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The desired competence of the Swedish ambulance nurse according to the professionals - a Delphi study

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KEYWORDS

Ambulance Nurse, Nursing, Professional Competence, Ambulance care, Prehospital Emergency Care, Delphi technique.

ABSTRACT

Nursing is evolving into new fields of health care including ambulance care, where a branch of specialist nursing is growing. Various views exist on the desired competence for the ambulance nurse and valid guidelines are lacking in Sweden. To increase knowledge of the field, professionals were asked to describe what competences an ambulance nurse should possess. The aim of this study was therefore to elucidate the desired professional competence of the specialist ambulance nurse, according to the professionals. A modified Delphi technique was used, where a panel of professional experts expressed their views on the desired competence of the ambulance nurse. This study reports, at a high level of agreement among the panel experts, that the desired competence of the specialist ambulance nurse consist of forty-four separate competences creating ten areas of competences: Execute leadership, Generic abilities, Interpersonal communication, Institutional collaboration, Pedagogic skills, Possession of relevant knowledge, Professional judgement, Professional skills, Research activities, and Technical skills. The high level of agreement among the professionals as well as the large number of competences reflects the high demands placed on the ambulance nurse by the professionals themselves.

BACKGROUND

Nursing as a profession is evolving into new fields of health care. One of these fields is pre-hospital emergency care, or ambulance care, where a branch of nursing is growing (Suserud et al, 2003; Suserud, 2005; Williams, 2012). In some countries, including Sweden and the Netherlands, the registered nurse (RN) is considered to be the most appropriate profession to work in ambulance care service. The desired professional competence of ambulance health care staff varies internationally, and this includes the educational systems and levels of education (Kilner, 2004; Melby, Ryan, 2005). In the UK, Australia, USA, Norway and several other countries, the paramedic system is used, but in other parts of the world there are other national standards for ambulance staff (Al-Shaqsi, 2010; Sanders, 2012). In Sweden the nursing profession is emerging as the standard in ambulance care services (Ahl et al. 2005). In 2005 the Swedish National Board of Health and Welfare decreed (SOSFS, 2009) that it would from that point onwards be mandatory to staff ambulances with RNs and in some health care regions a nurse holding a specialist nursing degree is required. Normally, the ambulance nurse represents the highest level of competence in the field of Swedish prehospital emergency care services. The presence of other professions represented in the field, such as emergency medical technicians (EMTs) or physicians are not regulated on a national level and there are regional differences regarding staffing issues in ambulance care services. Historically, EMTs were the dominating group of staff in the ambulance care services (Suserud, 2005) but, since the governmental requirement of RNs were issued, they are a diminishing group. Physicians are present only in a limited number of regions and, often as part of special units such as helicopter emergency services (HEMS). EMTs are typically paired with RNs as members of the regular ambulance team where the nurse has the responsibility

for the quality of care. Consequently, the RNs should be able to perform a variety of professional tasks including the work of EMTs as well as all levels of care in the prehospital setting. During this evolution the need of a nursing specialist education, similar to other areas of nursing, were identified and in 1998 a specialist nursing educational program at advanced level were established. The educational program results in a postgraduate diploma in specialist nursing, prehospital emergency care, as well as a master's degree (Ministry of Education and Research, 2011).

There is an ongoing media debate between representatives from the professional field, the authorities and the universities concerning the required professional competence and appropriate education for an ambulance nurse. National guidelines for the specialist ambulance nurse that were issued by the National Board of Health and Welfare (SOSFS 1997:18) expired by year 2008 and have not been replaced (National board of Health and Welfare, 2008), leaving the professional field without legal guidance. Recently the Swedish National Association for Ambulance Nurses, in collaboration with the Swedish Society of Nursing, published national guidelines for the competence (Swedish Society of Nursing, 2012) required for an ambulance nurse, but this document has no legal status. Many other stakeholders have an interest in the process of developing a description of the competence required in this relatively new professional field. Examples of these stakeholders are health care representatives, the medical profession, the Ministry of Education and Research, the Swedish Agency for Higher Education and the universities as educational providers (Swedish Society of Nursing, 2010).

Various consensus techniques can be used to find out what competences different interested parties in any particular field demand from a profession (Jones, Hunter, 1995). Such techniques include the nominal group technique, the consensus development conference and the Delphi technique (Keeney et al. 2001; De Meyrick, 2003; Hsu, Sandford, 2007). The consensus conference and nominal group techniques both require the participants to be simultaneously present in the process. The knowledge of the identity of the other participants can give a stronger influence to those with high authority. The Delphi technique is anonymous, however, and does not require simultaneous participation (Kennedy, 2004; Keeney et al. 2006). The technique was developed in the 1950s to foresee future events and uses a panel of experts who express their opinions on an area via a series of questionnaires (RAND, 1969). Results from the questionnaires are fed back to the panel of experts, who may change their views after seeing the opinions of the other experts. Diverging views currently exist on the desired competence of the ambulance nurse at a national level and research generated from the perspective of the relevant professionals is lacking. The aim of this study is to elucidate the desired professional competence of the specialist ambulance nurse, according to the views of the professionals.

METHODS

This study was performed using a modified Delphi technique (Williams, Webb, 1994). A panel of professionals was invited to express their views on the desired competence of the ambulance nurse with the aim of reaching a reasonable consensus.

The identities of the panel experts were not revealed to each other, to ensure that results were not biased by the members' background, politics or relationships among the panel members (Powell, 2003). The panel experts took part in three rounds of questionnaires. They were strategically recruited in order to obtain multiple perspectives, representing various organizational, educational and professional contexts, came from different parts of Sweden and were considered to be experts in ambulance care. The first author used personal knowledge and register studies to enroll the first line of panel experts. Some of those, at the request of the author, provided their recommendations for other experts to be included in the study. The panel experts were all contacted personally by phone for inclusion in the study. A total of 39 panel experts were included. Most of them were specialist nurses holding a degree in ambulance care. In order to ensure different views regarding their professional experiences the nurses were enrolled according to their years in the profession. Other panel experts represented different levels of management within the field, including medical managers, scientists, university teachers, union representatives and several national associations (Table 1).

Procedures

Data was collected using web based electronic questionnaires that were modified by the authors (TeleForm® v10). In each of the three rounds, all panel experts received an e-mail link to the active questionnaire. By clicking the link, they were directed to the web server where the questionnaire was available for completion. After completing the questionnaire the expert panel submitted their responses by saving them on the server. The first questionnaire was accompanied by detailed information about the study's aims and background. The questionnaire contained an open question, where

the informants were asked to write down, in their own words, their views of the desired competences of the ambulance nurse. The question was formulated to enable the expert panel to describe their views on what the ambulance nurse should be able to handle, analyze and perform in the profession from the perspective of the immediate future. The panel experts were given unlimited space for their written response. Analysis of this questionnaire was performed using qualitative content analysis as described by Burnard (1991). At first, a naive reading of all data as a whole unit of text resulted in summarized notes. The analysis then included the extraction of meaning units by thorough reading of the data. Similar meaning units of the transcripts were gathered into codes and then grammatically transformed into statements (Table 2). The grammatical transformation of codes into statements were made to state an opinion that aided the panel experts to take a decisive stand, based on their personal views, when answering the second questionnaire. The statements were thoroughly reassessed by the authors to assure that no specific competence was left out due to condensation of meaning units into codes.

The second questionnaire consisted of 46 statements presented in random order. The expert panel was instructed to rate the statements with regard to level of agreement using a four-grade Likert scale. The lower end point of the scale represented "Totally disagree" and the higher end point "Totally agree". The panel members' responses were analyzed using the Statistic Package for Social Sciences Software (IBM® SPSS® Statistics, version 21).

The third questionnaire consisted of the same statements as the second, with the addition of summarized results presented as numeric values and bar diagrams of round two. Again, the expert panel was asked to rate their level of agreement with the

given statements (Figure 1). After analysis of the third questionnaire the results were arranged as levels of rated agreement and presented as mean values (M) and standard deviations (SD). The statements used in the second and third questionnaires were further analyzed and gathered into categories representing areas of competences.

Ethical considerations

According to the Swedish legislation regulating research ethics this study was not subject to ethical review by the Regional Ethical Review Board. The panel experts received information about the study orally, including withdrawal from the study, and provided informed consent by submitting their written answers to the first questionnaire. Confidentiality was preserved in the study on several levels. All collected data was stored on a secure computer server accessible to the research team only. The first author was the only one in the research team who had knowledge of the panel experts' identities. The panel experts' responses to the three questionnaires were logged in order to issue reminders if necessary, but responses could not be linked to any individual expert.

RESULTS

The results are based on the written responses of 39 panel experts that were collected in the three Delphi questionnaires. The first questionnaire was answered by 38 panel experts. The expert missing (#14) later responded to the second and third questionnaires and these were included in the study (Figure 1). One expert dropped out of the study after completing the first questionnaire (#27) but the data already collected was included. A total of thirty-seven panel experts responded to the second questionnaire. One expert (#33) did not reply to the second questionnaire but

answered the first and third questionnaires and this data was included in the study. Thirty-seven panel experts responded to the third questionnaire. One expert (#20) did not respond (Figure 1) but data from responses to the first and second questionnaires was used in the analysis.

This study finds the desired competence of the specialist ambulance nurse to consist in ten areas of competences: Execute leadership, Generic abilities, Interpersonal communication, Institutional collaboration, Pedagogic skills, Possession of relevant knowledge, Professional judgement, Professional skills, Research activities, and Technical skills. Each of the areas contained two or more separate competences (Table 3). The analysis of the responses to the second questionnaire showed mean values (M) for the graded competences varying from 2.21 to 3.92. All but one competence, namely “The ambulance nurse shall be able to diagnose patients”, were graded with $M \geq 3.08$ (Table 4). The analysis of the responses to the third questionnaire showed mean values varying from 2.11 to 4.0. The competence “The ambulance nurse shall be able to master systems for radio communication and telephone” was graded 4.0, showing a 100% level of agreement among the panel experts. In the third questionnaire, the majority of competences (96%) were graded with $M \geq 3.24$. The mean value of grading the competences was increased in 46% (n=21), unaltered in 13% (n=6) and decreased in 41% (n=19) instances, compared to values from the second questionnaire (Table 3). For 30 of the 46 competences SD decreased from the second to the third questionnaire, indicating an increased level of agreement on their importance. The remaining 16 competences showed an increase of SD of 12, leaving 4 with an unaltered SD. In total 46 competences were identified in this study. Two of the competences, “The ambulance nurse shall be able to work with

prevention and health-promoting work” and “The ambulance nurse shall be able to diagnose patients” showed mean values of 2.70 and 2.11 respectively, indicating a comparatively low grading (Table 4). These two competences were consequently excluded from of the final results. The final 44 competences, constituting the agreed desired competence of the specialist ambulance nurse (Table 3), showed mean values ≥ 3.24 , demonstrating a high level of agreement in the rating of these final 44 competences.

DISCUSSION

The analysis of data resulted in ten different areas of competences, giving form to the desired competence of the specialist ambulance nurse. The multiple areas and wide range of competences indicated the extensiveness and complexity of the profession. The high level of rated agreement among the panel experts also elucidates the overall high demands placed on the ambulance nurse by the professionals themselves. The individual elements of each competence that comprises the ten overall areas of competences are complex and not easily embraced, adding to further complexity in defining the competence to be considered when creating professional guidelines or when planning educational programmes, such as the specialist nursing program.

The ten areas of competences elucidated in this study contain multiple competences in some of the areas. The largest number of competences was in the area of generic abilities, which included 11 separate constituent competences. However, the number of competences in an area cannot be used in grading their importance. The area “Possession of relevant knowledge” encompasses a great amount of medicine and

nursing care knowledge but is represented by only two competences. The great variation of competences in the area of “Generic abilities” indicates that the nurses' personal capacity is viewed as an important part of the ambulance nurse competence. Other studies have reported a similar focus on generic competences (Edgren, 2006; Barton et al. 2009; Eriksson et al. 2012), perhaps consolidating the view of a specific set of personal characteristics as being necessary for a specific profession. Contrary to this, there is no scientific evidence of the preferred type of generic abilities or personality characteristics that are fitting for the ambulance nurse profession. It can also be presumed that professional education can contribute to a change of personal characteristics, based on deeper professional knowledge. However, in the process of giving shape to a general competence by defining the professional competences desired, it is necessary to consider that each one of the individual competences only partly encompasses the complexity of the professional competence. The professional competence is not only found in the description of its constituent parts but in the incorporation of the profession and all aspects of it, in the individual professional (Bowden, Marton, 1999). In this study, the desired competence of the ambulance nurse is given form by the results, but further research conducted with other methods could be useful to add a deeper understanding of the complex nature of professional competence.

Today, there are several stakeholders that have diverging opinions on the desired competence of the ambulance nurse. These opinions are mainly expressed in an on-going media debate. Comparing the results of this study to the description of competence published by the National Association for Ambulance Nurses (2012) similarities in content are found in all of the ten areas of competences. A disparity can

be seen, as nursing care competences are described on a detailed level while these are not equally stressed in our study findings (where competences including nursing care were fewer and less detailed). The comparison highlights the need for consensus among the professionals with regard to the importance of the nursing care component in ambulance care. One aspect of this is that ambulance care management is largely influenced by physicians, with a focus on medical competences, leaving the nursing care competences as being less sought after among managers. Comparing study results to the competences and learning outcomes required for a degree in pre-hospital emergency care nursing, as stated by the Swedish National Agency for Higher Education (Ministry of Education and Research, 2011), a disparity can be seen in the way our study stresses the areas of “Professional skills” and “Generic abilities”. Competences are expressed as learning outcomes and emphasis is placed on more reflective and analytical abilities that can be assessed within an educational programme. The lesser focus on the competences of reflective or analytical kinds in this study could also reflect the limited possibilities given to the professionals, in their daily work, to use analytical strategies and to reflect on experiences. In all, the lack of legally valid professional guidelines, at both the national and international level, does enhance the importance of developing such, for both the profession itself and for the educational providers.

Some of the competences were highly rated by the panel, displaying an almost unanimous level of agreement (Table 4). Two of the three highest rated competences referred to technical skills perhaps indicating the influence of the rapidly increasing technical development in ambulance care services and the need for the professional to truly master the basic technical tools. Another explanation could be that the ratings

reflect the image of professional skills linked to the competence of EMTs, which have been important historically, instead of the as yet undefined competence of the ambulance nurse. For the EMT, as well as the ambulance nurse, these skills are essential but, in addition to the technical skills the competence of the ambulance nurse should hold a number of more complex competences which still have to be recognized by professionals the field.

A striking result of this study was the strongly expressed homogeneity among the experts' opinions, given the high value of means for all but two of the competences. This is interesting considering the current debate. One explanation could be that the concept of competence is extensive and complex for the expert panel. The limited number of competences in the questionnaires urged the experts to rate almost all the described competences very highly, due to the high demands on the ambulance nurses' professional competence.

The panel experts changed their opinions in that 41% of the competences received lowered ratings and 46% received higher ratings in the grading of the third questionnaire. Only 13% of the competences remained unchanged, strongly indicating that the Delphi method contributed to the change in the expert panel's opinions. Also, the changes in SD indicated increased agreement in two thirds of the competences between the second and the third questionnaire, resulting in a very high level of agreement in the final rating. Another reason for the high ratings could be that in the study information letter consolidating the present understanding of the field the authors may have unintentionally introduced a deductive frame to the expert panel.

Given the opportunity to review the data, the professional ambition of high demands is however more plausible. The elevated level of ambition can be based on internal demands by the nurses themselves, or may be imposed by external influences on the ambulance care context. Another relevant aspect of the homogeneity in the study is that the majority of the panel experts have long experience as RNs and share the common nursing culture, in values as well as in profession. Finally, in the evolution of ambulance nursing, an eagerness to distinguish the profession by inclusion of a large number of competences can be seen as a way of responding to both external and internal demands for high quality in every aspect of clinical work.

The choice to limit the study to three rounds of questionnaires was based on the literature (Keeney et al. 2006), where an increased dropout rate has been seen when performing more rounds. The dropout rate (2.5%) was low. In similar studies this has been shown to be prone to various factors e.g. informant's workload, organizational changes or study fatigue (Keeney et al. 2001) and can sometimes be substantial. A fourth round would perhaps have been helpful in reaching an even higher degree of consensus in this study, but since the level of agreement still was high, a fourth round was not used.

There is no specific appropriate number of panel members recommended for use in a Delphi study, but some evidence implies that when informant numbers reach above 20 the impact of a single individual is substantially reduced (Keeney et al. 2001; Kennedy, 2004). The present study is based entirely on the written responses of the panel members, possibly enhancing the significance of the strategic recruiting process over the number of panel members. Reaching consensus in a complex professional

field among various parties holding separate opinions is a task that is not done easily (Jones, Hunter, 1995). Possibly, as often seen when using the Delphi method (Hsu, Sandford, 2007), maintaining the anonymity of the panel experts may have contributed to agreement by diminishing the needs of expression of position-based divergence.

The qualitative content analysis is influenced by the authors pre-understanding of the ambulance care context, as well as by their academic background. The analysis in this study was limited to forming results at category level due to the qualitative content at the data level. Still, this is an expansion of qualitative analysis not seen in the traditional Delphi method (RAND, 1969), generating an enhanced trustworthiness in the results.

CONCLUSIONS

This study elucidates the desired competence of the specialist ambulance nurse, according to the views of the professionals. The high level of rated agreement among the professionals in grading the competences, as well as the great number of desired competences, reflects the high demands on the ambulance nurse by the professionals themselves. The Delphi method was found to be applicable for this type of research. These results can be useful in educational planning or when creating professional guidelines for the specialist ambulance nurse.

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Authors' contributions

JW designed the study, performed the questionnaire procedures, including the gathering of data, performed qualitative and statistical analysis and was the main author of the manuscript. GE, AJ and BS participated in the design of the study, the qualitative and statistical analysis and helped to draft the manuscript. All authors read and approved the final manuscript.

Conflict of interest statement

The authors have no competing interests.

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Figure 1 - Study communication steps: Panel and researcher activities, number of experts and response rates, missing responses and study dropout.

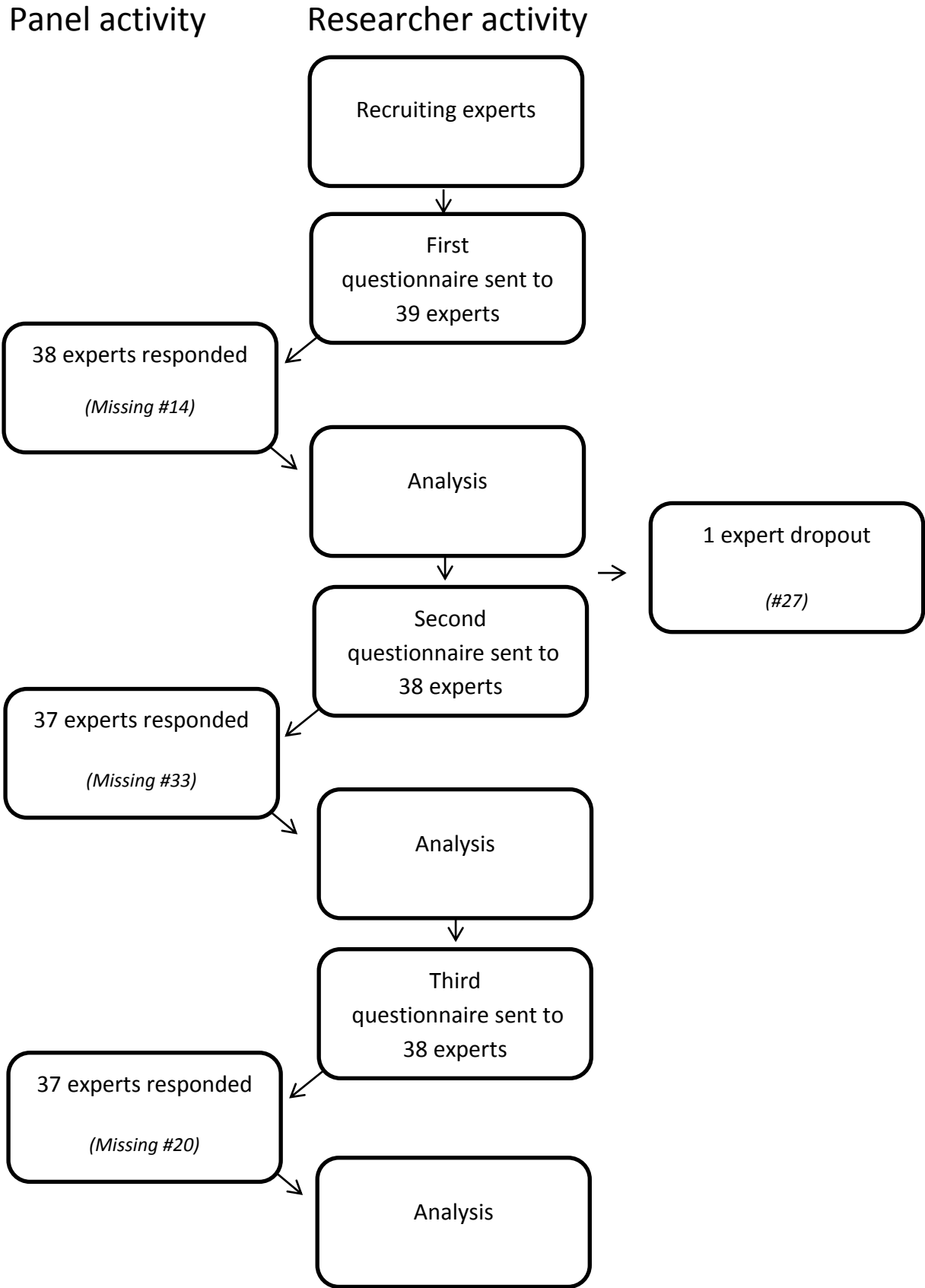


Table 1 - Description of panel members: Position, professional experience of the specialist nurse, major body of professional education in each group and number of informants in each group.

Position	Professional experience	Professional education*	Number (tot=39)
Specialist Ambulance nurse	0-1 years	RN	3
	1-3 years	RN	5
	3-5 years	RN	4
	>5 years	RN	4
Ambulance services manager		RN/Dr/EMT	4/2/2
Medical manager		Dr	2
Clinical teacher		RN	2
University teacher		RN	3
Scientist		RN	3
Union representative, National association		RN/Dr	4/1

**RN=Registered Nurse, Dr=Physician, EMT= Emergency medical technician.*

Table 2 - Example from the round one qualitative analysis process: Citation taken from a panel expert's written response of the first questionnaire.

<i>Citation</i>	<i>Meaning units</i>	<i>Code</i>	<i>Statement</i>
As stated above, the nurse needs insight in medicine, surgery, orthopedics, gynecology and psychiatry to be able to make decisions about the appropriate level of care. In some cases, you are alone in the process of decision-making. In order to be able to do this, you need knowledge and, maybe most importantly, a fully operational set of professional guidelines to use when leaving the patient in their own home.	Be able to make decisions about the appropriate level of care. You need knowledge.. and guidelines to use..leaving the patient in their home.	Ability to use a triage system, based on patient assessment, to determine adequate level of care.	The ambulance nurse shall be able to assess and direct patients to an adequate level of care using a triage system
(Expert #4)	(Expert #4)	(Experts #1, 4, 5, 7, 8, 10, 12, 13, 19, 20, 22, 23, 26, 33, 34, 37, 38)	

Note: The meaning units were identified and extracted from the citation. The code was then compiled by the condensation of multiple meaning units from the group of panel experts. The code was transformed grammatically into a statement.

Table 3 - Areas of competences: Created from the forty-four desired competences according to the expert panel and presented alphabetically.

<i>Areas of competences</i>	<i>The Ambulance nurse shall be able to...</i>
Execute leadership	manage and supervise a team of co-workers manage and supervise larger accidents or disasters
Generic abilities	be flexible and adaptive in their profession display the ability of professional learning in a lifelong perspective perform duties in a stressful situation displaying a unstressed manor perform work duties in a problem-solving way perform work procedures in a reflective and thoughtful way possess a good personal physical capacity possess capacity for the profession's every situation reflect upon the profession itself use experience-based knowledge when performing duties work autonomously work for personal well-being in the profession
Interpersonal communication	apply good skills when performing patient interview use good communication skills when meeting the patients and their relatives work in a team
Institutional collaboration	collaborate with other organizational representatives e.g. the police department, fire department or social services collaborate with other healthcare organizations e.g. primary care, emergency department or other hospital clinics
Pedagogic skills	act educationally towards patients, relatives and co-workers tutor students, new employees or colleagues
Possession of relevant knowledge	display deep theoretical knowledge of nursing, emergency care and medicine present knowledge of pre-hospital emergency care organization and aims
Professional judgement	assess the patient's situation, considering ethical principles assess the patient's condition in a holistic manner, considering the patient's current life situation as a whole display good judgement in the professional field meet relatives with respect regarding their special needs in the given caring situation
Professional skills	assess and direct patients to an adequate level of care using a triage system autonomously initiate, perform and evaluate medical treatment autonomously initiate, perform and evaluate nursing care correctly assess and handle threatening and violent situations make an accurate assessment of the patient's condition after analyzing the situation, vital stats and patient history perform conventional nursing care register the patient records in current systems for documentation and report when handing over the patient use a structured technique when performing medical assessment work according to local, regional or national guidelines work for enhanced patient safety
Research activities	evaluate scientific research and apply new knowledge in the profession initiate and participate in research and quality-enhancing work
Technical skills	master systems for radio communication and telephone navigate the ambulance vehicle to the designated address using maps or navigation system operate the ambulance's medical technical equipment operate the ambulance's technical equipment perform patient transport, considering ergonomic principles safely drive the ambulance vehicle

Table 4 - Ambulance nurse's competences: According to, and graded by, the expert panel. Presented as mean values and standard deviations comparing the second and third questionnaires.

<i>The Ambulance nurse shall be able to</i>	QNR 3		QNR 2	
	M	SD	M	SD
master systems for radio communication and telephone	4.00	0.28	3.92	0.23
collaborate with other organizational representatives e.g. the police department. fire department or social services	3.97	0.23	3.95	0.37
operate the ambulance's medical technical equipment	3.97	0.00	3.95	0.27
display good judgment in the professional field	3.97	0.32	3.95	0.44
navigate the ambulance vehicle to the designated address using maps or navigation system	3.95	0.23	3.84	0.23
operate the ambulance's technical equipment	3.95	0.17	3.95	0.23
use good communication skills when meeting the patients and their relatives	3.95	0.32	3.94	0.32
register the patient's records in current systems for documentation and report when handing over the patient	3.95	0.36	3.89	0.42
collaborate with other healthcare organizations e.g. primary care. emergency department or other hospital clinics	3.94	0.48	3.87	0.54
perform work duties in a problem-solving way	3.92	0.28	3.79	0.58
display deep theoretical knowledge of nursing. emergency care and medicine	3.92	0.56	3.95	0.65
correctly assess and handle threatening and violent situations	3.89	0.17	3.89	0.23
apply good skills when performing patient interviews	3.89	0.55	3.81	0.66
work in a team	3.89	0.35	3.97	0.59
safely drive the ambulance vehicle	3.89	0.32	3.84	0.46
perform duties in a stressful situation displaying a unstressed manor	3.86	0.23	3.76	0.23
use a structured technique when performing medical assessment	3.86	0.35	3.81	0.52
make an accurate assessment of the patient's condition after analyzing the situation. vital stats and patient history	3.86	0.42	3.89	0.39
work for enhanced patient safety	3.86	0.67	3.87	0.84
perform patient transport, considering ergonomic principles	3.86	0.40	3.86	0.46
meet relatives with respect, regarding their special needs in the given caring situation	3.83	0.66	3.89	0.76
work according to local, regional or national guidelines	3.81	0.62	3.84	0.51
manage and supervise a team of co-workers	3.81	0.46	3.70	0.52
assess and direct patients to an adequate level of care using a triage system	3.81	0.38	3.82	0.31
display the ability of professional learning in a lifelong perspective	3.78	0.44	3.76	0.44
be flexible and adaptive in their profession	3.78	0.16	3.68	0.23
possess capacity for the profession's every situation	3.78	0.23	3.79	0.41
manage and supervise larger accidents or disasters	3.76	0.48	3.76	0.54
tutor students. new employees or colleagues	3.76	0.48	3.68	0.51
autonomously initiate. perform and evaluate nursing care	3.70	0.42	3.82	0.34
perform conventional nursing care	3.70	0.76	3.70	0.65
perform work procedures in a reflective and thoughtful way	3.70	0.59	3.62	0.59
act educationally towards patients. relatives and coworkers	3.68	0.62	3.73	0.72
possess a good personal physical capacity	3.65	0.63	3.65	0.68
reflect upon the profession itself	3.65	0.46	3.61	0.37
assess the patient's situation, considering ethical principles	3.62	0.80	3.63	0.90
use experience-based knowledge when performing duties	3.59	0.39	3.70	0.16
present knowledge of pre-hospital emergency care organization and aims	3.56	0.69	3.58	0.72
initiate and participate in research and quality-enhancing work	3.54	0.61	3.53	0.73
autonomously initiate. perform and evaluate medical treatment	3.50	0.23	3.50	0.31
evaluate scientific research and apply new knowledge in the profession	3.46	0.94	3.55	0.52
assess the patient's condition in a holistic manner, considering the patients current life situation as a whole	3.41	0.53	3.54	0.70
work for personal well-being in the profession	3.38	0.86	3.57	0.80
work autonomously	3.24	0.74	3.29	0.80
work with prevention and health-promoting work	2.70	0.58	3.08	0.58
diagnose patients	2.11	0.50	2.21	0.66