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Research paper

Stress-promoting and stress-relieving factors among nurses in rural India: a case study

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What is known on this subject

- There are several occupational stressors that affect nurses in India, such as factors related to a large workload, night duties, dealing with emergencies, and dealing with problematic patients and relatives.
- Studies across cultures and nursing specialties indicate that there are several other common occupational stressors for nurses, such as role ambiguity, interpersonal relationships, bureaucratic constraints and poor job prospects, changing responsibilities, concerns about death and dying, conflicting demands of work and home, and nurses' lack of involvement in planning and decision making across cultures.
- A study from Pakistan identified several factors associated with stress among community health workers, such as low socio-economic status, long travelling distances, inconsistent medical supplies, inadequate stipends and lack of career structure.

What this paper adds

- Common occupational stressors among community nurses working at the College of Nursing Community Health (CONCH) project in India consisted of communication-related problems, factors related to the work environment and factors related to work and workload.
- Commonly used coping mechanisms were identified. The nurses' family, friends, spouse and work associates were the key sources of support. Arranging occasional breaks at work, employers giving high priority to safety at work, the development of programmes geared towards winning the confidence of local village leaders and a Christian faith were other coping strategies employed by the nurses.

ABSTRACT

Work-related stress among healthcare personnel has already been investigated in detail in the western setting. However, community health work in India differs in its content from that in western countries. The purpose of this study was to characterise stress-related factors, both causative and alleviating, among healthcare workers in the College of Nursing Community Health (CONCH) project in Tamil Nadu, India. An ethnographic approach was employed, consisting of observation, interviews and available documentation related to the CONCH project. The study participants were women, and included 7 nurses and 2 nursing supervisors. Data were gathered over a period of 3 months in 2003. Causes of stress among healthcare workers included communication problems, environmental factors and a large workload. Prominent among the stress-relieving factors were support from friends, family and colleagues, supervisor–nurse interaction and a Christian outlook. Stress-related fear experienced by workers hindered innovation and weakened their opportunity to further develop healthcare. Challenging work environments, varying work descriptions and unclear boundaries between working hours and free time all contributed to a decline in motivation and to fatigue. The identification of stress-related factors could play an important role in the facilitation of appropriate interventions. The results of this study suggest that wider studies employing, for example, quantitative methods may provide useful information.

Keywords: community health nursing, coping, culture, ethnography, India, stress-related factors

Introduction

Nursing is a very stressful career (Dewe, 1987; Chapman, 1993; Hartrick and Hills, 1993; Gottlieb *et al*, 1996; Chang *et al*, 2007), and job stress among nurses in western settings has been studied extensively (Corr, 2000; Cottrell, 2001; McGrath *et al*, 2003; LeSergent and Haney, 2005; Hsu *et al*, 2007). There is a stark difference between causes of stress among nurses in developed countries and in India. Nurses in India are poorly remunerated by comparison with global standards. They hail mainly from the lower economic strata and often have few educational qualifications. Their main motivators are salary and benefits, which enable them to support their families. In situations of staff shortage, they willingly accept excessive overtime with bonuses, even at the expense of their own health. They have limited access to claims and compensation for occupational hazards (Kane, 2009). Given the frequent paucity of doctors, nurses are on the front line, having to face unreasonable expectations, verbal abuse and, at times, physical aggression from patients and relatives. Little training is given to nurses on how to deal with confrontation (Kane, 2009).

Work in rural and urban areas differs in many ways. Rural nurses practise outside major metropolitan centres in settings where access to goods and services, such as healthcare, is reduced. The nurses may practise either with or without healthcare professional support (Francis *et al*, 2001). MacLeod and Browne (1998) suggest that, in the light of the demands placed on rural nurses, one might conclude that they are exposed to more stressors than their urban counterparts. Mills *et al* (2007) also note that rural practice for a range of clinicians creates a very different set of demands, both clinically and personally, to urban practice. In the face of infrequent village visits by doctors, nurses in rural India are often required to independently shoulder decision making, sometimes single-handedly responsible for both outpatient services and home visits, and essentially having to manage without team support. Unpredictable patient numbers mean that long queues may even preclude meal breaks, and this has in fact been suggested as a factor that increases the incidence of anaemia among nurses (Kane, 2009).

One of the fundamental issues challenging the implementation, and thus viability, of the community healthcare (CHC) concept in the developing world is whether an essentially democratic concept can be operationalised within countries that have complex hierarchical social structures (Nichter, 1986). Also, in a country the size of India, it is difficult to develop an efficient healthcare system (Johannesson, 1994; Abraham, 2007). In 1946 the Bhore Committee recommended that there should be one nurse for every 400 people in India (Wade, 1991). In 2004, the number of nurses per 1000 members of the population in India was 0.80. The corresponding ratio of nurses per 1000 members of the population was 1.05 in China, 4.24 in Singapore, 12.12 in the UK, and 9.37 in the USA (World Health Organization, 2006). Thus the goal that was proposed in 1946 has still not been reached. The National Health Policy of India (Ministry of Health and Family Welfare, 2004) emphasises nursing education as a major issue in improving the nurse:patient and nurse:population ratios. Efforts are being made to target the development of live registers by all state nursing councils, and the training of nurse practitioners in midwifery to function at community health centres (Abraham, 2007). The shortage of nurses is reflected in CHC, where nurses are desperately needed but are very few in number.

However, a mere statistical increase in the nurse: population ratio on the whole may not practically alleviate the shortage of personnel in the rural setting. Around 80% of the nurses work in hospitals in urban districts, whereas 70% of the population live in rural and tribal areas (Johannesson, 1994; Abraham, 2007). In a report of a study conducted in India (Granström and Lindmark, 2000), the reasons given for the scarcity of registered nurses (RN) in CHC are discussed. These included, among others, the government's reluctance to employ well-educated professionals, the attitudes of community leaders and the general population towards nurses, security issues, a shortage of facilities, and the existence of a hierarchical and corrupt system. All of these factors led to lack of motivation among the RNs, and did not persuade politicians to increase the number of RNs in CHC. The study also mentioned that nurses leave their jobs because they cannot tolerate the treatment that they receive from doctors as well as from the public (Granström and Lindmark, 2000). The above findings throw light on the demands placed on rural nurses. As MacLeod and Browne (1998) have noted, rural nurses experience added stressors, which highlights the importance of the subject matter of this study.

With regard to coping mechanisms, it is also worth noting that, in Indian society, there are multiple barriers to procuring psychological support services. The available services are few because of an absolute resource scarcity and a relative deprioritisation of mental health. There is a pervasive belief that only those with debilitating mental illness merit professional psychological help (Laungani, 1993). Services are often unaffordable because of the luxury status of psychological treatment.

Theoretical framework

There is a substantial body of research on job-related stress. It is now generally acknowledged that stress is

the product of an imbalance between appraisals of environmental demands and individual resources (Lazarus and Folkman, 1984, MacKay *et al*, 2004), and that stressors (i.e. environmental demands) should be operationally differentiated from strains (i.e. responses to these demands) (Jones and Bright, 2001). Nevertheless, stress is still subject to numerous explanations from diverse academic perspectives, and a clear distinction between stressors and strains is not always made.

Lazarus and Folkman (1984, page 19) defined stress as a 'particular relationship between the person and the environment, that is appraised by the person as taxing or exceeding his or her resources and endangering his or her well-being.' Lazarus also defined stress as 'any potential threat in the environment' (Lazarus, 1991, p. 42). The interpretation by Lazarus and Folkman (1984) of stress focuses on the transaction between people and their external environment. This is known as the *transactional model*, which conceptualises stress as a result of how a stressor is appraised and how an individual appraises their resources for coping with the stressor. The model breaks the link between stressor and stress by proposing that if stressors are perceived as positive or challenging rather than as a threat, and if the stressed individual is confident that he or she possesses adequate rather than deficient coping strategies, stress may not necessarily result from the presence of a potential stressor. The model proposes that stress can be reduced by helping stressed individuals to change their perceptions of stressors, providing them with strategies to help them to cope, and improving their confidence in their ability to do so. When considering this model, two issues are important. The first is that a transactional approach offers a very different perspective on work stress to traditional approaches. The second is that debate about the transactional model is more to do with how best it should be applied to a work setting than about the model itself (Dewe, 1997). The model has been the basis for research into stress and coping mechanisms among working women (Long, 1989) and nurses (Parkes, 1986; Bowman and Stern, 1995; Healy and McKay, 2000).

Coping has been defined by Lazarus and Folkman (1984, p. 141) as 'constantly changing cognitive and behavioural efforts to manage specific internal/external demands that are appraised as exceeding the resources of the person.' Two dimensions of coping are problem-focused coping and emotion-focused coping. Problem-focused coping consists of concrete attempts to alter the stressful event, whereas emotion-focused coping consists of attempts to alter stressful feelings. Both types of coping are used in every situation, and both may be helpful, depending on the situation (Lazarus and Folkman, 1984). Although researchers generally agree that the approach described by Lazarus and Folkman is the best available model for explaining coping, they have also highlighted several limitations. First, the model functions more as a general frame of reference than as a theory. Secondly, another important criticism follows from the conceptualisation of coping as a reaction to stressful situations, thereby neglecting the impact of other determinants of coping (De Ridder, 1997). In this study, stress-promoting and stress-relieving factors were investigated using Lazarus and Folkman's transactional model of stress (Lazarus and Folkman, 1984) as a foundational guiding framework. The model emphasises the relationship between the individual (the nurse) and the environment in relation to stress and coping. The theoretical framework employed in this study has its basis in western culture, because at the time when this study was carried out, no corresponding framework based on Indian culture was available.

Aims

This paper on occupational stress and coping among nurses focuses on the following:

1 common occupational stress factors among community nurses working at the CONCH project in India
2 commonly used coping mechanisms for occupational stress among nurses.

Methods

Setting

The study was conducted in rural parts of the Vellore District on the eastern shore of Tamil Nadu, India. Members of the main ethnic group in the area speak Tamil, and the majority practise Hinduism. The Christian Medical College (CMC) and Hospital, under whose auspices the researchers conducted the study, was founded in 1900 as a one-bed clinic. CMC's services have since grown rapidly. Today CMC offers 88 recognised training programmes in medical, nursing and allied health fields (Christian Medical College Vellore, 2003). CONCH, the project at which the interviewees worked, covers a population of 38 815 people in 18 rural villages. In 15 villages, regular services such as home visits, maternal and child health clinics and morbidity services are provided. The main thrust of this programme is nursing education, service, training and research. Health awareness in the community is enhanced by regular mass education programmes, health exhibitions, film shows, dance dramas, puppet shows, mothers' programmes and school health programmes (Christian Medical College Vellore, 2003).

Design and subject

An ethnographic approach was chosen because there have been very few studies in India on stress in nurses, and even fewer dealing with community nurses. In 1981, Grey-Toft developed the Nurses Stress Scale, an instrument which describes 34 situations that cause stress for nurses (Cottrell, 2001), and which has been employed in India (Kane, 2009). However, considering the unique features of Indian community health nursing, the present study was designed to be free of either constraint or direction arising from rigidly predefined stress-related factors. The goal was to openmindedly determine afresh all possible stress-related factors and coping mechanisms.

The researchers observed and worked side by side with community nurses in the local villages continuously for 6 days a week over a 3-month period. Observations were made from the early morning hours until late evening during the period of data collection. To provide a foundation for investigation, data were collected through participant observation (50 handwritten pages) as well as by formal and informal interviewing (28 handwritten pages) on a broad range of topics related to work stress. In addition, documentation describing the working of the community health department was examined. Participant observation included several visits to village clinics and the homes of a number of families, and participation in departmental meetings, evaluation meetings and lectures. Purposive sampling was employed. Subjects were chosen with the help of an Indian research supervisor, in order to exclude newly graduated nurses who lacked cumulative practical experience, and nurses whose work description differed from that of the typical community nurse (e.g. nurses who were partially employed in a tertiary-level hospital or those with predominantly teaching responsibilities). All of the nurses ($n = 7$) and their female supervisors ($n = 2$) working in the CONCH programme were interviewed. The department also employed two male supervisors, but they were excluded because their work description differed from those of the other supervisors in the department. The supervisors were Bachelor nurses who had been promoted to their present positions after two years of experience and an evaluation. All of the participants in the study were female, between the ages of 21 and 45 years. Nurse participants had worked in community health nursing from 6 months to 3 years, and both supervisors had done so for more than 20 years. The formal and informal interviews were conducted in a flexible and open atmosphere. The intention of this study was to obtain an evaluation of the situation of nurses in community healthcare from the perspective of the nurses themselves. The aim was not merely to collect data from which generalisations could be made, but also to reveal the deeply rooted opinions of community health nurses (Holloway and Todres, 2006).

Ethical approval

The study plan was presented to the Christian Medical College and Nursing College Research Ethical Committee (12 members) in early January 2003, and the committee gave permission for the research. The research goals were explained to the workers in the community health department. Nurses were asked how they wished to be officially referred to in the written report. They chose to be referred to as 'community health nurses from CMCH.' In the description of the findings, the exact words of nurses are not reproduced, in order to avoid specific comments being attributed to individual interviewees by their peers, as the number of individuals who were interviewed was small. This was considered ethically justifiable to prevent the study findings from affecting the way in which the participants were treated subsequently.

Procedure

Fieldwork was an essential and emphasised part of this study, considering the nature of work in the community health setting and the as yet unexplored effects of the local culture, factors which have not yet been described in the literature. Observations focused on the dynamics of healthcare provision, such as how nursing care was provided, who provided care, and whether factors such as age, cognitive status and staffing levels influenced how care was provided. Data were also obtained on how healthcare providers interacted with patients, patients' relatives, village leaders, village midwives, nursing supervisors, and other workers in the health team (departmental head, social workers, bus drivers), as well as between themselves. The complete working environment, consisting of diverse components such as villages, homes, events, trips and surroundings, was also examined.

Mere physical presence in the field guarantees little if anything in itself, as access largely involves insight and inside knowledge (Holloway and Todres, 2006). That is why the interviews were conversational and used as a supportive method to participant observation. Chosen methods allowed the author to witness at first hand and in intimate detail issues related to stress and methods employed to deal with stress. A tape recorder was not used during interviews, in order to preserve a flexible and open atmosphere. However, notes were taken during individual interviews, or where this was unfeasible practically (e.g. in the case of short interviews conducted between home visits), immediately afterwards. The individual interviews took place in different clinics during the working day, when

there were fewer clients or a quiet place was available for the participants to talk. All of the interviews were conducted by the authors of this study. During interviews, the researchers gave the interviewees freedom to express their own views with regard to stress factors at work and the coping strategies that they employed in an open-ended manner.

The language of learning and work for all nurses in the CONCH project was English, which made it possible for the researchers to follow different activities. Because of the cultural differences involved, the researchers also participated in the different activities of nurses after each working day. Furthermore, having many discussions with the nurses and supervisors helped the researchers to gradually understand the ways of thinking and patterns of behaviour of the Indian community health nurse. Differences between Finnish and Indian body language meant that many explanatory questions were required. For example, nodding in Finnish culture is interpreted as an affirmative response, and a sideways sway of the head is interpreted as a negative response. In South India, a similar sideways head movement is interpreted as affirmative. The data that were collected from observations, interviews and self-reflection were documented in field notes on a daily basis and constantly reflected upon.

Data analysis

Event analysis, which involves a detailed description and analysis of a specific event, was the strategy used to obtain data on work-related stress factors and coping mechanisms. An *event* is defined as something that occurs which is important to the investigation. In this study, the process of work-related stress factors and coping mechanisms was the *event* examined (Corsaro and Heise, 1990).

One of the central goals of ethnographic data analysis is the integration of various types of data. During the event analysis phase, data from interviews, observations, and documentation of the working of the community health department (e.g. reports, statistics, written instructions and forms) were processed. Analysis began in the field and was continuous. Continual event analysis was the basis of the ethnographic approach, which gave the research its form and direction (Savage, 2000; Holloway and Todres, 2006). Continual analysis was important in making the study responsive to the subtleties of the situations and the various phenomena under study (Savage, 2000; Holloway and Todres, 2006). As the analysis was based on interpretations, the constant switch between data and analysis assisted in confirming the interpretations that were made.

The analysis process after fieldwork began with a systematic perusal of all notes and interviews in order to obtain an overall picture. Subsequently, a new dialogue with the text began. The constant comparison technique was used to identify all relevant data. Analysis was performed to detect similarities, differences, variations and contradictions between the characteristics of the various work-related stress factors (Bernard, 2002). The data were coded according to the patterns that emerged. These patterns were then evaluated by exploring data that fitted with the emerging patterns, and data that disconfirmed these (Burns and Grove, 2005). The text and the categories were then read to search for a new whole, a main interpretation, going from the whole to the parts and back to the whole again. The main interpretation was structured at a more abstract level than the earlier interpretation which was made during the analysis process. The starting point of analysis was the inductive classification of data gleaned from interviews and observations into appropriate categories for further consideration. Broadly speaking, stress factors could be grouped into three categories (see Figure 1) as follows:

1 stress arising from fear/problems in communication
2 stress factors related to the work environment
3 stress arising from a large workload.

Findings

The findings are discussed according to the grouping categories (see Figure 2).

Stress arising from fear/problems in communication

Communication problems covered the issues of hierarchy at work and its influence on communication, lack of privacy, and supervisor–nurse interactions. All of the interviewees mentioned that the existence of a strong hierarchy at work created problems in communication in a vertical direction in the hierarchal ladder. An integral part of Indian culture is respect for one's elders, irrespective of status or behaviour, and this is also reflected in the workplace. Nurses respected their supervisors and other older personnel who were responsible for different projects. However, alongside respect there was fear associated with dealing with superiors. This was reflected in gatherings, meetings and teaching sessions. When opportunities were provided to express personal opinions about incidents in the field, on no occasion during the three months that the researchers were present did nurses volunteer

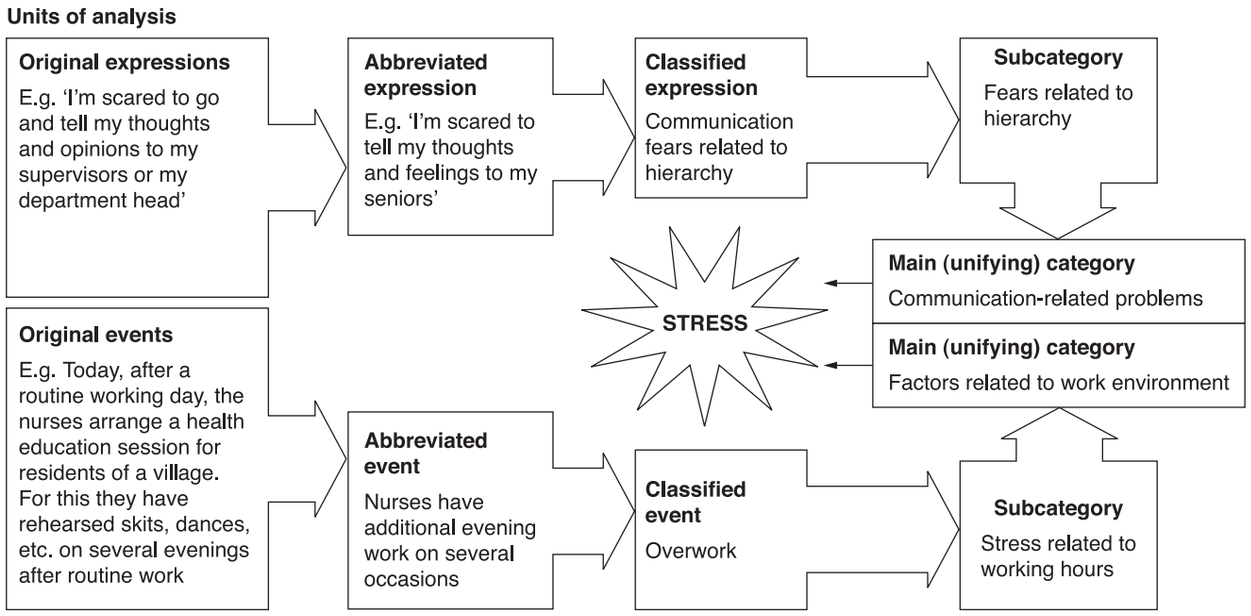

Figure 1 Exemplification of the development of the analysis process

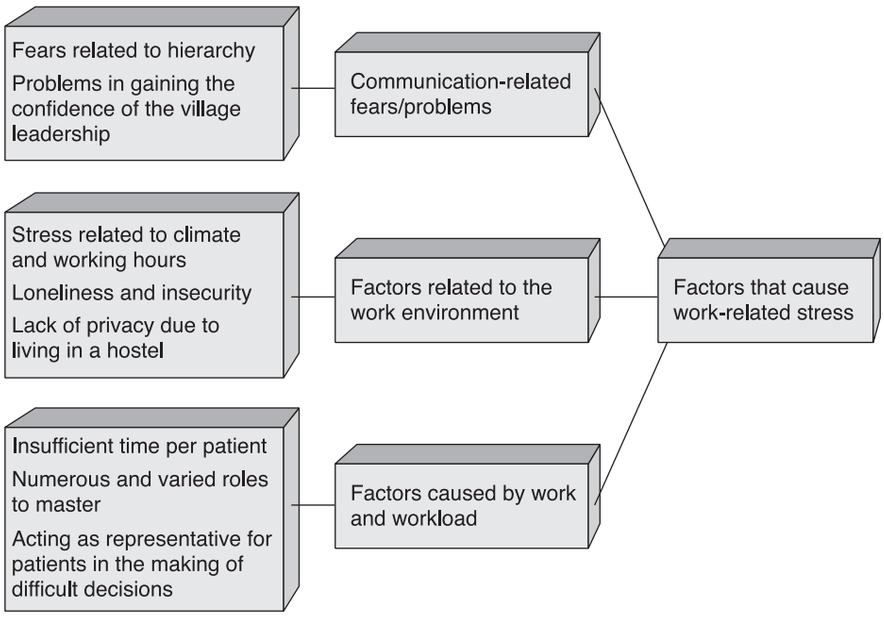

Figure 2 Factors that cause work-related stress

feedback. They admitted to discussing work-related difficulties with their friends, but not in the working environment. Nurses cited the following as causative factors for communication-related fears:

- a fear that expressing negative feedback would result in them becoming labelled as disrespectful or 'difficult' personnel
- a fear that it would affect their prospects of continuing in the field of community health, which they enjoyed
- a fear of consequent adverse effects such as a deliberate increase in their workload or a general humiliation. By this nurses meant that they would have to endure public criticism of their thoughts and opinions.

Fear was indeed one of the most visible factors creating stress among nurses. As a result, even the support that they obtained from their supervisors was deemed inadequate. However, modification of fear-related behaviour was not an easy task. Most nurses felt that it originated during their studentship. According to some, the nursing field did not gain much respect among other disciplines, and so they felt that their opinions were rarely called for. This was reflected in their behaviour as graduate nurses. The second drawback of this fear was an inability to think independently. Critical thinking was not nurtured, but rather the observation of established norms was encouraged. Decisions made by superiors were never questioned, but were just quietly accepted with a 'yes ma'am' attitude.

Nurses experienced less stress dealing with their patients compared with their superiors. Patient-related stress arose from so-called 'difficult patients', which referred to those who were unwilling to cooperate, or who were aggressive or were under the influence of alcohol. Certain nurses also mentioned difficulties in winning over the confidence of the village leadership. However, this matter had been considered in detail, and efforts to improve communication and trust-building between nurses and village leaders had been implemented in the following way. When the CONCH programme was initiated in a new village, a meeting was called between village elders and nurses. The purpose of such a meeting was to introduce the nurses to the village leadership, acquaint them with the customs and thoughts of the village inhabitants, and gain the confidence of the village leadership. In turn, the village elders had an opportunity to understand the purposes of the programme and the benefits that it would provide, as well as to have their own opinions heard. After the confidence of the village leadership had been gained, it was then much easier to win the confidence of the village inhabitants.

Stress factors related to the work environment

The results showed that working conditions did indeed at times create stress. Long drives to the villages, long working days (from 7 am to 6 pm) and hot weather were mentioned. Every day the nurses drove to different villages and their journey took between 30

minutes and an hour in the morning, with a similar length of journey back in the afternoon. The temperature between January and March was in the range 32–38.5° Celsius. Sometimes they found that the long mid-day walks in the sun for home visits were very exhausting. However, an effort was made to reduce such stress by allowing nurses to take sufficient breaks at work. Safety issues at work were also a high priority. All of the nurses felt that it was safe to work alone in the villages. If a client did not behave well, the nurse would contact her supervisor immediately, who would accompany her on the next home visit and try to solve the problem together with her. The nurses did not feel any pressure from the supervisor to go to situations where they felt unsafe. However, they did mention that working alone in the village was sometimes stressful, especially if a new nurse had not yet gained the confidence of the village leadership. The question of safety also surfaced in interviews with two nurses who admitted to feeling insecure when they started work as new nurses in the field.

Many of the participants mentioned stress related to hostel life. Although working hours and free time are theoretically two completely different entities, it was sometimes difficult to draw a clear boundary between them, because nurses resided in specific nursing hostels where their room-mates were often their colleagues at work. Long working hours, a six-day week and using their free time to plan, for example, health-education-focused entertainment programmes for the village inhabitants all contributed to blurring of the boundary between free time and working hours. On the other hand, the nurses found that living as a close-knit community hones skills such as efficient intra-group interaction. Nevertheless, an intrinsic problem of group interaction is the promotion of a spirit of competition, which can sometimes have the unhealthy side-effect of giving rise to inferiority complexes and other similar behavioural patterns. Individuals with strong personalities thrive, but others tend to find the situation stressful. In addition, lack of privacy was a practical problem that some nurses faced. The majority of them lived in shared accommodation, which gave rise to several problems, including lack of opportunity for individual reflection, concentration problems and lack of independence. However, living in shared accommodation facilitated emotional support for those nurses who had good relationships with their colleagues.

Family and social networks were important for nurses. However, many of them reported that family and social networks were disrupted, and they felt lonely and isolated in the host society. The nurses perceived an existing social network as a supportive and strengthening factor, whereas loss of social networks was experienced as a strain. On the one hand, the family was regarded as a source of strength, and on the other it caused concerns. Not being able to fulfil their role in the family, inability to support the family, and being totally dependent on outside assistance caused continuous distress. This was especially true in those situations where one of the family members had a disability or chronic illness that required continuous extra support. Sometimes the nurses expressed feelings of worthlessness and low self-esteem. It must be noted, though, that as a direct consequence of their extremely busy schedule, nurses tended to restrict their interpersonal relationships to members of their own fraternity, and this was therefore their most important emotional support framework, even more important than familial and other ties.

Workload-related stress

One source of workload-related stress that was identified by the participants was insufficient time for client care, due to having too many clients and too few clinic hours. Another problem was the large number of programmes. There were numerous health education-related activities presented in various formats (e.g. dance performances, skits), in addition to the usual home visits and running of health clinics. Nurses were also responsible for the training of local village midwives, general village health education and the arrangement of meetings in which the village leadership participated. In addition, a unique responsibility of nurses was to communicate the economic problems of their patients to the doctors. This could sometimes be very stressful because the doctor–patient interaction was often characterised by a lack of time and empathy, and the doctors sometimes brushed aside the nurses' words in a rather brusque, humiliating manner.

Other methods of coping with stress

In addition to the methods described above, nurses also mentioned other factors as helping to relieve stress. Family, friends, spouse and work associates were the key sources of support. The primary types of support received were emotional and affirmational. Friends helped them to relax or to re-energise after work. Another factor that played a significant part in relieving stress was a Christian outlook. A large number of nurses mentioned their Christian faith as one of the most important factors that helped them to cope with stress. The Christian Medical College, Vellore, which runs the CONCH programme, officially documents its philosophy as follows:

> healing involves seeing it 'holistically', not being satisfied either with a purely biomedical approach or with an exclusively educational or socio-economic one. Its response is the long, slow, agonizing business of learning to live together in love, of acknowledging the alien as one's

> neighbour, of recognizing the full humanity of others, of facing truths even when they are uncomfortable, of allowing ourselves to experience the pain of human need in the hope that we ourselves may be redeemed.
>
> (Christian Medical College, Vellore, 2003)

Since the ideology of the project is based on Christian principles, it is natural that the nurses who enrolled in the programme also possessed a similar outlook. This was manifested in several ways. Weekly Bible studies in every department were important for most of the nurses. In difficult personal and work situations, prayers and other kind of spiritual support was mentioned as the most important source of personal help. The leaders of the College of Nursing also attached great importance to that form of support. Some of the nurses used different church activities often, and some of them tried to find help in other ways.

Supervisor–nurse interaction took place on a daily basis and functioned not only as a problem-solving resource, but also as a possible constantly available source of spiritual support for nurses. Such support received the highest priority by supervisors, who were more than willing to subject their own work to such interruptions as were required for the discharge of this function. There were disparities in the depth of the nurse–supervisor relationship. Whereas some nurses had a very open relationship with their supervisors, others preferred to keep their personal problems to themselves.

Discussion

India is working towards a healthcare system that meets its objectives in an equitable, effective, accountable and affordable manner. To take the right directions, it is important to consult, analyse, debate and forge a consensus in key issues, and to consider options that have not been considered before (Peters *et al*, 2002). The majority of Indian healthcare workers practise in urban areas, whereas rural areas face a great shortage of health-related personnel (Abraham, 2007). In addition, a large number of Indian nurses find work in western countries (Abraham, 2007). There is therefore ample reason to investigate all of the possible reasons why only a small minority of nurses practise in the rural setting. This study focuses on the stress experienced by rural healthcare personnel, and aims to identify causative stress factors for community health nurses as well as the coping mechanisms that they employ to alleviate stress.

Interestingly, the rural nurses in the study identified stressors similar to those identified by nurses in other studies (Dewe, 1987; Chapman, 1993; Hartrick and Hills, 1993), and these stressors were consistent with the model of Lazarus and Folkman (1984). However, many unique stress factors were identified among the nurses taking part in the CONCH programme. In addition, the central role played by the local cultural setting in the creation of unique stressors and coping strategies, as compared with those in a western setting, was also clearly highlighted. Of these, the most significant factor was communication problems created by a rigid hierarchal system. Since such a system has deep historical roots, it is difficult to achieve large changes within a short time span. Such changes are desirable, as an inherent problem with a rigid hierarchy is that the model repeats itself easily. Adverse behaviours experienced during studentship are incorporated and subsequently reflected towards subordinates in future years.

Among the stress factors related to the work environment were some that are specific to the Indian system, resulting from both the culture and the environment. Prominent among these was blurring of the boundary between free time and working hours, as well as hostel-life-related stress, and stress caused by an inability to care for family members due to the large geographical distances involved and lack of free time. Since free time was often spent in hostels on work-related issues, work-related stress also surfaced in hostel life, and for this reason hostel-life-related stress factors were included in the analysis of the study results.

A comparison with the study by Grandström and Lindmark (2000) in India highlights several interesting findings. According to that study, the status, attitudes and behaviour of Indian village leaders were considered to represent a difficult stress factor among nurses (Granström and Lindmark, 2000). However, this was not such a major issue for nurses participating in the CONCH programme, many of whom felt that they received much support and respect from the village leadership and subsequently the village community as well. This in turn was a great relief for them at work. A few nurses mentioned difficulties in gaining the confidence of the village leadership, but again they felt that this was most problematic among the newly graduated, less experienced nurses. Comparison with the results of the study by Grandström and Lindmark (2000) raises the interesting question of whether programmes that are run under government auspices are associated with more stressors than similar programmes that operate in the private sector, CONCH being an example of the latter. In contrast to other studies (Chapman, 1993; Hartrick and Hills, 1993; Corr, 2000; Healy and McKay, 2000), the effect of a Christian perspective figured prominently in this study in terms of the methods that were employed to deal with stress. This could also affect the results, in that nurses with such an outlook would also probably

consider that expressing a negative opinion about certain issues was inappropriate, believing that adverse experiences were to be endured without complaint.

Methodological consideration

The ethnographic methodology is of much help in investigating issues in a country with which the researcher is unfamiliar. When the approach is open-ended, barring the central research questions, the researcher has an opportunity to investigate issues that may not have crossed their mind when, for example, designing a research questionnaire.

Reliability

The central determinants of reliability in qualitative studies are credibility, transferability, dependability and confirmability. The cultural competence of the researcher and reflection are regarded as factors that increase the credibility of a study of high quality (Kirk and Miller, 1985; Fetterman, 2009). In this research, in addition to a relatively broad review of the literature, the researchers' hands-on practice in the healthcare environment has been relevant. The research process has encompassed a continuous consideration of relevant theoretical aspects, theoretical frames of reference, empirical data and the users of relevant data, namely Indian healthcare workers. Reflection and face validation were achieved by presenting the results to participants and asking them for their evaluations (Kyngäs and Vanhanen, 1999).

According to Fetterman (2009), transferability from one context to another in qualitative studies depends essentially on the degree of similarity between the environment that has previously been researched and the environment now under consideration. The researcher cannot individually make final assessments of transferability, but rather the responsibility falls largely on those who make use of the research findings (Kirk and Miller, 1985; Fetterman, 2009). The research has attempted to describe in sufficient depth the relevant details of informants and their work environments, so that those who intend to use the research findings have sufficient tools to enable them to assess the applicability of the findings to different contexts. Rather than merely gathering information from a large pool of participants, the focus was on achieving richness, depth and saturation of data gathered from the interviewees.

During the research period, the researchers actively endeavoured to eradicate the effect of individual opinion, thereby increasing the objectivity of the findings. Although an official re-evaluation was not performed, the researchers spent considerable time in the service of the Christian Medical College, Vellore (20042005) in projects in the research community. This extra experience further enabled the researchers to verify and highlight the previous findings. The above findings indicate that the researchers' observations did not change even though their experience of Indian culture had increased. Different stages of the research have been reported carefully in an attempt to increase and confirm the reliability of the research. As a result, the reader should have sufficient evidence to enable them to accept, differ from or reject the interpretations that have been made.

Implications for practice and the limitations of the study

In nursing organisations, effective proactive solutions can be found to deal with stress-related factors, such as increasing skills and enriching work. Adequate staffing, which reduces job stress and overtime, could improve efficiency and cost-effectiveness (O'Brian-Pallas *et al*, 2004.) Coping techniques such as team building, counselling, and learning assertiveness and communication skills can be enhanced. This study prompts consideration of how a clear separation between working hours and free time may be achieved, and suggests that other viable non-hierarchy-based management options should be found, within the given cultural constraints.

Since the study was undertaken in the private sector, the results may be difficult to generalise. The presence of male nurses in the study might have enriched its multi-faceted nature. Stresses related to balancing work and family responsibilities might have surfaced if the study had included more nurses with families. Results relating to a working environment that strongly supports Christian values may not be applicable to other environments. However, in comparable studies from countries such as Pakistan (Mumtaz *et al*, 2003; Afsar and Younus, 2005; Haq *et al*, 2008), Uganda (Baguma, 2001) and Singapore (Chan *et al*, 2000), similar results were obtained.

Conclusion

Using an ethnographic approach, this study succeeded in identifying unique stressors and coping mechanisms among Indian community nurses. Challenging work environments, a blurred boundary between working hours and free time, and stress-related fear all contributed to a decrease in motivation and to fatigue, in addition to hindering innovation. The identification of these stress-related factors could facilitate implementation of appropriate interventions

and the development of healthcare. The results suggest that broader studies employing, for example, quantitative methods may provide useful information.

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CONFLICTS OF INTEREST

None.

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