An Interpretative Study on Nurses’ Perspectives of Working in an Overcrowded Emergency Department in Taiwan

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ABSTRACT

Purpose: This study aims to gain in-depth understanding of nurses’ perspectives of working in an overcrowded emergency.

Methods: Symbolic interactionism and Charmaz’s construction of grounded theory were used. Purposive sampling at the start of the study and a further theoretical sampling by snowball technique were used to recruit 40 registered nurses (RN) to participate in in-depth, semi-structured interviews between May and November, 2014. Data analysis included analytic techniques of initial, focused and theoretical coding.

Results: Study findings showed searching for work role is derived by the themes of Finding the role of positioning in Emergency Department (ED), Recognizing causes of ED overcrowding, and Confined working environment. Nurses’ work experience which represents the RNs not gained control over their work, as care actions in influence by the problematic overcrowded circumstance of the ED environment.

Conclusion: The findings fill a gap in knowledge about how RNs experience their work role in the context of an overcrowded Emergency Department in Taiwan. Arising from the study result include taking account of nurses’ perspectives when planning staff/patient ratios, strategies to reduce waiting time and ensure that clients receive appropriate care.

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Introduction

The emergency department (ED) environment involves complex procedures to care for patients with nonurgent and/or urgent illnesses. However, overcrowding and blocking of patient flows in an ED are an underexplored worldwide issue [1]. Overcrowded concerns have significant negative impacts on health professionals to manage patients efficiently among heavy patient loads. Blocking of patient flows inaccessibly reposition patients to an appreciate place for further treatment, and it causes the occurrence of overcrowding. Subsequently, health professionals experience stress and exhaustion, and such experience leads to likelihood of slipshod care [2].

Overcrowding is referred to a situation in which the identified need for ED services exceeds available resources for patient care. The issue has been described as a “crisis” in Taiwan. It is reported that “7.7 million visits to the emergency room in 2016” in a population of 23 million in Taiwan, and costs the government huge health-care expenditure [3]. There is clear evidence of the harmful impacts of ED overcrowding on patients, health-care providers, and even to the wide community [4]. These well-researched negative impacts propose risks to patients’ dignity, privacy, prolonged or delayed treatment, and length of hospitalization, thus influencing quality and integrity of care [5–9]. Staff often experience burnout,
and the working environment is often described as violent. Furthermore, differences of expectations among clients and organizations that clients often expressed as their dissatisfaction with their treatment are stated; challenges of retaining employees that lead to manpower allocation problems are also partly found [10].

Overcrowding is caused by multiple factors, such as shortage of beds, serious severity of illness, and job dissatisfaction, which cannot be measured by simply counting the number of clients or bed occupancy at a point in time [11]. Nursing workforce is the largest health professionals in healthcare who have direct impacts on the quality of care. However, limited literature is found in investigating nurses’ perspectives of working in the overcrowded ED environment. Therefore, a qualitative approach was used to explore the overcrowding issue [12].

Study aim

The aim of this study was to gain in-depth understanding of the meaning of being working in an overcrowded ED among registered nurses (RN).

Methods

Study design

An interpretative approach by a combination of symbolic interactionism [13] and Charmaz’s construction grounded theory [14] was used. Blumer [13] articulated three core concepts of symbolic interactionism which justify the appropriateness of applying the approach to address the study aim. First, “human beings act toward things on the basis of the meanings that the things have for them (p. 2)”. In the present context, this means that ED RNs interpret and define the situation of ED overcrowding, and the actions they take are a response to these interpretations. The second concept is that “the meaning of things is derived from, or arises out of, the social interaction that one has with one’s fellows (p. 2)” which applies to a social interaction that occurs between an individual RN and other RNs, clients and their families, and other health professionals. This process can form and reform nursing actions and views in the sense that the underlying meanings can be derived through such an interaction. For example, an overcrowded ED results in prolonged stays for some nonurgent clients, and an excess of nonurgent clients leads to ED overcrowding. The third concept is that “meanings are handled in and modified through an interpretive process used by the person in dealing with the things (p. 2)” encountered. The meaning of ED overcrowding is formed in the context of an RN’s professional social interactions and modified by the interpretations that flow from these social interactions.

Although there are philosophical and methodological debates within the grounded theory field, this study was underpinned by Charmaz’s construction grounded theory [14]. In Charmaz’s approach, the research outcomes are the result of interpretation. Its framework emphasizes the distinction between reality and truth—researchers manage their own constructions and interpretations of the participants’ constructions and interpretations. However, the study results are contextualized. The theoretical concepts of a constructivist approach serve as interpretive frameworks and offer an abstract understanding rather than a theory for explanation and prediction. Knowledge is therefore created and constructed during the research process. A constructivist grounded theory, therefore, allowed for an inductive exploration and analysis of the complex process of RNs’ socialization in the context of ED overcrowding.

Participants

Purposive sampling was used at the start of the study to recruit eligible RNs initially. Grounded theorists purposively selected participants who they believe can offer valuable insight into the topic [15]. All RNs employed at the participating ED were invited to the interview. Once a participant was recruited, a further theoretical sampling by snowball technique was also used for recruitment until saturation of the data was reached [14]. The inclusion criteria were participants who have at least one year full-time working experience in an ED. One year of ED work experience was needed as a minimum eligibility criterion for RNs to have developed work sensitivity and thinking [16]. Exclusion criteria were RNs’ working experience less than 12 months and RNs involved in another study.

Setting

This study was conducted at a tertiary hospital with 3,338 ward beds and 233 emergency beds including 180 observation beds in Taiwan. The settings were chosen as they represent a “phenomena in natural settings” that is overcrowded ED. The study settings also provide an environment for researchers to examine participants’ experience in “why event occurs, what happens, and what those events mean to the participant studied” [17].

Ethical considerations

This study received ethical approval from the Institutional Review Board (Approval no. 102–3923B). The researcher obtained consent from the administrative authority of the hospital nursing departments. All RNs working in the ED at participating hospital were invited to participate in the study. Potential participants who met the selection criteria received an information sheet outlining the purpose of the study. Informed consents were obtained from each participant. Participants’ involvements were voluntary; they were free to withdraw from the study at any time without penalty. Confidentiality and privacy were maintained throughout the study. Data were kept securely at the principle investigator’s office at the university. All digital data were password protected and stored at secure drive with university server, and only authorized research team members have access to the data.

Data collection

Face-to-face individual interviews were conducted to understand participants’ perspectives on their own experiences. Interviews were started with two broad questions: “Could you please describe the situation of your ED to me?” and “What do you see as the issue of ED overcrowding?” Participants effectively led the direction of the interviews, and further questioning was based on their responses and on the analysis of previous interviews. Each interview lasted between 45 minutes and 1 hour. The interview was conducted in a quiet and private room within the hospital.

Data were collected from May to November 2014 by the principal researcher who is not known to the participants. Each interview was audio taped and transcribed verbatim into a readable document. The transcripts were compared with the audio tape to detect omissions and errors and to afford the principal researcher the opportunity of interacting with the data. Forty nonidentified files were created, each containing an interview in audio-transcribed formats.

Data analysis

The interviews were conducted and transcribed into Chinese. All transcripts were read carefully and systematically coded with new
subcategories developed based on their similar characteristics and the emerging analytical categories and verified with the original interview data by all authors. The translated themes and sub-themes were checked by bilingual authors. Any queries were clarified by the participants at the interview.

The constant comparative method was used to establish theoretically grounded categories processing through a set of coding steps: initial, focused, and theoretical coding [14]. Data collection and analysis were performed simultaneously, and data analysis continued until theoretical saturation was reached. This occurred when no significant new categories are emerging [18]. The data with subcategories into related categories were then grouped and checked their relationships by specifying the conditions under hypotheses. These categories provided a variation of the hypothesis that could be generated through provisional and conditional relations. The final step was to merge categories into a central category that represented the RNs’ perspectives of ED overcrowding. The core category was abstracted to interpret the main phenomena through a process of conceptualization.

Trustworthiness

Four criteria guided assessment of the study’s quality and ensured the trustworthiness of the study: credibility, transferability, dependability, and confirmability [19]. Credibility and dependability were warranted from the interviewer and validation of findings [20]. The principal investigator who is a fully qualified qualitative researcher conducted all interviews; the consistency and quality of the interview data were assured. Data coding was regularly discussed within the research team members, and queries of interview data were clarified. Transferability was established by study findings directly evolved from participants’ own statements, and each interview transcript was augmented with “thick descriptions” which were identified on the basis of their relevance to the study topic and congruence with participants’ viewpoints; therefore, the findings are applicable to other contexts. Confirmability is established by clarifying the data collection process that led to possible findings.

Results

Characteristics of the participants

A total of 40 people were interviewed. All participants were female, aged from 23 to 52 years, who have been working in the ED for 2–20 years. Thirty-seven participants (92.5%) had obtained a bachelor of nursing degree, and three participants (7.5%) held a diploma qualification.

Study findings

Three main themes with multiple subthemes evolved from the interview data to present RNs’ perspectives of working within an overcrowded ED. The main themes were “Finding the role of positioning in ED”, “Recognizing causes of ED overcrowding”, and “Confined working environment”.

Theme 1: Finding the role of positioning in the ED

The RNs recognized an idealized ED role as a safety net for the society whose services were vital for human survival. An ideal ED was a distinctive area of work that provides highly specialized care to those with urgent needs and to vulnerable people. This perspective, however, was at odds with the perception that some people with nonurgent needs attend the ED because they see it as their right as a citizen and tax payer. Unlike the more appropriate option of an outpatient department (OPD) visit for nonurgent health problems, ED services are not subject to time restrictions. Participants stated that this inappropriate use of resources resulted in an increased number of nonurgent clients presenting to the ED, for example:

...Most people do not understand that ED care is for urgent cases; they do not know what the criteria for ED admission are...” (RN B).

...In most people’s minds, the ED is the solution to all problems. However, the ED is for managing emergency and urgent situations, not for quick delivery of treatment for any problem. We often hear clients or their families saying that their care in the ED is taking too long...but theirs is not an emergency...” (RN G).

...The ED is there to help people with genuinely critical and urgent health conditions, not for people at the first or second level of triage...” (RN I).

There are two subthemes evolved from the interview data, including “Identifying the situation of overcrowded ED” and “Feelings of challenge and stressful to work within an overcrowded ED”:

Identifying the situation of overcrowded ED

A busy and an overcrowded ED may be illustrated by a number of clients, a shortage of beds, and insufficient space and equipment that meet clients’ specific needs. In the view of study participants, the differences between these two ED situations are the presence or absence of client movement. The situation in which clients block access leads to a continuous increase of ED clients’ numbers and an overcrowded ED manifestation. They described ED overcrowding as a “traffic jam”, suggesting that it frequently occurred on some days of the week. The recurring nature of ED overflow indicated that no effective and consistent actions were in place to respond to the situation. This contradiction between an ideal and an overflowing ED impacted RNs’ experience of their work; for example:

...When I feel busy at work it means there are too many patients... ED overcrowding is like a traffic jam, and a patient is like a car stopped in front of traffic lights that cannot go any further. ED overcrowding means not only that I am busy in my work, but also that patients cannot move to observation areas or be admitted to a ward...” (RN C).

Feelings of challenge and stress within an overcrowded ED

Participants perceived the ED working environment as challenging and stressful. This concern was about unpredictable numbers of clients admitting to the ED, possibly with insufficient resources to meet patients’ needs. However, RNs also expressed that their feelings of seeing clients “on the move” had a significant meaning in the context of RNs’ interactions within an overcrowded ED. It provided hope that the wait for a transfer would be brief. RNs accepted the challenge of a busy workplace with an optimistic view that they could assist ED clients during their waiting time. By contrast, their interactions with a situation of ED overflow led to work tension as ED clients blocked access. Interacting with an overcrowded ED caused work frustration:

...My work is just like a gyroscope turning around and around in the same way and never stopping. When the ED is just busy, patients will eventually be admitted to a ward or transferred to another hospital. When the ED is not just busy but also overcrowded, this means the number of patients just keeps on increasing and they are stuck in the ED, not going anywhere...” (RN C)
Theme 2: Recognizing causes of ED overcrowding

Several causes of ED overcrowding were recognized, including "Current health policy", "Sociocultural beliefs", and "Unnecessary multiple diagnostic examinations".

Current health policy

Both hospital and government health department [National Institution of Health (NIH)] policies influencing ED were acknowledged. At the hospital level, the current policy was to respect clients' choice to visit an overcrowded ED and divide them into streams for consultation with ED doctors based on triage level. As a result, a client with a minor health problem may see a doctor before someone with a serious condition. Although streamlining reduced the number of ED clients temporarily, it resulted in overcrowding of clients who did not meet ED criteria. RNs expressed that this happened regularly and led to the perception of the ED as a fast track of delivering care. For example,

...Emergency is equivalent to ‘fast’ in most patients' and families' thinking. Some patients and families can accept the explanation about the aim of ED, but some do not agree with it... (RN D2)

...Everyone thinks that any problem can be solved in the ED. I feel that it is not only a place for dealing with urgent situations, but also a place where people expect to receive care quickly... (RN F)

The NIH provides accessible, available, and convenient ED services to all citizens. Only a minimal payment is required to see a doctor and for the treatment. While this would seem to be a benevolent policy on the part of government, the RNs argued that it provided yet another encouragement for people to bypass the OPD and visit the ED instead. Hence, the ED became overcrowded, and the work of the caring professions was devalued. As one annoyed participant remarked

...All you (patient) need to pay is $720, no matter how many days you stay in the ED or what treatment you received ...You only pay the $720 when you are discharged from the ED... (RN D4)

Sociocultural beliefs

RNs referred to various ways in which sociocultural beliefs influenced their work experience in the ED. These sociocultural beliefs included autonomously choosing ED, providing business service, and having a special consultation in the ED. Within the wider society, for instance, there was a belief that an overcrowded ED was evidence of a well-managed and well-resourced hospital. Hence, people believed they were making the right choice in seeking treatment at a teaching hospital without transferring from regional hospitals. They have autonomy to make their own decision in selecting hospital to manage health status, and hospital could not reject people's request. Policy from the NIH tacitly permitted people's request in visiting the ED of a teaching hospital which was an alert of failure in transferring system. For example, RNs stated:

.....They (patients) feel that if I (client) come to ED, you (health providers) have a priority to manage my problem first. ... (RN D)

.....A minor flu should go to the OPD, not ED, but the hospital (i.e. ED) cannot refuse to treat patients, and patients mistakenly view the ED as the department for health checkups.... (RN A1)

Participants also believed that most people perceived EDs as providing a business service rather than delivering highly specialized professional knowledge and skills. Hence, people with nonurgent needs readily accessed EDs, which caused overcrowding. As a result, EDs were disvalued, and this could lead to a tensed relationship between RNs and the public which resulted from the different perceptions of the role of the ED. For example,

...The ED provides fast services in their (patients' and families') perception. ... (RN D2) ...The ED is a place for solving an urgent and critical health situation, not just for providing speedy services.... (RN F)

Furthermore, participants stated overcrowding often occurred in part because clients sometimes had to remain in the ED for a specific diagnosis or specialist consultation before they could be admitted to a ward. When the problem involved several special medical areas, the wait could be even longer. The RNs expressed that the ED did not have the authority to assign clients to wards, therefore further contributed to overcrowding issue. For example, a nurse stated:

.....Trauma patients often ask how long they need to wait for a consultation. When will the consultant come? ...They need to wait a bit longer to consult a surgeon, or gynaecologist, because they are all in the operating theatre or working in wards.... (RN D3)

Unnecessary multiple diagnostic examinations

Participants talked about often having to provide multiple diagnostic examinations (e.g., commencing intravenous fluid infusion, blood tests of electrolytes and other clinical profiles, X-ray, and CT scan) routinely to all ED patients regardless of their condition. The RNs stated that this "usual" care was necessary to satisfy clients and their families and avoid any possible accusation of negligence. This not only wasted medical resource but also delayed the client's time to move out of the ED. For example,

...Everybody worries about being sued, so they satisfy all patients' and family requests if possible ...For example, a patient asks for an abdominal CT scan because of abdominal discomfort. Thus the CT scan was abused ...The prescription is what the family requests .... (RN C4)

Another example, RNs stated that many people believe that an intravenous (IV) drip can cure feelings of unwellness, and ED clients might therefore request such a drip. Even though it was unnecessary, the procedure might still be performed because the RNs lacked the authority to deny the request. This slowed down the flow of ED clients and resulted in overcrowding.

...Basically, the doctor will prescribe what a family requests even if they (patients or families) ask to stay in the observation room overnight with an IV drip.... (RN C3)

...Doctors still allow patients who do not need an emergency service to register in the ED and give them an IV drip.... (RN E)

Theme 3: Confined working environment

The nursing work situation could not be improved effectively because many influencing factors were beyond the authority of the RNs involved. Three subthemes evolved from the participants' statements, including "Yielding care according to available
resources”, “Dissatisfy with current work conditions”, and “Acceptance of current work situations with feelings of powerlessness”.

Yielding care according to available resources

Participants stated that they sometimes need to amend their care according to available resources with an overcrowded working environment. Despite the view of the ED as a place of security for vulnerable patients, with lack of resources available, patients could in fact be compromised. For example,

...Some aged patients were extremely ill. We (ED staff) could only put them in a wheelchair and insert an indwelling urinary catheter …it is hard to find the right vein for the IV line when a patient is in a wheelchair. I needed to kneel down to put in an IV catheter. ...(RN J)

Dissatisfy with current work conditions

Overcrowding resulted in RNs being unable to achieve satisfaction with their care performance. Concerns about client safety led to feelings of anxiety and of having to work less than a caring professional. For example,

...The ED has no beds for patients; patients are even put on ambulance stretchers or in wheelchairs in the hallway of the ED …I had to look after their safety in the meantime. I was anxious about the possibility of patients falling from an unstable ambulance stretcher. I worked as a machine…. (RN E)

Acceptance of current work situations with feeling of powerlessness

Participants expressed little alternative to accept the ongoing mismatch between supply and demand in the ED and work even harder to get their work done. Incidents such as those described in the following extract reduce RNs’ willingness to work in the ED environment, which would be unable to provide them with a positive, professional working role positioning. For example,

...I feel awful when patients are lying in the hallway. It is very easy to offend patients and family… I am not surprised that violence happens in the ED; it is fact, not fiction. I feel discouraged myself and become impatient. My sympathy is almost gone …My passion to work in the ED will be worn away…. (RN D6)

"Searching for the work role" is derived by the themes of Finding the role of positioning in ED, Recognizing causes of ED overcrowding, and Confined working environment. Searching for the work role represents the RNs not having feeling of being in control over their work because of care actions influenced by the problematic overcrowded circumstance of the ED environment. The professional endeavor in ED care, as this study suggests, may be impeded by various structural and procedural tensions. In other words, we understand ED care as socially, financially, culturally, and even constitutionally located. There is a need to recognize how RNs find their own work role in an overcrowded ED.

The status of ED care in Taiwan could be reflected in perceptions of the work role of RNs, in the stereotypical images of ED, and in the nature of the ED work environment. Although the study revealed a genuine sense of influences (Recognizing causes of ED overcrowding), contributing to the status of ED overcrowding and an ideal role of ED (Finding the role of positioning in ED), the perceptions and the reality of the work are constructed and reproduced at many levels. At the level of interaction with work environment, RNs perceived a
disvalued ED care (Confined working environment) from the public, and therefore, it was misused. It is meaningful and valuable if searching for the role of work position, and all that encompasses this process, can contribute to a better understanding of the RN’s role in the Taiwanese ED sector (see Figure 1).

Discussion

The results of searching for work role show how RNs experienced working in an overcrowded ED in Taiwan. The findings contribute to the past thinking about using numbers to quantify the busy ED and also provide the perceptions of patients in a blocked ED that have captured the reality of unavailable admissions and limited ED resources. ED overcrowding potentially reflects insufficient space, equipment, and care providers to meet clients’ needs. ED space is inflexible but does not rigidly determine the number of clients who can be treated [21]. Apart from the issue of space, the term of overcrowding is like the view of “supply and demand”, that is, available resources including care givers and patients in an ED. Although the increased ED equipment or having the appropriate number of caregivers does not necessarily resolve the problem, literature shows the overcrowding problem can be sufficiently addressed by introducing a maximum waiting time of 4 hours [22].

Findings in this present study, that ED RNs recognize the multifactorial influences on ED overcrowding are supported by literature. The study showed that clients receive the similar treatment in the ED and in the ward [23] which indicates the waste of managements in the ED. A longer ED stay resulted in longer hospitalization even though clients received the same care in the ED as they would in the ward. Therefore, reduced length of ED stay translates to a shorter hospitalization, which in turn opens up more ward beds and reduces the overcrowded ED. Subsequently, RNs can provide care to patients who need urgent care and therefore feel less frustrations while working in a blocked and super busy ED [6].

Symbolic interactionism holds that the self is the major unit of analysis. Symbolic interactionists understand the self as a process that develops through reciprocal interaction between an individual and her/his social and cultural context [13]. The self constitutes one form of social identity. A number of key features of work role are identified. First, when there is a commonality between the image that others have of one’s-self and one’s own self-image, group actions occur. ED RNs action produces boundaries, and the boundaries between ED nursing roles serve to reinforce a sense of self. Furthermore, attitudes and behaviors of ED RNs toward other health professions are shaped by the strength and relevance of the groups’ social identity [24]. Social features such as roles, social status, rankings, and bureaucratic structures do exist and are very important. Therefore, the RNs’ their work role in an ED involves interaction with other health professions and relates to how ED RNs compare and differentiate themselves from other health professions.

In addition, RNs’ action in situations of ED overcrowding is open to uncertainty, challenge, and obstruction [13]. Therefore, the process of searching for work role may not have a clear and predetermined pathway. RNs derive their self-concept of work role from partly self-created interactions with work environment, work values, and traditional social and cultural values [25]. ED nursing roles under circumstance of overcrowding that are negotiated and constructed cannot be separated from the sites within which RNs practice. This rejects the conceptualization of searching for work role in an ED as an individual characterizes or pursues and emphasizes work role as a social phenomenon.

It is generally agreed that an occupational group must demonstrate the knowledge and skills that differentiate it from other groups and that it enjoys an associated degree of autonomy. Where
Differentiation is difficult to achieve, role definition and professional work identity remain uncertain. In this study, there was a lack of clarity over the role of the RNs in ED practice in a situation of overcrowding. RNs have not gained control over the area of expertise in their ED care practice environment. Yet, the framework of explanation for the results of this study can move beyond the interactions of the key actors to position the professional group within a broader context. The RNs' endeavors in ED care in situations of client overflow may be impeded by various structural and procedural tensions.

**Limitations**

There were only female participants recruited in this study which may not have represented male nurses' perspectives of working in an overcrowded emergency. Another limitation identified is that data collection was conducted in one tertiary hospital, which raises concerns of representing nurses' perspectives of working in different levels of hospitals.

**Recommendations**

Implications from the findings include taking into account nurses' perspectives when planning staff/patient ratios and strategies to reduce waiting time and ensuring that clients receive appropriate care. It is also recommended that the hospital policy makers consider proposing strategies for appropriate access to an ED.

**Conclusion**

Findings from this study have provided valuable information on nurses' perspectives of working in an overcrowded ED in a teaching hospital in Taiwan. Perceptions on the overcrowded influencing factors highlight intolerable working environment. The experience includes misuse of the ED and NIH resources, which have great impacts on patients' safety, quality of care, and potentially inappropriate health utilizations.

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**Conflict of interest**

The authors declare that they have no competing interests.

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