JOURNAL OF AMERICAN MEDICAL SCIENCE & RESEARCH

Original Research Article
ISSN: 3041-5578
Journal homepage: https://medical.researchfloor.org/

Health professional's experiences during stroke care: a focus group study in Greece

T. Bellali[,1], P. Galanis,[2] O. Konstantakopoulou,[2] I. Karagkouni,[2] G. Manomenidis,[3] A. Kasapoglou,[2] N. Kakaletsis,[4] I. Kalliontzakis,[5] T. Kotti,[6] I. Kouzi,[7] T. Laina,[7] M. Papadopoulou,[8] M. Poumpouridou,[9] C. Savvopoulos,[9] A. Tountopoulou,[7] I. Tsagalas,[10] E. Tsampalas,[6] P. Sourtzi,[11] G. Ntaios,[10] K. Vemmos,[12] P. Gallos,[2] T. Mitropoulos,[2] E. Korompoki[¥8], D. Kaitelidou[¥13] and O. Siskou[¥14]**

[1]*Department of Health Sciences, School of Sciences, European University Cyprus, Nicosia, Cyprus*
[2]*Center for Health Services Management and Evaluation, Department of Nursing National and Kapodistrian University of Athens, Greece*
[3]*Faculty of Nursing – International Hellenic University, Greece*
[4]*Ippokrateio – General Hospital of Thessaloniki, Greece*
[5]*General Hospital St. George, Chania, Greece*
[6]*General Hospital of Tripoli Panarkadiko "Evangelistria", Tripoli, Greece*
[7]*Aiginiteio University Hospital, Athens, Greece*
[8]*Alexandra General Hospital, Athens, Greece*
[9]*AHEPA Hospital, Thessaloniki, Greece*
[10]*General University Hospital of Larissa, Greece*
[11]*Department of Nursing National and Kapodistrian University of Athens, Greece*
[12]*Hellenic Stroke Organization and Hellenic Cardiovascular Research Society, Greece*
[13]*Head of Center for Health Services Management and Evaluation, Department of Nursing National and Kapodistrian University of Athens, Greece*
[14]*Principal investigator Center for Health Services Management and Evaluation, Department of Nursing National and Kapodistrian University of Athens, Greece*

¥equal last authors

ABSTRACT

Purpose: The aim of the study was to investigate HPs experiences during stroke care and the way health services providing stroke care in Greece are organized.

Materials and Methods: This is an exploratory qualitative study with inter-professional focus groups. Nurses and physicians working in various Greek stroke care units were purposively sampled.

Results: Two focus groups' interviews with nurses (n=5) and physicians (n=6) were conducted. In relation to the factors that affect stroke care provided by HPs, the covid pandemic, the management of time and patient, and the role of informal carers in the hospital were identified. Positive challenges that help HPs in their work with stroke patients included the quality of collaboration, self-resilience and the patient as a source of power. Regarding difficulties encountered by HPs during stroke care, organizational problems and educational deficiencies were highlighted. Suggestions to improve current clinical practice included education and collaboration among HPs, the need for a specialized stroke team and financial support.

Conclusions: Awareness concerning the stroke patient's rehabilitation process after hospital discharge is highly supported by all HPs. The need for HPs specialized education on stroke care and funding for stroke unit structures in hospitals is essential for improving quality of services.

Keywords: *stroke care, healthcare professionals, focus groups, staff experiences, Greece*

Citation: T. Bellali, P. Galanis, O. Konstantakopoulou, I. Karagkouni, G. Manomenidis, A. Kasapoglou, N. Kakaletsis, I. Kalliontzakis, T. Kotti, I. Kouzi, T. Laina, M. Papadopoulou, M. Poumpouridou, C. Savvopoulos, A. Tountopoulou, I. Tsagalas, E. Tsampalas, P. Sourtzi, G. Ntaios, K. Vemmos, P. Gallos, T. Mitropoulos, E. Korompoki, D. Kaitelidou and O. Siskou (2024). Health professional's experiences during stroke care: a focus group study in Greece. *Journal of American Medical Science and Research.*

DOI: https://doi.org/10.51470/AMSR.2024.03.01.15

Received on: 16 January, 2024
Revised on: 05 March, 2024
Accepted on: 25 April, 2024

Corresponding Author: ***T. Bellali***
Email Address: ***bellalithalia@yahoo.com***

Introduction

Stroke is the leading cause of serious disability globally among other cardiovascular diseases, despite newly introduced techniques and methods in stroke treatment [1] and one of the most expensive hospitalizations [2]. Similar to other vascular diseases, stroke incidence is highly age related and if one considers the increase in the average age of society's nowadays, the need for enriched rehabilitation services is now more than imperative. The stroke is multidimensional in care as it includes various aspects of care: the acute care phase, the treatment complications monitoring, the counseling and the rehabilitation.

Caring for a stroke patient is increasingly complex and challenging and health professionals (HPs) are expected to display high levels of competence and knowledge of stroke, not only during patient's hospitalization in the stroke unit but after discharge in the rehabilitation center [3]. However, HPs' knowledge in stroke care varies and is considered low or not up-to-date on the current indications of stroke treatment

The recovery process following a stroke could be very demanding, especially for survivors left with movement disorders, cognitive dysfunction, and self-care disability [4].

Various degrees of functional limitation might lead to long-term impairment that can severely affect stroke patients' quality of life. Caring for these patients can be challenging for HPs who encounter various barriers including lack of training and knowledge in some areas in specialized stroke care [5], low levels of staff [6], interdisciplinary collaboration and staff satisfaction [7], increased levels of stress [8] and unsupportive organizational culture [9].

In the stroke care pathway, HPs play a vital role in stroke patients' care, since they are the direct care providers and their level of experience in stroke care might affect the quality of care provided. In a qualitative study conducted in China, nurses' subjective experiences were defined by the gap between their ideal role and their actual practice that left them unable to meet their patients' need, thus provide them with the proper holistic care [10]. In another qualitative study in Canada, nurses who experienced constrains in fulfilling their role in patient care, felt that their role was devalued and that various obstacles, mainly organizational, affected the quality of care they provided [7]. The link between patient care and continuous support in nurses who work in hyper-acute stroke unit was observed in a qualitative study in the UK that suggested the importance of effective communication during thrombolysis process [11]. In a Greek qualitative study, exploring the knowledge and attitudes of nurses and physicians towards stroke care, the importance of continuing specialized education in stroke management was highlighted and its impact on patients' care was greatly supported [12]. The barriers HPs experience as major obstacles during the implementation of stroke care were identified in two qualitative studies in France and in the UK that included the lack of resources, training and coordination between HPs and healthcare facilities [13,14]. Finally, in a qualitative study, describing both patients' and health professionals' experiences of a hospital stroke service, the importance of effective collaboration among members of the stroke team were highlighted [5].

In the context of Greece, there is a dearth of qualitative studies focusing on HPs experiences, barriers and factors affecting stroke patients' care. Understanding the experiences of HPs can help comprehend the current situation and challenges faced when caring for stroke patients as well as improve patient-centered goals, thus implement the proper holistic treatment for them. In addition, identifying influential factors in stroke patients' care-such as HPs' experiences on the topic and function of health services, that has long been recognized as a key component of implementing guidelines, is essential to synthesize the best evidence regarding patients' care in stroke.

The aim of this study was to investigate HPs experiences during stroke care and the way health services providing stroke care in Greece are organized. The research questions that guided the study were the following: a) What are the factors that affect the care of stroke patients? b) What are the difficulties encountered by HPs when caring for stroke patients? c) What are the challenges they face? and d) Which interventions/measures should be taken in order to improve stroke patients' care?

Materials and Methods

Study design

This study was based on an exploratory qualitative design with thematic analysis of inter-professional focus groups. Focus group interviews has become an important tool for collecting data in qualitative research in the health sciences field [15]. It is a strategy that allows researchers to gather information on the experiences, perceptions and beliefs of participants [16].

In addition, with the spread of COVID which was experienced throughout the globe, the method of interviews via the internet was dictated by the restrictive measures that followed the pandemic. To achieve maximum variation technique, a purposive sampling technique was used. Consolidated criteria for reporting qualitative research guidelines (COREQ) were followed [17-19].

Participants

HPs (nurses and physicians) working in four University Teaching Hospitals and two National Health System Hospitals situated in different regions of Greece (Athens, Thessaloniki, Tripoli, Chania) were enrolled. An invitation to eligible for the study HPs was sent via direct email. Two focus group interviews with 5 nurses and 6 physicians respectively, were conducted. Regarding the number of participants considered appropriate for a focus group and internet-based research, the optimum group size is between six to eight participants, apart from the researchers [20].

The purposeful sampling of participants based on inclusion criteria of study and the availability of them who are willing to participate. Inclusion criteria were the following: having a working experience for at least two years with stroke patients and working in different hospitals in various regions.

Data collection and procedure

In the present study, internet played the role of the research venue, where the collection of data took place in a way that is very close to traditional methodologies [21-24]. More specifically, focus group interviews were conducted by using Zoom platform, with the use of a camera, which lasted approximately 1.5 – 2 hours. Platforms in general consist tools that are offered for contemporary research and can be used for the study of a specific subject, theme, phenomenon [21].

Two researchers (TB and AK) used a semi structured interview guide with open questions which allowed a flexibility by giving the opportunity to the participants (of the two focus groups) to freely answer and even respond possibly not strictly following the series of issues of concern [25,26]. The interviews began with an introduction of the researchers and a presentation of study's purposes, as well the direction to which the results will be used. Main key questions of interview guide focused on HPs' challenges and difficulties met in their everyday practice and during stroke patients' care, contributing factors to effective treatment of stroke patients and suggestions for improvement.

Data analysis

Thematic analysis was considered appropriate for this study because it gives insight into the perspectives of different participants, finds similarities and differences and allows to summary key characteristics of a large data set [28]. The analysis was conducted according to Nowell [29] who described a step-by-step approach for a trustworthy thematic analysis. According to their guide, the first step refers to researchers' familiarization with the data after transcribing the recordings of the session. The researchers read and reread the data while making notes about ideas for coding. The second step involves the initial production of codes from the data. Interesting aspects are identified and data relevant to each code are gathered and combined by allowing the researcher to pass to the third step that involves sorting and collating similar coded data into themes [30]. At the next step, themes are checked for forming a coherence pattern and their relation to the extracts. Subthemes may be also formed.

Then researchers define and name the themes in a way that gives the reader right away the idea of what the theme is about. The final step, includes presentation of themes, subthemes and representative quotes in a report.

In the present research, three experienced researchers (TB, GM and AK) within the stroke field and qualitative research methodology, analyzed the data separately to ensure credibility of the findings, carried out the coding and identified the key themes. The researchers then met to cross-check the identified patterns and compare the results. Discrepancies that occurred were discussed and resolved by all authors.

Description of focus groups' dynamics was also incorporated in the analysis, as it can help interpretation of the social reality of participants [31]. Interaction analysis was analyzed based on Steven's step by step 12 question guide [32] i.e "What were the contradictions in the discussion?", "Was a particular view dominant?", "How were emotions handled?", "what was the atmosphere during the interview?" that can help the researcher to have a better insight on the collectivity of the group experience [32].

Ethics

Informed consent procedure was carried out before the interviews. The researchers asked for participants' consent regarding the visual recording of the interview and a copy of the consent form was given. Upon concluding all the set of questions, the participants were asked to possibly refer to something that was overlooked by the researchers or something that they consider important enough to mention at that point.

After concluding each interview, an oral summary was presented by the second moderator/observer, the researchers thanked the participants for their time and for sharing with them their very important and sensitive experiences. Finally, participants were asked to offer their feedback answering "what went well, what did not go well and what could have been done differently" and then researches shared their thoughts and feelings [27].

The study was implemented in accordance with the General Regulation (EU) 2016/679 on Data Protection (GDPR) and approval was obtained by the Ethics Committee of the Department of Nursing, National and Kapodistrian University of Athens (Ref. No 277/14-1-2019). Finally, the deontological issues regarding the identification of the personal data of the participants were overcome as the participants were known to the research team as they work in a common field (hospitals, clinics etc). Regarding audio and visual recording, the archives were stored in the computers of the researchers with the use of a code. The data will be available after reasonable request.

Results

Nurses group comprised of 4 females and 1 male. The majority was working in a University Hospital and the mean years of working experience was 13.4. Accordingly, physicians group included 4 males and 2 females, mainly working in a University Hospital with 20.7 years of mean working experience. In Table 1 are presented the demographic and professional characteristics of the participants.

Table 1: Characteristics of the participants

	Gender	Age	Profession	Studies	Working Experience (years)	Stroke care Experience (years)	Type of Hospital
N1	Male	49	Nurse	PhD	21	3	UTH
N2	Female	38	Nurse	MSc	14	8	UTH
N3	Female	36	Nurse	MSc	14	12	UTH
N4	Female	39	Nurse	MSc	11	11	NHS
N5	Female	30	Nurse	PhD	7	2	UTH
P1	Male	56	Physician	PhD	29	12	UTH
P2	Female	45	Physician	PhD	15	9	UTH
P3	Male	37	Physician	PhD	13	9	UTH
P4	Male	56	Physician	MSc	20	18	NHS
P5	Female	43	Physician	PhD	18	5	UTH
P6	Male	56	Physician	MD	29	12	NHS

***UTH:** University Teaching Hospital / **NHS:** National Health System Hospital*

Based on the four research questions of the study, findings showed that HPs caring for stroke patients, experienced several challenges and difficulties in their everyday work. Reflections concerning improvement measures are also suggested. HPs shared several themes, showing that both nurses and physicians have the same reflections in general. The results are presented integrated since common themes emerged. However, themes that emerged by only one focus group, were described separately. All themes are supported by representative quotes of nurse and physician group participants. To enable identification of nurses' and physicians' quotes, the labels (N) and (P) were given for nurses and physicians respectively. Additionally in the end of results, the interaction between participants are described according the analysis of focus group studies.

First of all, in relation to the **factors that affect stroke care** provided by HPs, three themes and 7 subthemes were produced (Table 2).

Table 2 Themes and subthemes from factors that affect stroke care provided by Hps

Themes	Subthemes
1. Time and patient management	a) Supply of information and the importance of early diagnosis
	b) The precious time of diagnosis and treatment
	c) Early onset of the rehabilitation process
2. Informal carers and patient's family members in hospital	a) The "harmful" informal giver
	b) Training of caregivers and optimal collaboration
3. The COVID pandemic	a) Quality of care and the lack of students
	b) The rehabilitation process

Time and patient management

Both nurses and physicians highlighted the importance of early and immediate supply of information on patient's condition when arriving at the hospital, as in all the instances it may determine the final outcome.

"It is very important that the hospital unit is called while the patient is on the ambulance so that the expert physician (neurologist) waits at his position…" (P)

"We should be informed prior to the patient arrival so that we can be 100 % ready …" (N)

HPs agreed that time is precious when it comes to the procedure of early thrombolysis and emphasized on the onset of the rehabilitation process immediately after the patient is stable.

"The sooner the thrombolysis starts the better the therapeutic result…time is crucial...The "gold standard" of survival... early rehab is also crucial" (P)

"From my experience, patients have better quality of life after stroke when they receive early rehabilitation services" (N)

Informal carers and patient's family members in hospital

The patient's loved ones may be a true support for both the patients in stroke during their stay at hospital and the HPs but at times they may impede staffs' work and could put at risk the patients' life.

"In my working career I have experienced a number of cases of aspiration pneumonia provoked by informal carers trying to feed the patient...I know they want to help but…" (N)

"Not only do we have to care for our patients… but dealing with the numerous questions of patient's family is something else…they make questions all the time and they interfere in our work…can't stand them..." (N)

"Training the family member on how to mobilize patient at home is important for patient's rehabilitation after the stroke…they can cover patient's needs at home…if you teach them how to do it they can be a great help..." (P)

"Educating the family member on the warning signs of a second stroke could be lifesaving for the patient. It is critical to know when to call for medical help... (N)

The COVID pandemic

The quality of care provided is seriously threatened by the COVID pandemic that has changed the way HPs monitor patients with stroke. This has been expanded by the altering of internal medicine departments into COVID clinics. The rehabilitation process has been also affected.

"Now with this whole new reality, I mean with the COVID pandemic, it's not easy for me to dress all the time and care for the patient as I did before…I'm exhausted ...I really want to help but my powers let me down…" (N)

"It is really difficult... Now that a lot of clinics have merged, and there is lack of specialized hospital beds, stroke patients are accommodated in various departments…not specialized...it is not the same as being treated in a stroke unit..."(P)

"The whole rehabilitation process has changed in the COVID era. The COVID protocols have changed the whole procedure and stroke patients that are not ready to return home, have to stay in quarantine in the rehab center…and there is an overbooking…one patient in a room... Availability is very low" (P)

In relation to the difficulties HPs face during stroke care, 4 main themes, 7 themes and 16 subthemes emerged: Table 3.

Table 3. Main themes, themes and subthemes from the difficulties HPs face during stroke care

main Main themes	Themes	Subthemes
A. Staff and infrastructures	1. Shortage of staff	a) nursing staff
		b) medical staff
		c) other specialties
	2. Infrastructure, organization, co-ordination	a) Lack of infrastructure and co-ordination
		b) Lack of specialized neurological unit and clinic
		c) Collaboration with other clinics
		d) Internal conflicts and co-ordination difficulties
B. Education and functional standards	1. Training and the unwillingness of both nurses and physicians	a) Lack of specialized training and inexperienced employees
		b) Insecurity/fear. Unwillingness and fear of responsibility
	2. Functional standards and the implementation of new knowledge	a) Lack of guidelines
		b) Implementing new knowledge

C. Communication with the patient and the family	1. Informing patients/family during hospitalization	
D. The rehabilitation	1. Timing of onset	a) The importance of early rehabilitation
		b) Rehabilitation in hospital setting
	2. "Directing" the patient to the rehabilitation center	a) Informing the patient about rehabilitation
		b) Continuing rehabilitation in private centers
		c) The Financial parameter

The main theme "Staff and infrastructures" include the themes shortage of staff and infrastructure, organization, co-ordination. More specifically:

Shortage of staff

The staff shortage was stated by the HPs as one of the main obstacles in providing quality services to stroke patients. Few HPs for too many patients that need specialized care. In many cases, high technology medical equipment is present but there is lack of specialized users.

"There is a huge shortage of nurses…we are really tired and cannot give to our patients the care they deserve..." (N)

"One would say that now that there is an MRI and a CT device in almost every hospital, diagnosis would be easy to set and monitor stroke patients…still radiology technologists are scarce and at times we have to transfer our patients to nearby hospitals… (P)

"It is difficult to have only one neurologist to the emergency department and expect him to give at the same time thrombolysis, monitor the patient and care for other patients as well...it is not right for any of the patients...and the stress.."(P)

Infrastructure, organization, co-ordination

The Greek health system has a number of gaps in technical facilities, namely in medical devices, and in organized stroke departments mainly in the provincial hospitals. In some cases, there is total absence of specialized stroke unit and patients are treated in common internal departments. Everyday tension between physicians from different departments that are unwilling or overload with too much work to treat stroke patients and communication problems between interdisciplinary groups are a common phenomenon that seriously affects patient's trajectory.

"The infrastructure of the hospital is great!! Good and comfortable rooms renovated…still medical devices do not function properly, cables are worn out, monitor screens are difficult to watch...many technical issues…we are constantly trying to find money to fix them..." (P)

"Here in the large province of Arcadia, exists the only neurological clinic in the area that is still not very well equipped and not organized at all...there is no co-ordination...Someone that can determine the framework...that is the problem..." (P)

"There is no neurology department and neurologists are working in the psychiatry ward...In my hospital we treat stroke patients in the internal medicine department...(N)

"When our hospital is on duty service and we have to treat a stroke patient, if he is over 65 he is sent to the internal medicine department where the injection of thrombolysis takes place by an internist…neurologists proceed to thrombolysis only inside the stroke unit…this should be changed...(P)

"Unfortunately, our cooperation with the radiographer is not the one expected...imagine a stroke patient arriving around midnight at the hospital and me calling him to come and carry out a CT scan… "we can arrange it in the morning were his exact words"..As far as it concerns the MRI scan, they only carry them out after scheduled appointments, as if one can predict the stroke..it is ridiculous!! (P)

The main theme *"Education and functional standards"* include the themes "Training and the unwillingness of both nurses and physicians" and "Functional standards and the implementation of new knowledge ". More specifically:

Training and the unwillingness of both nurses and physicians

There are many gaps in the staffs' knowledge, both in nursing personnel and physicians, on how to aid or participate in the thrombolysis process. Insecurity, fear and unwillingness are some of the HPs' feelings during the procedure.

"Unfortunately, there in a lack of special education in nurses because no one cares... Nurses are afraid to participate in these kind of medical cases…they do not have the knowledge..." (N)

"The nurse in charge, always has to receive and treat patients during the thrombolysis because younger and novice nurses are scared to do so…it is not fair...the workload is too heavy...Someone has to train them..." (N)

"In my hospital the cases of thrombolysis always cause frustration to the staff...we have to search for the physician who is on call and that is not necessarily a neurologist...so we have to wait...Does he know the process, is he willing to uptake the whole thing?..there is some kind of resistance to all that..i don't know…we should hurry up, can't they see that time is crucial?" (P)

"The interns in the Emergency department are the ones that will have to receive the stroke patients...that is why us the specialized doctors have to train them effectively...we have to convince them that the stroke is a serious condition and that they have to act quickly...they lack education..." (P)

"Physician that gives the thrombolysis has to stay by the patient's bed at least 24 hours…he has to check the patient all the time...some are not willing to do so and they let unspecialized staff to monitor the patient, not to mention the unwillingness of the head in cardiology department that did not take the patient in his clinic because he did not want to have all responsibility…we treated the patient conservatively" (P)

Functional standards and the implementation of new knowledge

The importance of operating protocols when caring for a stroke patient is highlighted by both nurses and physicians who believe that guidelines could help them provide the best quality of care to their stroke patients. Moreover, they emphasize on the problem of inadequate training towards treatment of stroke patients and that most of the care plans they implement are based on their own experience acquired from their everyday practice.

"Unfortunately, there is no special protocol or guideline or algorithm hanged in the nursing station in relation to stroke patient treatment..." (N)

"I believe that nurses abroad are implementing nursing plans based on guidelines...this does not exist in Greece..." (N)

"It is important to have specific guidelines when treating stroke patients...so that the doctor knows exactly what to do, even the resident before the specialized doctor comes…but also after rehab...it is important to have a plan concerning scheduled

appointments, follow up visits...this inspires patients trust towards the doctor" (P)
"We have lack of knowledge and even if we have, based on our experience is out of date...this should be that way...(N)
"We have a special protocol for potential stroke patients in the Emergency Department (ER)... this has helped us win time and go straight for CT..our nurses are also feeling more confident" (P)
The main theme "Communication with the patient and the family" include only one theme, the "Informing patients/family during hospitalization".

Informing patients/family during hospitalization
Effective communication between physicians and patient/family members that have experienced stroke or are at risk of stroke is very important as it can help them to early recognize the stroke signs and literally save their beloved's life.
"I think it is very important to have an effective communication with the family members when patients survive... some of them may ask questions that are crazy, but it is important to get into their mind and explain to them as simple as possible, so that when they see the early signs to come immediately to the hospital... (P)
"People are not well informed and are not told about the importance of early admittance in the hospital...they may be late even a date and this is serious.."(P)
The main theme about *rehabilitation* includes two themes: "the timing of rehabilitation onset" and the "Directing patient to rehabilitation center".

Timing of rehabilitation onset
HPs reported the importance of early rehabilitation immediately after thrombolysis and highlighted the significance that the rehabilitation plan starts when the patient is still inside the hospital and not after hospital discharge.
"The rehabilitation process including physiotherapies, should start in the first 24 hours after thrombolysis "(N)
"it is important for the patient to grow strong to start physiotherapies early in the hospital" (P)
"Patients' relatives can call their own physiotherapist if they want, as hospitals physiotherapists are only in morning shift" (N)

"Directing" patient to rehabilitation center
One of the most important steps after the patient survives the stroke and is ready to discharge from hospital is to continue his rehabilitation treatment plan. In Greece, rehabilitation centers that are public are only a few and in certain areas, so the patient has to take care of this on his own and seek for a private rehabilitation center. Private centers are rather expensive and one of physician's main concerns is that patients may omit this part of treatment, resulting in bad quality of life.
"It is the doctor's duty to advise the patient to continue his rehabilitation after hospital discharge"...(P)
"Rehab centers are mainly private in Greece and patient's relatives have to look on their own...but this is costly..." (N)
"There is a list of stroke patients waiting for admission in the public rehab centers...this is a huge problem... I believe that this is one of the major problems in the Greek health system... patients decide to stay at home...(P)
Communication problems may occur between nurses and physicians in relation to who is telling the stroke patient about the rehab process after hospital discharge. Nurses stated that physicians may be annoyed if they advice the patient to look for a certain rehab center arguing that physicians' motives are unselfish.
"Doctors may get really angry if we propose to the patient a center different from what they did..." (N)
"I can't understand why doctors are getting that angry when we propose a rehab center when we are asked from the patient...Why am I to blame?.. I am convinced that their motives are not pure..." (N)
In relation to the *challenges* HPs face during stroke care, three themes, and six subthemes were produced (Table 4.)

Table 4. Themes and subthemes from challenges HPs face during stroke care

Themes	Subthemes
1. Collaboration	A) Interdisciplinary/interprofessional collaboration
	B) Collaboration with the physicians
2. Nurses' self-reliance and vigor	A) Nurses as "multi-tools"
3. The patient as a source of HPs' power	A) Satisfaction from patient's progress "The impossible can become possible"
	B) Satisfaction from patient's rehabilitation
	Γ) Relationship with patients and their families

Collaboration
All HPs supported the importance of interprofessional collaboration and the effect this may have on patients' quality of life. HPs tend to close ranks when the stroke patient is in danger and this always works in patient's favor.
"It is challenging to work as a team and have the best result...there is personnel shortage but if we want we can all help for the patient... setting aside our pride is important..." (N)
"I feel emotional every time a see my younger colleagues, that they are at the begging of their career, to fight so eagerly to save the patient, collaborating so good with the interdisciplinary team...it is important to set aside our differences for the patient's good" (P)

Nurses' self-reliance
Greek nurses feel very confident in their everyday practice. They are expected to perform a variety of duties, some of which are physicians' responsibility, and this gives them the confidence to stand firm on their feet when the physician is not around.
"I believe we are more energetic that nurses in other countries...we can do many things at a time..." (N)
"We are multitasking...we work with more than two hands and legs" (N)
Ok...the doctor may be in the driver's seat but the nurse is the one who changes the gear..." (N)

The patient as a source of HPs' power
HPs' greatest satisfaction comes from seeing their patients surviving. Every time a patient walks out of the hospital, HPs feel that their tiredness and stress is worth the effort.
"When you see that the patient is getting better...this gives you satisfaction...you feel that you contributed to all this..." (N)
"My favorite part is when I see the stroke patient starting to move, when he is getting of the bed...residents feel it too, they say so..." (N)
"I feel so full as a physician when I see my patient visiting us strong and healthy...it gives me the strength to keep on despite the difficulties..." (P)
Analysis of the focus groups, in relation to the **improvement measures suggested by the HPs,** three main themes and 6 subthemes were produced Table 5:

Table 5. Themes and subthemes in relation to the improvement measures suggested by the Hps

1. Education and collaboration between HPs	a) Permanent employment status
	b) Continuous education and standards of stroke care
	c) Interdisciplinary meetings
2. Specialized stroke team	
3. Managerial and financial support.	a) Administrative assignment with meritocracy
	b) State financial support

Education and collaboration between HPs

One of stroke nurses' main suggestions in order to provide high quality of care was to put a stop to experienced nurses' rotation and replacement with nursing personnel that is not permanent. The importance of interdisciplinary meetings in which nurses have a pivotal role in the patients' care was also highlighted. Finally, the need for clinical guidelines, protocols and continuous education concerning stroke patients' care was also supported.

"It is important that the manager doesn't transfer nurses too soon from specialized units and departments... we need experienced nurses... (N)

"It is only the doctors that keep on attending educational meetings and symposiums…we are the ones that stay behind...the management should take that in mind...they expect us to be informed …without educating us... (N)

"We nurses, are by patients side 24 hours a day...we should attend meetings with the doctors and be informed about the therapeutic plan so that we support the patient from our side…we are members of the team" (N)

Specialized stroke team

Mostly physicians reported the importance of a stroke team that could attend the patient both in the ER so as to provide the appropriate specialized care as soon as possible.

"It is important to have a stroke team in the hospital because the internist might be attending at another patient...in a hospital's duty service it is difficult for one doctor to be in multiple places…time is valuable for stroke patients..." (P)

"I strongly support the importance of a different department and a stroke team in the ER that is occupied strictly with the thrombolysis...time is precious...you can't expect one neurologist to be in the ER for all cases and to uptake the thrombolysis... (P)

Managerial and financial support

HPs strongly supported that hospital managers should be professionals that have previously worked in the hospitals and have a wider perception of the health system's difficulties and not persons appointed in their position by each government that takes the lead. They also emphasized on the financial support that should be given to the health system.

"It may seem a little provocative but all these people in hospital's managerial positions should stop being appointed by the government...they have nothing to do with the health system and most of them are bureaucrats, they no nothing about hospitals, still they are expected to solve hospital's problems... this should change now..." (P)

"Hospitals need financial support...to improve facilities and hire staff" (N)

Results from group interaction analysis

In both two groups, there was a high level of interaction and the cooperation of the moderators in both focus groups was excellent. In the first group (nurses), the whole atmosphere was very positive. Participants were willing to share ideas, experiences and thoughts and were open to all issues raised. There was room for everyone, mutual respect and sympathy. There was consensus in all the answers and no one tried to prevail or impose his / her own point of view. One of the participants spoke less, perhaps because she was younger than the others and had less experience. Another participant participated actively, however it was observed that she did so after moderator's urge.

In the second group (physicians), the atmosphere was positive and pleasant, but the dynamics were a little different from the nurses' team. The discussion continued in an easygoing mood. Each participant from the physicians group expressed his/her position, point of view and experience without conflicts, but without consensus either. No common concerns were observed. The atmosphere was colder and more typical. Participants were generally smiling and answering the questions very concrete. Two of the participants had less participation, probably because they had less experience with stroke patients than the others.

Discussion

This qualitative study explored HPs' experiences in providing services to stroke patients in healthcare units in Greece. Principal findings indicate that even though HPs manage to provide high-quality stroke care to patients, concerns regarding challenges and difficulties encountered with their daily clinical practice, were raised. Moreover, the COVID-19 pandemic has severely affected the effective monitoring of stroke patients and their rehabilitation process due to the rapid reconfiguration of services, caused by the pandemic, and the reallocation of specialized stroke staff in COVID-19 units, as a result of staff shortages. The World Stroke Organization who is monitoring the impact of the pandemic globally has reported a widespread impact on the quality of stroke and rehabilitation services, highlighting on the fact that stroke patients are particularly susceptible to developing complications and are facing death more often due to co morbidity with the COVID-19 infection during their hospitalization [33]. Also, HPs-reported the need for implementing commonly agreed operating stroke protocols and modifications that should be imposed in current clinical practice, in order to ensure that the most appropriate and effective treatment pathway for stroke patients is implemented. The European Stroke Organization and the Canadian Stroke Best Practice recommendations, highlight the importance of stroke protocols in improving clinical outcomes by delivering practice of high quality among stroke patients [34,35].

Regarding the issues that affect negatively the quality of the provided stroke care in Greece, HPs referred to the lack of specialized training, infrastructure, organization and coordination as the most notable factors, apart from staff shortages. According to the Organization for Economic Co-operation and Development, the ratio of nurses amounts to 3.4 per 1,000 population in Greece, vs 9.7 in Europe, indicating major imbalances among other staff categories, i.e. a 6.2 per 1,000 population for physicians vs the respective ratio of 4.5 in Europe. This evident shortage of nursing staff combined with the low-level specialization in stroke treatment could be considered as an obstacle in the process of improving current clinical practice. However, the results of another qualitative study related to experiences of nurses and doctors involved in stroke care, indicate that stroke nurses in Greece can achieve their professional potential within the appropriate working environment characterized by innovation, development and commitment of HPs [12].

The role of a robust continuing professional development framework in nursing education can be a leading factor to counteract understaffing and reduce clinical practice deficits in current stroke care practice [36]. HPs' also reported that in some highly equipped internal medicine units, there is a lack of specialized staff in operating high technology medical equipment. The lack of specialized stroke units in the majority of Greek public hospitals, combined with the absence of operating stroke protocols, constitute important factors that often lead to overcrowded internal medicine departments where stroke patients are treated. According to studies, patients admitted to stroke units in neurological hospital departments seems to have better clinical outcomes and quality of stroke care compared to stroke patients admitted to internal medicine hospital departments [37,38].

Communication issues that involve the decision-making process during stroke care, among patients and their families were also raised. Effective communication among HPs, stroke patients and their caregivers constitute an essential tool to achieve early identification of stroke signs. According to several studies, a patient-centered approach with regard to stroke patients and their families showed increased potential in empowering effective decision-making in daily clinical practice and improving stroke patient outcomes by reflecting individuals' special needs and care issues [39-41]. However, informal caregivers and/or family members of stroke patients sometimes may impede HPs' work and increase the risk for undesirable conditions (e.g. hospital-acquired infections, stroke complications) during the treatment process due to adverse behavioral patterns and attitudes. The communication problems between informal caregivers and HPs are commonly reported during the daily clinical practice [42-44]. Emotional factors, such as anxiety, fear and feelings of insecurity or abandonment, as well as, the ignorance of the appropriate holistic support required for a stroke patient and the lack of knowledge or skills with regard to rehabilitation, constitute major causal parameters for informal caregivers' unwanted behavioral patterns [42, 45].

Interprofessional collaboration among HPs was another crucial issue raised in relation to patient-centered care. All HPs supported the importance of interprofessional collaboration and its impact on delivering high quality of care to stroke patients and their caregivers. Multidisciplinary meetings with high level of interaction among HPs were characterized as a major group dynamic element that could positively affect the inpatient stroke care process [46].

The recovery process constitutes one of the most important parameters in achieving an effective treatment pathway in stroke patients. Stroke patients' recovery time is highly modified by the timely rehabilitation immediately following thrombolysis and the well-designed rehabilitation plan during patient hospitalization. HPs reported poor recovery time process in case of belated planning rehabilitation following hospital discharge. According to recent studies [47,48], the use of early on clinical evaluation specialized tests during hospital admission and treatment planning from the stroke onset to rehabilitation during hospitalization, positively affect stroke patients' discharge scores, as well as, clinical outcomes. It must also be considered that a consistent rehabilitation process is characterized of equal importance following hospital discharge, in order to achieve more favorable clinical outcomes and effectively reinstate stroke patients to their previous life habits [49]. HPs also pinpointed the necessity for continuity in the rehabilitation process following hospital discharge, but they were concerned about the existing facilities of rehabilitation services in Greece, in terms of cost and accessibility, i.e. high cost services and low accessibility for a large number of stroke patients of low or medium income. In Greece, rehabilitation services are delivered mainly by private providers, since the public sector is hardly developed. Therefore, stroke patients turn to the private sector or abide to the recommended rehabilitation plan on their own, often resulting to a poor rehabilitation outcome. In fact, low rates of compliance to the HPs' rehabilitation recommendations due to the increased out-of-pocket expenditure, constitute a major contributing factor to poor quality of life among stroke patients and their caregivers [50].

Financial and healthcare management issues were also discussed HPs strongly supported the need for further investments in hospitals in order to introduce and establish special stroke units in the current clinical inpatient practice. Moreover, it was supported that hospital managers should be expert professionals with clinical working experience and wide perception of the healthcare system's boundaries and perspectives, so as to plan and implement methods for assessing quality of care and outcomes more effectively.

Strengths and limitations

A strength of the study is the representation of both nurses and physicians in the sample of HPs that participated in the study. They are the frontline groups in stroke patients' care but with a different nature of work, experiences and aspect of the system, thus contribute to a broader perspective. Heterogeneity of the FGs, was obtained with variability of sex, age, years of experience in stroke patient care and geographical area of the hospital. To ensure coding reliability in the present research, coding was conducted by three experienced qualitative researchers.

The sample size of the two focus groups study was in line with accepted suggestions when conducting a qualitative study with FGs (Gill et al 2008). Perhaps, more focus groups interviews could have provided a broader content. The study represents experiences of HPs working in certain hospitals with stroke units, thus it is not representative of HPs working in other hospitals across the country.

Conclusions

This study provides insight into the experiences of HPs who care for stroke patients in hospitals. Findings highlighted the difficulties and challenges encountered by HPs in their everyday clinical practice, which focused mainly on the lack of guidelines and gaps in education regarding stroke care In light of this, efforts should be made in managerial and policy makers level to develop specific policies and strategies to improve these deficits. Awareness about rehabilitation process for stroke patients is raised and the need for hospital funding for special stroke units is suggested as fundamental. The increase in number and age of older population is likely to lead to an increase of the number of people who need rehabilitation, thus it is important to increase satisfaction of HPs by optimizing their working conditions in the demanding field of stroke care.

Funding: This project has received funding from the Hellenic Foundation for Research and Innovation (HFRI)and the General Secretariat for Research and Technology (GSRT), under grant agreement No538

H.F.R.I. Hellenic Foundation for Research & Innovation
GSRT GENERAL SECRETARIAT FOR RESEARCH AND TECHNOLOGY

Acknowledgments

Conceptualization: Thalia Bellali, Olga Siskou, Petros Galanis
Data curation: Thalia Bellali, Georgios Manomenidis, Anna Kasapoglou, Olympia Konstantakopoulou
Data resources: Nikolaos Kakaletsis, Ioannis Kalliontzakis, Theodora Kotti, Ioanna Kouzi, Theodora Laina, Martha Papadopoulou, Maria Poumpouridou, Christos Savvopoulos, Argyro Tountopoulou, Ilias Tsagalas, Evangelos Tsampalas
Moderator: Thalia Bellali
Observer: Anna Kasapoglou
Transcript : Olympia Konstantakopoulou
Coding: Thalia Bellali, Georgios Manomenidis, Anna Kasapoglou
Methodolody: Thalia Bellali, Georgios Manomenidis, Anna Kasapoglou, Petros Galanis
Writing–review & editing: Thalia Bellali, Georgios Manomenidis, Iliana Karagkouni, Olympia Konstantakopoulou, Petros Galanis, Paris Gallos, Thanasis Mitropoulos
Supervision: Olga Siskou, Daphne Kaitelidou, Eleni Korompoki, Konstantinos Vemmos, George Ntaios , Panagiota Sourtzi

References

1. Virani SS, Alonso A, Benjamin EJ, Bittencourt MS, Callaway CW, Carson AP, et al. Heart disease and stroke statistics—2020 update: a report from the American Heart Association external icon. Circulation. 2020;141(9):e139–e596.

2. Wang G, Zhang Z, Ayala C, Dunet DO, Fang J, George MG. Costs of hospitalization for stroke patients aged 18-64 years in the United States. Journal of Stroke and Cerebrovascular Diseases. 2014;23(5):861-8.

3. Ashcraft S, Wilson SE, Nyström KV, Dusenbury W, Wira CR, Burrus TM, American Heart Association Council on Cardiovascular and Stroke Nursing and the Stroke Council. Care of the patient with acute ischemic stroke (prehospital and acute phase of care): Update to the 2009 comprehensive nursing care scientific statement: a scientific statement from the American Heart Association. Stroke. 2021;52(5):e164-78.

4. Mohd Zulkifly MF, Ghazali SE, Che Din N, Singh DK, Subramaniam P. A review of risk factors for cognitive impairment in stroke survivors. The scientific world journal. 2016;2016.

5. Morris RE, Payne O, Lambert A. Patient, carer and staff experience of a hospital-based stroke service. International Journal for Quality in Health Care. 2007;19(2):105-12.

6. Rudd AG, Jenkinson D, Grant RL, Hoffman A. Staffing levels and patient dependence in English stroke units. Clinical Medicine. 2009 Apr 1;9(2):110.

7. Barreca S, Wilkins S. Experiences of nurses working in a stroke rehabilitation unit. Journal of advanced nursing. 2008 Jul;63(1):36-44.

8. Nishimura K, Nakamura F, Takegami M, Fukuhara S, Nakagawara J, Ogasawara K, Ono J, Shiokawa Y, Miyachi S, Nagata I, Toyoda K. Cross-sectional survey of workload and burnout among Japanese physicians working in stroke care: the nationwide survey of acute stroke care capacity for proper designation of comprehensive stroke center in Japan (J-ASPECT) study. Circulation: Cardiovascular Quality and Outcomes. 2014 May;7(3):414-22.

9. Bridges J, Nicholson C, Maben J, Pope C, Flatley M, Wilkinson C, Meyer J, Tziggili M. Capacity for care: meta-ethnography of acute care nurses' experiences of the nurse-patient relationship. Journal of advanced nursing. 2013 Apr;69(4):760-72.

10. Cheng W, Tu J, Shen X. Registered nurses' role experiences of caring for older stroke patients: a qualitative study. BMC nursing. 2021 Dec;20(1):1-9.

11. Catangui EJ, Roberts CJ. The lived experiences of nurses in one hyper-acute stroke unit. British Journal of Nursing. 2014 Feb 13;23(3):143-8.

12. Theofanidis D, Gibbon B. Exploring the experiences of nurses and doctors involved in stroke care: a qualitative study. Journal of clinical nursing. 2016 Jul;25(13-14):1999-2007.

13. Gache K, Leleu H, Nitenberg G, Woimant F, Ferrua M, Minvielle E. Main barriers to effective implementation of stroke care pathways in France: a qualitative study. BMC Health Services Research. 2014 Dec;14(1):1-0.

14. Kyle J, Skleparis D, Mair FS, Gallacher KI. What helps and hinders the provision of healthcare that minimises treatment burden and maximises patient capacity? A qualitative study of stroke health professional perspectives. BMJ open. 2020 Mar 1;10(3):e034113.

15. Moraiti A, Papadatou D. The Use of Focus Groups in Collecting Qualitative Data. Nosileftiki. 2010 Oct 1;49(4).

16. Calderon J, Baker R, Wolf K. Focus groups: a qualitative method complementing quantitative research for studying culturally diverse groups. Education for health. 2000;13(1):91-5.

17. Tong A, Sainsbury P, Craig J. Consolidated criteria for reporting qualitative research (COREQ): a 32-item checklist for interviews and focus groups. International journal for quality in health care. 2007 Dec 1;19(6):349-57.

18. Booth A, Hannes K, Harden A, Noyes J, Harris J, Tong A. COREQ (Consolidated Criteria for Reporting Qualitative Studies). In Guidelines for Reporting Health Research: A User's Manual (eds D. Moher, D.G. Altman, K.F. Schulz, I. Simera and E. Wager). 2014; https://doi.org/10.1002/9781118715598.ch21

19. Bellali T, Manomenidis G, Papazisis G. Challenges and Self-care of Health professionals during the COVID-19 pandemics from SARS-CoV-2 a critical review. Nursing Care & Research/Nosileia kai Ereuna. 2020;Sep 1(58).

20. Gill P, Stewart K, Treasure E, Chadwick B. Methods of data collection in qualitative research: interviews and focus groups. British dental journal. 2008 Mar;204(6):291-5.

21. Eynon R, Fry J, Schroeder R. The ethics of online research. The SAGE handbook of online research methods. 2017;2:19-37.

22. Sugiura L, Wiles R, Pope C. Ethical challenges in online research: Public/private perceptions. Research Ethics. 2017 Jul;13(3-4):184-99.

23. Shelley-Egan C, Bowman DM, Robinson DK. Devices of responsibility: Over a decade of responsible research and innovation initiatives for nanotechnologies. Science and Engineering Ethics. 2018 Dec;24(6):1719-46.

24. Markham A, Buchanan E. Research ethics in context: Decision-making in digital research. 2017

25. Iosifides T. Qualitative methods of research in social sciences. Athens: Kritiki. 2008.

26. Bryman A. Encyclopedia of social science research methods. Encycl. Soc. Sci. Res. Methods. 2004:1143-4.

27. Salmons, J. "Qualitative online interviews " Thousand Oaks: SAGE Publications. (2015).

28. Lincoln YS, Guba EG. Naturalistic inquiry. sage; 1985.

29. Nowell LS, Norris JM, White DE, Moules NJ. Thematic analysis: Striving to meet the trustworthiness criteria. International journal of qualitative methods. 2017 Sep 28;16(1):1609406917733847.

30. Braun V, Clarke V. Using thematic analysis in psychology. Qualitative research in psychology. 2006 Jan 1;3(2):77-101.

31. Misouridou E, Papadatou D. Challenges in engaging parents in the drug and alcohol treatment: The professionals' perspective. Qualitative Health Research. 2017 Nov;27(13):1948-58.

32. Stevens PE. Focus groups: collecting aggregate-level data to understand community health phenomena. Public health nursing. 1996 Jun;13(3):170-6.

33. Markus HS, Brainin M. COVID-19 and stroke—A global World Stroke Organization perspective. International journal of stroke. 2020 Jun;15(4):361-4.

34. Ringelstein EB, Chamorro A, Kaste M, Langhorne P, Leys D, Lyrer P, Thijs V, Thomassen L, Toni D. European Stroke Organisation recommendations to establish a stroke unit and stroke center. Stroke. 2013 Mar;44(3):828-40.

35. Casaubon LK, Boulanger JM, Glasser E, Blacquiere D, Boucher S, Brown K, Goddard T, Gordon J, Horton M, Lalonde J, LaRivière C. Canadian stroke best practice recommendations: acute inpatient stroke care guidelines, update 2015. International Journal of Stroke. 2016 Feb;11(2):239-52.

36. Kosmidis D, Petsina A, Fountouki A, Theofanidis D. Nurses' knowledge about the symptoms, complications and management of eating and swallowing disorders after a stroke in Greek hospitals.

37. Svendsen ML, Ehlers LH, Frydenberg M, Ingeman A, Johnsen SP. Quality of care and patient outcome in stroke units: is medical specialty of importance?. Medical care. 2011 Aug 1:693-700.

38. Ingeman A, Johnsen SP. Quality of Care and Patient Outcome in Stroke Units. Medical Care. 2011 Aug;49(8):693-700.

39. Salinas J, Sprinkhuizen SM, Ackerson T, Bernhardt J, Davie C, George MG, Gething S, Kelly AG, Lindsay P, Liu L, Martins SC. An international standard set of patient-centered outcome measures after stroke. Stroke. 2016 Jan;47(1):180-6.

40. Xian Y, O'Brien EC, Fonarow GC, Olson DM, Schwamm LH, Hannah D, Lindholm B, Maisch L, Lytle BL, Greiner MA, Wu J. Patient-centered research into outcomes stroke patients prefer and effectiveness research: implementing the patient-driven research paradigm to aid decision making in stroke care. American heart journal. 2015 Jul 1;170(1):36-45.

41. Zhou MH, Kansagra AP. Effect of routing paradigm on patient-centered outcomes in acute ischemic stroke. Journal of neurointerventional surgery. 2019 Mar 1;11(3):251-6.

42. Pindus DM, Mullis R, Lim L, Wellwood I, Rundell AV, Abd Aziz NA, Mant J. Stroke survivors' and informal caregivers' experiences of primary care and community healthcare services–a systematic review and meta-ethnography. PloS one. 2018 Feb 21;13(2):e0192533.

43. Sutter-Leve R, Passint E, Ness D, Rindflesch A. The caregiver experience after stroke in a covid-19 environment: A qualitative study in inpatient rehabilitation. Journal of Neurologic Physical Therapy. 2021 Jan;45(1):14.

44. Jarva E, Mikkonen K, Tuomikoski AM, Kääriäinen M, Meriläinen M, Karsikas E, Koivunen K, Jounila-Ilola P, Oikarinen A. Healthcare professionals' competence in stroke care pathways: A mixed-methods systematic review. Journal of Clinical Nursing. 2021 May;30(9-10):1206-35.

45. Brouns B, Meesters JJ, Wentink MM, de Kloet AJ, Arwert HJ, Boyce L, Vliet Vlieland TP, van Bodegom-Vos L. Factors associated with willingness to use eRehabilitation after stroke: a cross-sectional study among patients, informal caregivers and healthcare professionals. J Rehabil Med. 2019 Oct 1;15.

46. Ryan T, Harrison M, Gardiner C, Jones A. Challenges in building interpersonal care in organized hospital stroke units: The perspectives of stroke survivors, family caregivers and the multidisciplinary team. Journal of advanced nursing. 2017 Oct;73(10):2351-60.

47. Oyanagi K, Kitai T, Yoshimura Y, Yokoi Y, Ohara N, Kohara N, Sakai N, Honda A, Onishi H, Iwata K. Effect of early intensive rehabilitation on the clinical outcomes of patients with acute stroke. Geriatrics & Gerontology International. 2021 Aug;21(8):623-8.

48. Harari Y, O'Brien MK, Lieber RL, Jayaraman A. Inpatient stroke rehabilitation: prediction of clinical outcomes using a machine-learning approach. Journal of neuroengineering and rehabilitation. 2020 Dec;17(1):1-0.

49. Rakesh N, Boiarsky D, Athar A, Hinds S, Stein J. Post-stroke rehabilitation: Factors predicting discharge to acute versus subacute rehabilitation facilities. Medicine. 2019 May;98(22).

50. Pishkhani MK, Dalvandi A, Ebadi A, Hosseini M. Factors affecting adherence to rehabilitation in Iranian stroke patients: A qualitative study. Journal of Vascular Nursing. 2019 Dec 1;37(4):264-71.