulate tasks from everyday work situations. For example, he can ask critical questions that reveal attitudes or ethical standards in nursing: "What would you do if...?"

Since 2000 many nursing associations, unions and also politicians are making efforts to create a new system for the training,

- which integrates paediatric und adult nursing into one education system
- which strengthen the influence/power of the universities and
- which integrates nursing-science in the theoretical courses.

This was a short review of the German education system.

2.2 Labour market situation for nurses

Labour market conditions for nurses

Framework

- Great demand for qualified nurses in all fields and all cities
- Great demand for students
- High employee turnover rates and low job survival rates
- Lack of methods that are designed to assess the relevant competencies and that are based on scientific standards (e.g. validity).

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A second important factor, which must be taken into account for developing a new selection method, is the labour market situation for nurses.

A) There is a lack of nurses in all regions and in all fields. It seems that every 20 years the demand for nurses is higher than the supply, but now it seems that there are different causes and dimensions of the problem. The shortage concerns all fields of nursing, but it is especially difficult to recruit nurses for geriatric care and specialised staff (for example for endoscopies-units or Intensive-care-units).

B) The number of applicants for the nurse training schools is also decreasing.

Furthermore, the schools complain about the bad qualification of the applicants. They also complain about the low degree of intelligence, the low marks of school exams and the lack of language skills. Thus the quantity and the quality of the applicants is decreasing and this is leading to an increasing number of vacant places in the school. Upto 5 years ago the general rule was that started with 25 or 30 students, now they begin with a mere 15-20 students. This also threatens the existence of the schools.

And this development also influences the selection methods: On the one hand schools have to assess the applicants to ensure that they have the relevant training, this will therefore ensure a good quality of nursing in the future, but on the other, they have to fill the courses to save their continuity.

C) A further problem could be the high job turnover of nurses. Statistics from 1988 estimate the mean retention time of nurses to be between 4 and 5 years. Unfortunately, there is a lack of new and reliable data about the mean retention time in nursing.

Both factors: The high job turnover and the decreasing amount of applicants have lead to a lack of qualified nurses. The reasons for these effects are unidentified. Maybe it is „zeitgeist“, maybe the job situation has lead to this effect. But these are speculations. Nobody knows.

This problem has prevailed for at least two years. For the past two years politicians have been trying to solve this problem with well-meant proposals. For example, they require that an obligatory job in a hospital or a nursing home for retired people and the unemployed could solve the problem. Also, a „greencard“ for nurses is under consideration.

D) A fourth problem is that there are no selection procedures developed by scientists. A review of the literature and an analysis of the currently used selection procedures reveal that most schools and hospitals select „off the top of one’s head“. Mostly they use unstructured interviews, without knowing in detail, what competencies they are assessing. Nobody knows about the validity of those ad hoc assessments and how effective the selection is:

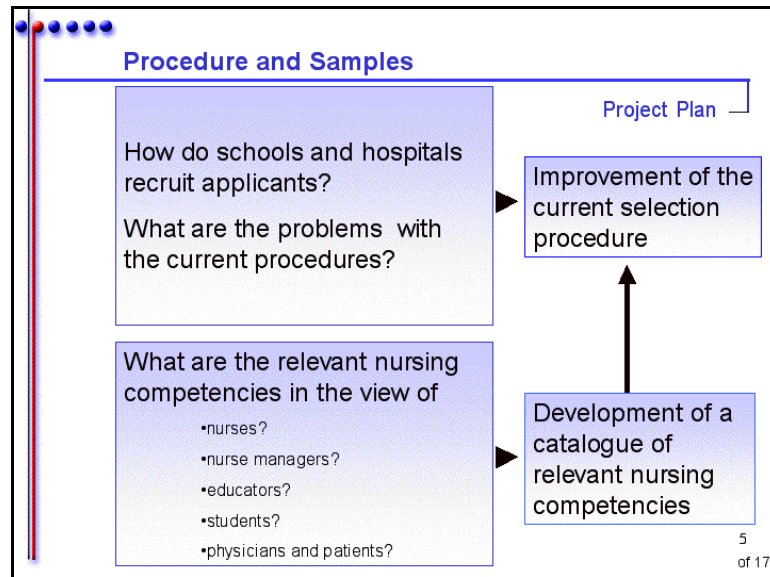
What constitutes effective selection procedures: Is it the job performance or is it the retaining of new employees?

These four factors: Lack of nurses, decreasing applications, high turnover rate and badly constructed selection procedures built the framework of my project.

In the next part I would like to show the plan and the samples of my project.

3 Procedure and methods

The major intention is to improve the current selection and recruitment procedure for nurses under the consideration which I described earlier. An improvement is only necessary when the analysis of the current “state of the art” revealed deficiencies.



The first step is to analyse what kind of selection procedures are in use? Which methods are good and which are bad in relation to the applicant, hospital and scientific perspective?

250 nurse managers were asked about their experience and their preferred method. I used a postal survey (with a return rate of 40%). Furthermore I explored the view of the applicants by interviewing 44 nurses. They were newcomers who were less than 6 months occupied at the hospital

The analysis of the literature revealed, that the lack of a collection of relevant nursing competencies is one major problem. The selectors used methods (for example an interview) without explicitly knowing which competencies were important for the job and how they could assess them. If you were to think for a moment about either a member of your family or a close friend, could you then imagine them as being a good (male) nurse? Would you employ this person? Would you prefer a male or female or a young or old person?

Mostly it is a subjective evaluation and an ad hoc decision about the aptitude of a person. You and also the other nurse managers mostly don't know about the criteria which bias the decision.

So, one further step in creating a new recruitment system is to analyse the relevant competencies in the view of nurses, patients, physicians and nurse managers.

Are there differences and which required competencies are the basis for the interview?

To create such a criteria catalogue I used the critical incident method described by Flanagan (1954).

People are asked to report incidents they have witnessed which relate outstandingly to good or bad nursing. The people have to describe the situation in which they see a very competent nurse or an incompetent nurse.

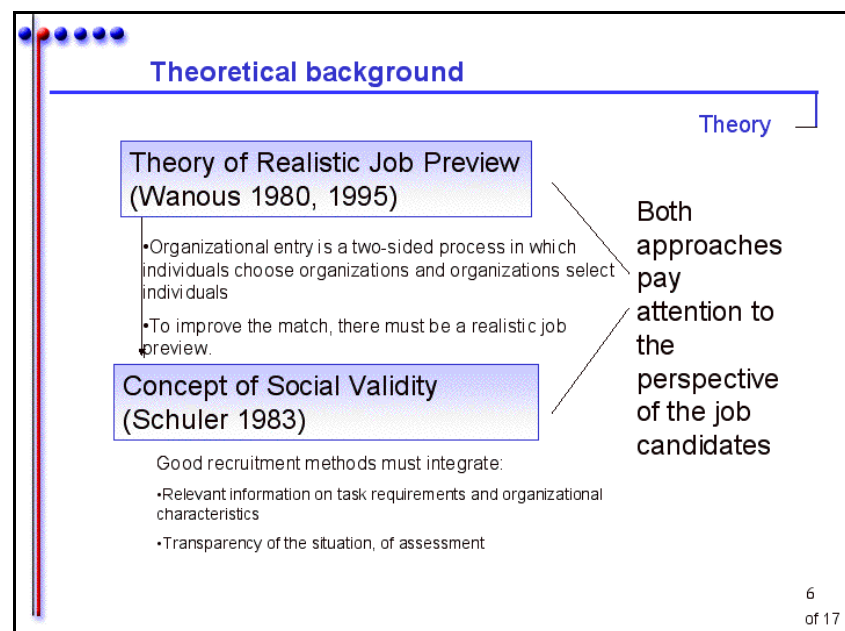
The advantage of this procedure is that abstract competencies (for example “Social competence”) could be clarified in typical situations.

It is easier to assign such critical situations to the selection methods than abstract attributes. For example, the critical situations can be the basis for a simulation or a so called “situational interview” (What would you do if...). The result of such an analysis is a criteria-catalogue that shows the special demands in different fields and for different responsibilities.

First I have to know what the relevant competencies are, and only then can I design corresponding methods to assess them. The results of the first stage of analysis - the reflection of the problems with the current methods – must also be integrated into the new conception.

Now I want to come to a central aspect which influences the quality of recruitment: The neglect of the perspective of the job candidates. This aspect was pointed out in the theory of realistic job preview by Wanous and also in the concept of social validity by Schuler.

4 Theoretical background



What both approaches have in common is that they emphasize the experiences and the satisfaction of the job candidate. This idea is being ignored in the majority of books on personnel selection. They focus on the perspective of the selector, for example, the nurse manager. It seems that the only intention of the selection procedure is to find a person, that fits the expectancy of the manager. Everything is related to the question: Which method best predicts the future performance of the job candidates.

Nobody asks: What does the applicant want, when he/she enters into an organization or a selection procedure.

The job candidates also make a selection. They evaluate as to whether the organization fits with their expectancy and they try to get a realistic picture.

Both sides have the same interests: They want to get fair and realistic information about each other. If realistic information is given to the applicants they can then decide whether the specific job on the one hand fits their needs and on the other, whether they themselves will meet the requirements of the job and suit the organization.

That's a central part of Wanous Theory: Individuals' specific job needs and the hospital's capacity to fulfil them must match. If both match, they influence the job satisfaction and the organisational commitment in a very positive way.

To facilitate such a match, the selection procedure – for example, the employment interview – has to yield the relevant information.

Thus typical recruitment practices that emphasize information limited only to the positive aspects of the organization may result in a mismatch between individual specific job needs and those of the organisation.

Wanous analysed different forms of selection procedures and found that not every selection method is qualified to give such a realistic job preview.

He favors an employment interview that is conducted together with potential colleagues. Also, work experience can help to get realistic information.

The idea that the kind of selection method can influence satisfaction of the candidates, is part of the concept of social validity. Schuler claimed that the one-sided emphasis on “empirical-technical validity” in constructing assessment methods neglects the view of the applicants. He also suggested that the social validity should be considered. Two situational characteristics are suggested to be the main components of social validity: 1) Relevant information about task requirements and organizational characteristics, that means adequate mutual communication, and

2) transparency of the situation, of assessment tools, and of the evaluation process.

Not every assessment method fulfils these requirements for social validity. For example, an intelligence test mostly does not reveal information about the required competencies and doesn't care for mutual communication.

I want to give you two examples from my own experience concerning the social validity of assessments: When I applied for a job at several nursing schools in 1988, I had the chance to compare many different recruitment methods. I remember one school in which I was asked about the length of a 10 DM-note. In another school I had to read a children's story called the „little tucki-tuffel-schnuffel“. I had to summarize the openend story and write a happy end.

At that time I asked what possible information would my answers provide for the school? What is the connection between the length of the note or the Tucki-Tuffel-Schnuffel-story on the one hand and the nursing competencies on the other?

Are both relevant to nursing? I found it funny but I got a wrong impression about the demands of the job.

A second example:

After my final examination I applied for a job in a hospital, where fortunately I didn't have to do a test, but instead had to attend a classical employment interview. The nurse manager asked me the usual and expected questions for approximately 20 minutes. Why are you applying for a job here? Do you know the hospital? After this question answer session he discussed the contract and described the structure of the organization.

On my way home I asked myself, if this could be the right workplace for me. I wondered how little information I got about the things I was really interested in. For example, about the team or the quality of nursing. Nobody asked me what I wanted to know and what my expectancies were.

4.1 Reasons to pay attention to the perspective of the job applicant

Why is it so important to pay attention to the perspective of the job applicants?

One reason is the changing conditions on the labour market; another reason derives from Wanous' theory.

The labour market situation:

The labour market situation has changed from a supply to a demand market.

Nowadays the applicant can choose between the different job offers available, whereas in the past, the hospital was in the prized position of being able to pick and choose among qualified applicants.

Therefore, the selection methods must pay more attention to the satisfaction and the expectancy of the applicant.

During the first stage of my research I visited several schools and attended different selection procedures. One school had an "assessment-center". In this case the applicant had to cope with several assessment techniques over an 8 hour period. Applicants had to do a presentation, a role play, a paper-and-pencil-test, and a classical applicant interview. After each module they had to reflect on their own performance and their performance of their competitors.

It was very stressful and laborious to fulfil the different demands.

Only one third of the job applicants got a contract. It is obvious that such a procedure damages the image of the school, of the affiliated hospital and maybe the image of nursing in general. This negative image has long-term consequences: The applicant's girlfriend or boyfriend will never apply to this school and relatives may avoid the hospital.

In the context of the first survey I asked students why they had applied to the school they then attended. Most students said that it was the image, the first impression they got during the selection procedure. Others said that they or their friends had positive experiences in the affiliated hospital. No one had "hard criteria" to evaluate the training or quality of the teachers.

These arguments point out how important it is to pay attention to the perspective of the job applicants.

Also, the theory of realistic job preview makes a good case for that.

Why focus on the perspective of the candidates?

Theory

- Changes in the labour market of nurses:
 - The applicant selects a hospital

- The prediction of the RJP-Theory:
 - Applicant centred recruitment influences
 - Organizational commitment
 - Turnover-proneness
 - Job satisfaction

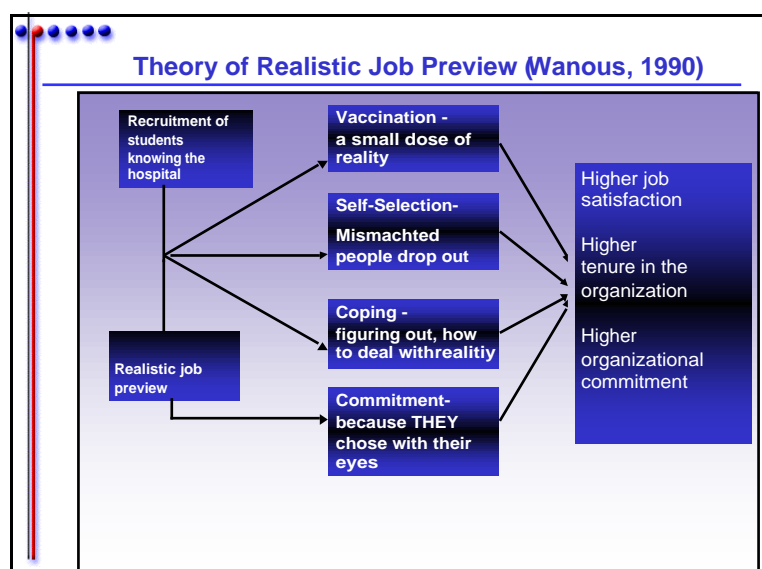
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4.2 Theory of realistic job preview

Wanous predicted that the content of the application procedure influences the long-term job satisfaction, the commitment of the applicant and hence reduces the turnover. Perhaps you remember that I talked about the problems concerning the great fluctuation-rate of nurses in Germany. The practical implications of that theory could be one possibility to steer against this tendency.

Wanous argued that during the application procedure, the person tries to find out if the new job will meet his or her expectations. This calculation can only be exact, if he gets the information he is searching for.

The realistic recruitment influences the long-term dependent variables: Job satisfaction, turnover-prone, and commitment. To explain the effects there are four mediator variables:



Vaccination: This means that realistic recruitment operates in much the same way as a medical vaccination works because job candidates are given a small dose of

organizational reality during the recruitment stage in an attempt to lower initial expectations.

The variable known as **self-selection** should be clear. If expectations and reality do not match the newcomer will not enter the hospital.

The **coping effect** variable is a third way in which realistic expectations can enhance the newcomer's entry. Having accurate expectations should clarify the expectation that the organization has for newcomer's job performance. This leads to the fact that newcomers can develop coping strategies which will enable them to succeed in the new job.

Finally, when individuals believe that they made a **job choice decision without strong inducements** from others, they tend to be much more committed to the decision. That is a known effect from psychology, that people accept decisions that they have had a hand in making.

That is the theoretical background.

And now my questions:

Can this theory and its implications be applied to the recruitment of nurses?

To answer this question I tested two hypotheses derived from the theory.

4.2 Hypothesis

The first hypothesis supposed that students working in the hospital know their workplace very well. So if they apply for a job in the same hospital after their training, they got realistic job previews and so the satisfaction and the organizational commitment is high and the turnover-rate is low. That is the prediction from the theory.

Not every hospital has an affiliated school. Such hospitals do not offer training for nursing students. They use an external recruitment.

People applying for a job in such a hospital have an information deficit.

However, hospitals which recruit nurses from the affiliated school have the advantage of knowing the student and also the student knows the hospital and its specific demands.

So my assumption following the theory of Wanous is that the hospitals which can not recruit students from an affiliated school, have higher turnover rates. Hospitals which sometimes or always recruit new employees from the school, should have lower turnover rates.

To test this hypothesis I used a postal survey. 256 hospitals were asked about their annual turnover rates and about the frequency they recruit nurses from the affiliated school. The turnover-rates were calculated as a ratio between employees and turnover. Following Wanous, the voluntary and the involuntary turnover are both influenced by the job preview.

Here is the result:

You can see, that the turnover-rate is significantly higher for hospitals that exclusively recruit nurses from other schools, which use external recruitment. The turnover-rate of the 29 hospitals which use external recruitment is 10%. The mean difference is 5,6%. (That is significant. I used an independent Sample T-Test)

Another way to present the result is to use an ordinal dependent variable instead of a dichotomous one. I asked the hospitals how often they recruited students from the affiliated school: never, seldom, occasionally, frequently or always.

Here you see the result. The turnover-rate decreases with the probability of internal recruitment.

I used the kendalls-tau-coefficient for ordinal data to test the significance. The correlation is low, but it is significant.

These results also confirm the hypothesis.

Now to the **second hypothesis** derived from Wanous theory.

With the increasing amount of information the newcomer goes about his job, the job satisfaction increases, the commitment increases and the turnover-proneness (that is the tendency to leave the job) decreases. According to Wanous the amount of information could be increased during the selection procedure and this would therefore influence these dependent variables.

The first step to test this hypothesis was to get a collection of relevant information which nurses look for, when they apply for a job.

In a pretest I asked 220 students what information they want to get about the new job during the employment interview. The answers have been categorised and completed with items from the Minnesota Job Description Questionnaire. Typical information they want to get is:

- Degree of challenge at work
- Salary level
- Quality of nursing etc.

The final job-description questionnaire has 58 items.

In the next step I asked 44 nurses who had a maximum of 6 months in their new job, how much information and what information they received on their first working-day. It was a retrospective question.

I did not ask explicitly what information they got during the employment interview, because there are other informal sources to get information about the job (for example from friends or from own experience made as a patient). The sum of items he/she answered with “yes” is a score for the information he/she had. The maximum attainable score is 58 and the minimum 0. Using a median-split I got two groups: The well-informed and the ill-informed nurses. That is the independent variable.

Now to the dependent variable:

Job satisfaction, turnover-proneness and organizational commitment.

I measured job satisfaction with a so-called thermometer method. The nurses were confronted with the 58 job characteristics and had to rate their satisfaction at each item. They could use numbers between zero and 100.

The mean value over all 58 items is a measure of the Job-Satisfaction. High values mean high job satisfaction.

The organizational commitment was measured with the Commitment questionnaire by Allen and Meyer. “Organizational commitment consists of the factors such as the employee’s belief and acceptance of the organization’s goals and values, the employee willingness to exert effort on behalf of the organization, and a strong desire to keep up membership in the organization”.

The mean value of the 24 items is a score of the Commitment. The highest value can be 7, the lowest value 1, because it’s a 7-point scale

To measure the turnover-tendency I used the same procedure as Vandenberg & Scarpello (1990). They asked “How do you estimate the probability of still working in the hospital next year? The nurse had to rate the probability with the thermometer-scale between zero and 100. That is a prospective question.

Hypothesis 2 Testing the theory

Hypothesis 2:
Well-informed nurses have higher job-satisfaction, higher organizational commitment and a lower turnover-prone than the ill-informed nurses.

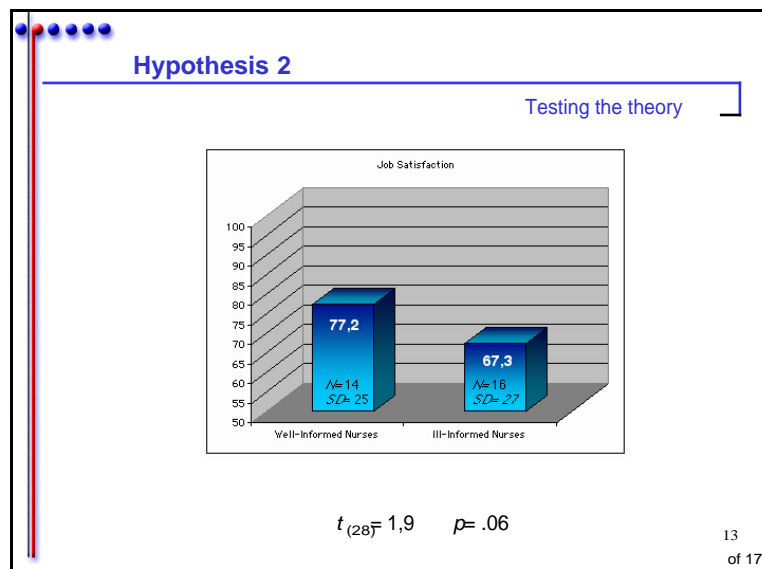
Independent Variable: Well-informed vs. Ill-informed nurses
Dependent Variable:

- Job satisfaction
- Organizational commitment
- Turnover-proneness

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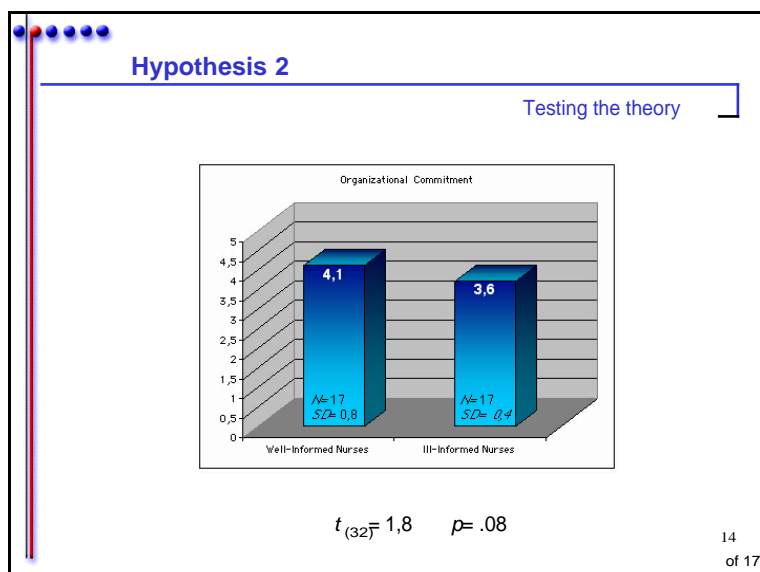
So take a look at the results.

Job-Satisfaction:



The mean difference is nearly 10%. The T-Test is significant at an alpha-level of 10-Percent. This supports the theory: Well-Informed nurses are more satisfied than ill-informed nurses.

Also the results concerning the Organizational commitment support the theory:

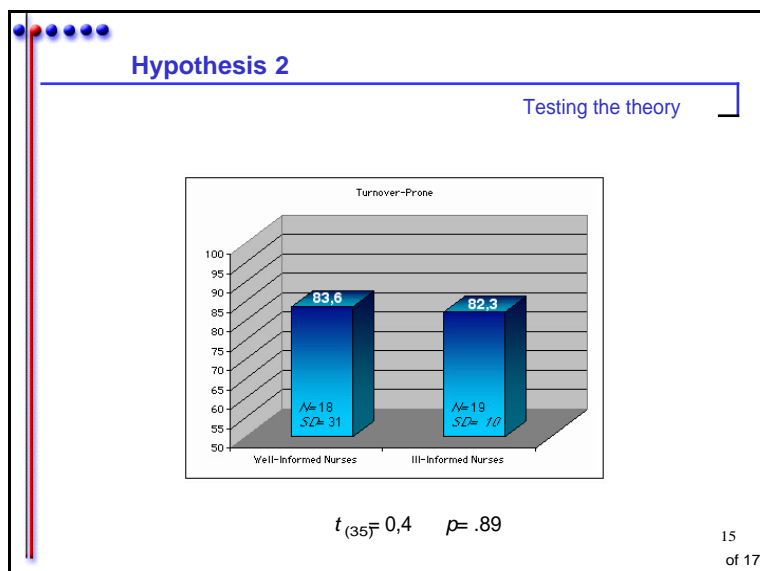


Well-informed nurses have a higher level of organizational commitment.

But there are no effects concerning the turnover-tendency. The well- and the ill-informed nurses show no significant difference. The hypothesis has to be rejected.

I think that is caused by the operationalisation of the variable. The Question “What will be next year“ is very problematic, because it is a hypothetical question. The answer is affected by many other non-job-factors, for example, family planning, relocation etc.

I think that in Wanous’ model there is a wide gap between information-level and turnover, however the connection between the level of information and job satisfaction seems narrower.

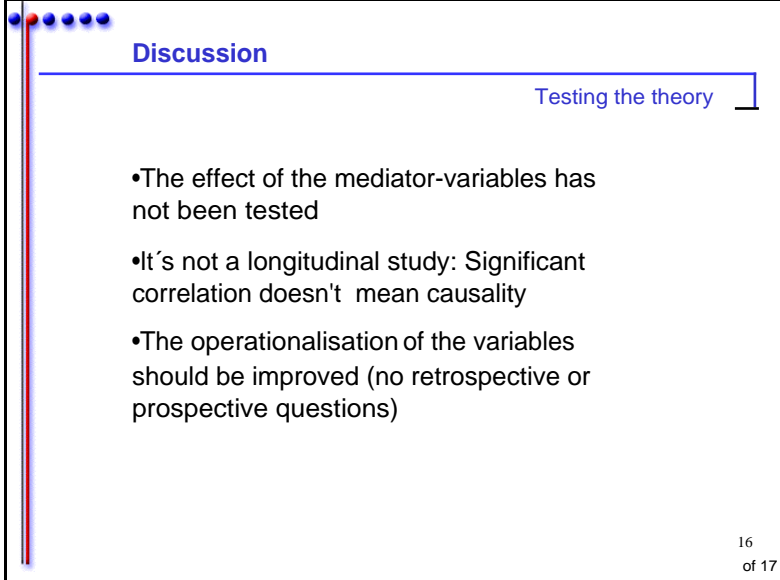


So far I have shown the results of the quantitative analysis but it is also important to study the qualitative data. Following the questionnaires I asked the nurses which information they wanted to get but had not got at the beginning of their job.

They seemed to be well-informed concerning hard facts like payment, working time or further training. But they were ill informed concerning the quality of nursing at the workplace, the atmosphere in the team, or the equipment of the ward. These are important topics, which could result in dissatisfaction, so it should be communicated during the selection procedure.

5 Discussion

What is critical regarding these reports:



Discussion

Testing the theory

- The effect of the mediator-variables has not been tested
- It's not a longitudinal study: Significant correlation doesn't mean causality
- The operationalisation of the variables should be improved (no retrospective or prospective questions)

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1. There is only a correlative connection between information and the turnover-proneness. However, the influence of mediator-variables were not analysed. It should be tested in further studies using structural equation modelling whether the variables (vaccination, coping, self-selection) are indeed responsible for the found effects.

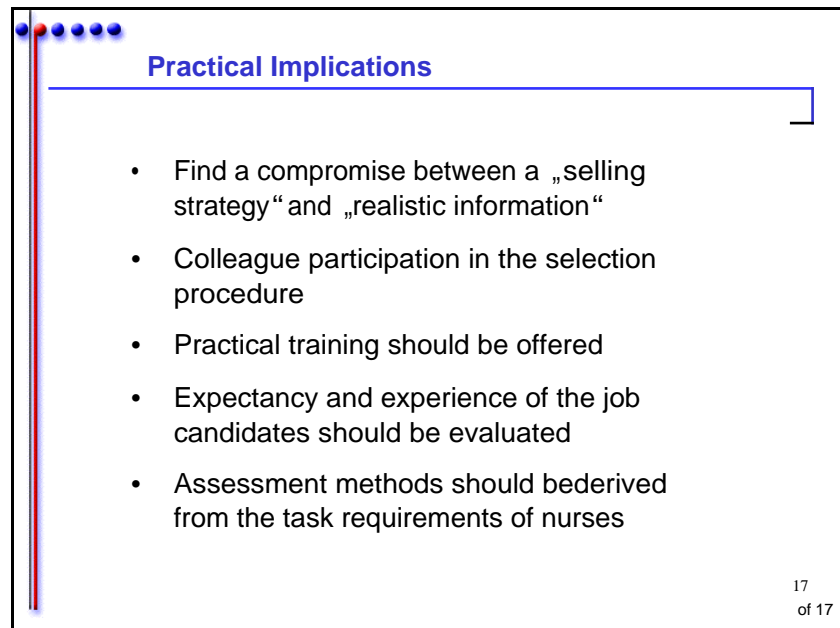
2. This is no longitudinal study. Significant correlations don't mean causality. In future studies it should be checked, for example, whether the estimated probability for staying in the job corresponds with the real tendency for termination.

3. The operationalisation of the variables should be improved (no retrospective or prospective questions). But that's also an effect of the cross-sectional-study.

6 Practical implications

Nevertheless:

If you take the results together and take into consideration the labour market situation and the special education system, the following recommendations should be put into practice:



Practical Implications

- Find a compromise between a „selling strategy“ and „realistic information“
- Colleague participation in the selection procedure
- Practical training should be offered
- Expectancy and experience of the job candidates should be evaluated
- Assessment methods should be derived from the task requirements of nurses

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- During the selection procedure the hospital should present itself. The nurse manager should use a “selling strategy” to produce a positive image. But a compromise between selling and realistic communication has to be found. The expectations of the job candidates must be taken into account.
- Later colleagues should participate in the selection procedures, because they have the best insights into the actual demands of the job.
- Practical training should be offered. Here the applicant is as near as possible to everyday reality. He or she could meet his later colleagues and see the needs of the job.
- To get an impression of the perception and the feelings of the applicant at the selection procedure, the process should be analysed with standardized qualitative and quantitative questionnaires. Which information did the applicant not get? It is favourable if the applicants can send back the questionnaires anonymously and also that an independent institution should analyse the data.
- It is important to develop assessment tools, that are specifically derived from the task requirements of nurses. Methods from other economic fields should not be adopted unreflectedly. The first step has to be a catalogue of relevant competencies. Designing corresponding methods that will reveal these competencies could be the next step.
- Procedures should be used which are close to the requirement of the job. Exactly this fact corresponds to the concept of the social validity. Due to that, tests have to be avoided that ask the size of a bank note. Instead, demands of the practice should be simulated, in role playing, computer simulations or work samples.
- Taking into account the present status of the project I would propose two procedures which mean a compromise between high social validity and empirical-technical validity: A structured employment interview. That means a task-related, psychometric constructed and partially standardized interview. In the case of students, a multimodal applicant-centered selection procedure should take place. 30 applicants have recently been tested using such a procedure, which is a combination of role playing, group discussions and single discussions. First results show that the applicants rate the combination positively. But the effectiveness and the validity have not yet been evaluated.

Zitierhinweis:

Reuschenbach, B. (2001). *Development of a new selection procedure for nurses integrating the concept of „social validity*. Paper presented at the 2nd European Doctoral Conference in Nursing Science, Oct. 12. - 13, Maastricht.