Perceptions of Central Gauteng occupational health nursing practitioners of their traditional and expanded roles

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ABSTRACT
This paper provides an overview of the findings of a cross-sectional survey conducted in 2011 that investigated the perceptions of Central Gauteng occupational health nursing practitioners of their traditional and expanded roles and role activities, using a self-administered questionnaire. In the traditional role area, high importance was given to the functions of health assessment and providing direct care of job-related emergency and minor illness episodes. The assistance of rehabilitation and relocation of disabled workers was rated low in overall importance. In the expanded role area, the highest importance was given to managing an occupational health service, while the lowest importance was given to research-related activities. The results demonstrate that occupational health nursing practitioners need to engage in research activities and conduct situational analyses of workplaces.

Keywords: perceptions, traditional role, expanded role, occupational health nursing practitioner

INTRODUCTION
Occupational health nursing practitioners (OHNPs) play an important role in the creation and maintenance of a healthy and safe work environment, and are expected to engage in a variety of traditional curative activities as well as expanded role activities, focusing on injury prevention, health promotion, wellness, management and research.¹ Role refers to a part that someone or something has in a particular activity or situation: the part that someone has in a family, society, or other group.² Role activities relate to the functions performed to enact a specific role. The roles of the OHNP are those of consultant, clinician, educator, researcher and manager/leader. The enactment of the roles and role activities are dependent on the size of the organisation, the nature of the business, and the health risks in the workplace setting.³ In addition, role activities that are applied in fulfilling the roles are diverse and overlapping.⁴ OHNPs are “the largest group of healthcare providers serving the worksite”¹⁵ with a variety of workplace roles that are in a constant state of change and expansion.⁵

The traditional role of the OHNP is described in the literature as being largely illness-based, and utilises a disease-oriented, task-based, medical model of practice.⁷ The traditional role thus encompasses those elements of nursing that relate to providing curative treatments and rehabilitation, counselling employees regarding health risks, following-up employees for workmen’s compensation claims, and conducting health assessments.¹ The expanded role of the OHNP, on the other hand, is based on wellness models of health that are consistent with the public health domain, and includes activities such as health promotion and education, risk reduction through workplace risk assessments and surveillance, environmental health monitoring, and those activities that centre on the increased professionalisation of OHNPs, namely research and its dissemination and utilisation, and management.¹ Role expansion is the extent to which nurses do not merely take on a responsibility for additional tasks, but the extent to which they achieve authority over the nature of their practices.⁷ In addition, role expansion is about nurses taking their own initiatives, doing their own thinking, and making their own decisions based on
their own experiences and education, to improve practice for the benefit of patients and clients.⁷

Studies conducted in the United States of America,⁴ Australia,⁶ Brazil⁸ and Taiwan¹⁰ revealed slight differences in role perceptions among OHNPs. Findings emphasised that, although OHNPs have moved from a healthcare curative perspective (the traditional remit of occupational health) to a new expanding OHN role that encompasses workplace health promotion, injury prevention, management and research, the traditional illness-based models of practice continue to dominate and remain a key task for OHNPs. Nevertheless, the expanded roles are of increasing importance with more time being needed for them in future OHN practice.¹

The perception of an employee of her/his role is a key determinant of performance, with a misty perception of the role likely to result in underperformance by, and underutilisation of, the potential of the individual.¹¹ It has been suggested that role perception and actual role content are intrinsic predictors of job satisfaction.¹² Since perceptions are likely to shape the OHNPs’ practices and their responses to the expanded role,¹³ it is imperative that these perceptions be explored.

There are no studies about the perceptions of OHNPs of their traditional and expanded roles in South Africa. This is the first attempt to identify those perceptions in the country. The purpose of this study was to describe the role perceptions of OHNPs in Central Gauteng.

**METHODS**

A cross-sectional survey was conducted in 2011. Using the list of names of 640 South African Society of Occupational Health Nursing (SASOHN) Central Gauteng members, 150 potential eligible research participants were selected by means of a systematic random sampling method. It was estimated that a sample size of 114 was needed, using Epi Info 6 Version 3.5.3. However, 150 participants were selected to account for non-responders as some questionnaires were posted.

The Central Gauteng district comprises Johannesburg which accounts for 92% of the district, Edenvale which covers 7.6%, and Carletonville and Soweto which contribute the least coverage at 1.5% each. Participants were restricted to professional nurses registered as OHNPs with the South African Nursing Council, employed in occupational health practices at the time of the study on a full-time, part-time or casual basis, or with an agency within the region. The Central Gauteng SASOHN members represent a significant proportion of OHNPs in South Africa and, as reiterated by Mellor and St John in 2007,¹ belonging to a professional organisation demonstrates a commitment to the continuing development of occupational health nursing (OHN) practice.

The data capture instrument used was an adjusted self-administered, structured questionnaire developed by Mellor and St John¹ who determined the perceptions of Australian OHNPs with regard to their current and future roles. The validity of the instrument was ensured by pre-testing it for layout, clarity, specificity and completeness on 10 postgraduate students in the OHN course at a tertiary education institution, who were not part of the study, as well as through assessment by two occupational health nursing experts. The internal consistency and “homogeneity” of the instrument was demonstrated by calculating the Cronbach’s alpha co-efficient on the instrument’s items under the eight sub-scales contained in the questionnaire.

The questionnaire consisted of two sections. The first section (Section A) contained questions about demographic information, and the second (Section B) measured eight components of OHNPs’ role activities, viz. managing an occupational health service, assessing the work environment, workers’ health assessments, health education, health promotion, rehabilitation, managing an illness and injury service, and research. Twenty-seven specific task items that reflected role activities underpinned the eight components. Adjustments were made to the original questionnaire so as to be relevant to the South African context. The revised questionnaire consisted of 16 items in Section A and 27 items in Section B. Participants were asked to indicate the degree to which each activity component rated as important to their current practice. The items were measured on a 5-point Likert scale (ranging from 1 “not important” to 5 “extremely important”). Participants indicated “0” if the activity was “not performed”. The participants were also asked to estimate, as a percentage, the amount of time in any given week that they believed they spent in these areas in their current practices.

The study was approved by the Human Research Ethics Committee (Medical) of The University of the Witwatersrand (certificate clearance number M110919).

**Data collection**

One of the authors (EM) attended one regional monthly meeting of SASOHN’s Central Gauteng branch prior to the data collection date and explained the objectives and importance of the research, the sampling procedures, the research instrument that would be used, follow-up procedures, and time commitments required of the participants. The OHNPs were...
assured of confidentiality and participation was requested. Identified eligible participants who were at the meeting were handed an unmarked envelope containing the questionnaire and information sheet. Identified participants not at the meeting were contacted via telephone and/or email. The questionnaire packages were then e-mailed, posted or delivered by hand. The completed questionnaires were deposited in sealed envelopes into a drop box at the Edenvale community centre.

**Data analysis**

Analytical procedures included descriptive and inferential statistics. Data were analysed using STATA 10.0. Descriptive statistical analysis in the form of frequencies, central tendency measurements and variability measurements was used to describe the data. The criteria for perceptions of the importance of role activity interpretation were as follows: a mean rating score for each activity of 0.00 to 1.49 was considered to be the lowest importance, 1.50 to 2.49 was a low importance, 2.50 to 3.49 was a moderate importance, 3.50 to 4.49 was a high importance, and 4.50 to 5.00 was the highest importance of that role activity. This interpretation was based on that used by Ishihara, et al. (2004).[^14]

**RESULTS**

A total of 127 questionnaires were returned, of which only 102 were analysed, representing a response rate of 68.0%.

The other 25 questionnaires were not included in the analysis because of incompleteness.

The average age of the OHNPs was 42.8 years (SD 9.4) with the youngest participant being 28 years old and the oldest 59 years old. Figure 1 illustrates the proportion of respondents in each age category. The majority of the OHNPs (45.5%) were in the age group 40 to 49 years. The age group 20 to 29 years had the fewest participants (2%).

Of the 102 participants who responded to the question on gender, 91.2% were female and 8.8% were male.

Table 1 provides an overview of the participants’ qualifications in OHN. The majority (n = 36, 35.3%) held a diploma in OHN as their highest post-basic qualification, followed by 22 (21.6%) with a certificate in OHN. Seven (6.9%) had a higher degree whilst five (4.9%) had no OHN qualification at all.

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Figure 2 shows the distribution of OHNPs by the number of years of experience they had in OHN at the time of the study. Years of experience varied from six months to 30 years. The mean number of years of professional experience in the field was 11.1 (SD 5.9).

Table 2 illustrates the current state of job satisfaction amongst the OHNPs. Only 14.7% of the OHNPs experienced job satisfaction all the time, while 6.9% expressed having no satisfaction with their jobs.

The responses relating to the traditional area of practice are depicted in Table 3. High importance was allocated to the role activities of periodic and pre-placement physical assessments, and to providing and supervising direct care of job-related emergency and minor illness episodes. Moderate importance was assigned to evaluating the ability of absentees to safely return to work, providing direct care and treatment for non-work-related illnesses and injuries, and counselling employees regarding health risks. The assistance of rehabilitation and relocation of disabled workers was rated low on the overall importance scale.

Table 4 reflects the OHNPs ratings of the expanded area of practice.

Table 2. Level of job satisfaction (n = 102)

<table>
<thead>
<tr>
<th>Current satisfaction with job</th>
<th>Never</th>
<th>Rarely</th>
<th>Somewhat</th>
<th>Mostly</th>
<th>Always</th>
</tr>
</thead>
<tbody>
<tr>
<td>n (%)</td>
<td>n (%)</td>
<td>n (%)</td>
<td>n (%)</td>
<td>n (%)</td>
<td>n (%)</td>
</tr>
<tr>
<td>7 (6.9)</td>
<td>8 (7.8)</td>
<td>30 (29.4)</td>
<td>42 (41.2)</td>
<td>15 (14.7)</td>
<td></td>
</tr>
</tbody>
</table>

Table 3. Ratings of the traditional role activities

<table>
<thead>
<tr>
<th>Role activity/activities</th>
<th>n</th>
<th>Mean rating</th>
<th>Overall importance rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assessing, monitoring and evaluating worker’s health</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Perform periodic health assessments</td>
<td>102</td>
<td>4.00</td>
<td>High</td>
</tr>
<tr>
<td>Conduct pre-placement physicals</td>
<td>102</td>
<td>3.92</td>
<td>High</td>
</tr>
<tr>
<td>Evaluate the ability of absentees to safely return to work</td>
<td>102</td>
<td>2.90</td>
<td>Moderate</td>
</tr>
<tr>
<td>Managing an illness and injury treatment service</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Provide and supervise direct care of job-related emergency and minor illness episodes</td>
<td>102</td>
<td>3.75</td>
<td>High</td>
</tr>
<tr>
<td>Provide direct care and treatment for non-work related illnesses and injuries</td>
<td>102</td>
<td>3.14</td>
<td>Moderate</td>
</tr>
<tr>
<td>Counsel employees regarding health risks</td>
<td>102</td>
<td>3.03</td>
<td>Moderate</td>
</tr>
<tr>
<td>Managing the rehabilitation of ill or injured workers</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Assist in the rehabilitation and relocation of disabled workers</td>
<td>102</td>
<td>2.29</td>
<td>Low</td>
</tr>
<tr>
<td>Provide follow-up of employees with compensation claims</td>
<td>102</td>
<td>3.28</td>
<td>Moderate</td>
</tr>
</tbody>
</table>

Table 4. Ratings of the role activities in the expanded area of practice

<table>
<thead>
<tr>
<th>Role activity/activities</th>
<th>n</th>
<th>Mean rating</th>
<th>Overall importance rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assessing the work environment</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Conduct a situational analysis of the organisation as a whole</td>
<td>98</td>
<td>2.39</td>
<td>Low</td>
</tr>
<tr>
<td>Participate in environmental monitoring</td>
<td>102</td>
<td>2.32</td>
<td>Low</td>
</tr>
<tr>
<td>Conduct plant rounds regularly to identify hazards and potential violations</td>
<td>102</td>
<td>2.74</td>
<td>Moderate</td>
</tr>
<tr>
<td>Advocate for the implementation of environmental health control measures</td>
<td>102</td>
<td>2.88</td>
<td>Moderate</td>
</tr>
<tr>
<td>Applying research methodology to the investigation of occupational health and safety issues</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Use evidence-based practice to promote quality outcomes</td>
<td>102</td>
<td>2.64</td>
<td>Moderate</td>
</tr>
<tr>
<td>Generate analyses on trends in health promotion, risk reduction and healthcare trends</td>
<td>102</td>
<td>2.81</td>
<td>Moderate</td>
</tr>
<tr>
<td>Conduct independent research to determine cost-effective alternatives for healthcare programmes/services and disseminates results</td>
<td>102</td>
<td>1.53</td>
<td>Low</td>
</tr>
<tr>
<td>Providing information, education, training and advice</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Participate in employee safety orientation classes and programmes for high risk areas</td>
<td>102</td>
<td>2.97</td>
<td>Moderate</td>
</tr>
<tr>
<td>Plan, develop, implement and evaluate educational programmes related to worker safety, health promotion and risk prevention</td>
<td>102</td>
<td>2.91</td>
<td>Moderate</td>
</tr>
</tbody>
</table>
role activities. The importance of conducting a situational analysis of the organisation was rated by only 98 of the participants. The mean rating was 2.39 (low importance rating). By contrast, conducting regular plant rounds (mean rating = 2.74) and advocating for the implementation of environmental health control measures (mean rating = 2.88) were considered to be moderately important in the OHNPs’ current practices. It is evident from Table 4 that none of the activities in the expanded role activities in the three areas of assessing work environment, applying research methodology and providing information, education, training and advice were perceived to be of high importance. Participating in environmental monitoring was also rated as being of low importance.

Perceptions about managing an occupational health service are reflected in Figure 3. The activity that was rated as extremely important by 26.4% of participants was being a member of the occupational health and safety committee. Almost as many participants (24.5%) rated analytic and report writing as an important role activity. Meeting with occupational

![Figure 3. Responses for managing an occupational health service (n = 102)](image-url)

![Figure 4. Distribution of responses for enhancing the health of workers (n = 102)](image-url)
health and safety professionals was rated by 14.7% of the participants as not important. Seventeen participants (16.6%) indicated that they did not perform budget development activities but 12.5% rated this activity as very important.

Figure 4 summarises the OHNPs’ responses regarding the importance of role activities under the sub-scale: enhancing the health of workers. Of the 101 participants who responded, 3.9% reported that they did not perform the activity, 31.7% indicated that it was moderately important, 22.8% believed it was very important, and 25.7% felt it was an extremely important activity.

In the field of health promotion programme development, only 9% reported not developing, implementing and evaluating educational programmes to address the particular needs of the corporation; 22% thought it was an extremely important activity. A total of 42% thought it was either moderately or very important. Extending health programmes to workers’ dependants was thought to be unimportant by 36% of participants.

DISCUSSION
This research provides valuable information on what role activities Central Gauteng OHNPs perform to improve workers’ health and safety, as well as their perceptions about the importance of these roles, and should be used as the basis for the development of OHN practice in Central Gauteng and South Africa as a whole. The importance of the study lies in the fact that it is an unexplored field in OHN research in South Africa and informs occupational health nursing practice with regard to role activities that need to be expanded in line with international trends in OHN. OHNPs face competition from other professionals in the field of occupational health and safety, which means that they must be prepared to demonstrate their relevant skills, competencies and value to employers.15

Similar age distributions, with the average age of participants in their forties, were reported in Australian1 and Japanese studies.14 This may be due to the fact that when nurses finish their basic nursing training, they work as general nurses before they move to specific areas of specialisation.

Only a small number of participants were males. Nursing in South Africa is largely a female-dominated profession. This concurs with the gender ratios of OHNPs in South Africa (92.6% to 7.4%)16 and other countries, such as Brazil (89% to 11%)9 and the USA (94.8% to 5.2%).8

Most of the OHNPs in the study held diplomas in an OHN qualification, followed by those with a Certificate in OHN. Until the early 1990s, the Certificate in OHN was the only formal postgraduate qualification, which would explain the high number of OHNPs with this qualification. When the South African Nursing Council promulgated Regulation 212, relating to the course leading to registration of an additional qualification in 1993, the Certificate was upgraded to a Diploma. In this study, only 4.9% of the participants did not have an OHN qualification, while 95.1% held varying post-basic qualifications in OHN. The few participants with no post-basic qualification in OHN may be due to the fact that, in South Africa, registered nurses are permitted to work in OHN before completing further education in the field.

The mean number of years of experience in the field of professional OHN demonstrates a substantial amount of experience in the specialty. Length of experience in the USA was reported to be 9.9 to 11.2 years9 and, in Brazil,9 9.9 to 12.7 years, similar to the respondents’ experience in our study.

Overall, OHNPs were mostly satisfied with their jobs. According to Lu et al.,12 job satisfaction is positively correlated to one’s perception of one’s role and the actual role content reported. Role perceptions, reported times spent in these roles, and their association with job satisfaction were, however, not explored in this research.

In the traditional area of practice, the OHNPs perceived the following as being highly important: performing periodic and pre-placement examinations, performing health assessments, and providing and supervising direct care for work-related illnesses and injuries. Support for these findings is found in a study on occupational health nursing practice, education and research in Taiwan in which OHNPs rated the same role activities highly.19 This indicates that, although these activities have been a feature of the traditional role activities in OHN practice, they remain an important component of today’s holistic OHN...
practice and, as Mellor and St John⁹ have observed, will continue to be in the future work of the OHNP.

An interesting finding in this research was that the activity of assisting in the rehabilitation and re-location of disabled workers had the lowest rating, with a majority of the OHNPs reporting that the activity was not important in their practices. Yet, providing follow-up with compensation claims was rated as moderately important. This may be due to certain external and internal influences affecting the enactment of the role activity, such as the fact that OHNPs work with medical practitioners and this has traditionally been the medical practitioners’ activity, and that the activity would normally be relegated to either physiotherapists or occupational therapists. In a 2004 study that defined the roles and functions of occupational health nurses in Japan,¹⁴ assessing employees with work restrictions and making appropriate job placement recommendations was one of the most frequently performed tasks amongst the Japanese OHNPs.

Results of the expanded role activities revealed that research activities were perceived to be of low importance in this study. The findings from a previous study that explored the status of occupational health services in South Africa revealed that the expanded role of researcher is lacking and recommended that it be a focal area in future OHN practice, in particular encouraging OHNPs to not only conduct the research but to also disseminate the findings of their research.¹⁶

“Workplace health promotion can contribute to protecting and enhancing the health of employees and the OHNP has an important role in this regard”.¹⁷ However, this study shows that fewer than half of the participants thought it was either moderately or very important. This finding is supported by a study outlining the roles and functions of OHNPs in Brazil, which found that the primary job responsibility of the OHNP was clinical activities followed by manager, educator, occupational health service coordinator and then health promotion specialist.⁹ Findings from an earlier study in Brazil revealed that the actual activities performed by many OHNPs are not compatible with the health promotion model or the prevention of accidents and disease because the employer’s focus is primarily on curative measures.¹⁸

With regard to the management of an occupational health service, the top rated activities included serving as a member of an occupational health and safety committee, and developing analyses for management (through record keeping), whereas developing budgets for the occupational health unit was rated low, a finding consistent with those from the Japanese study.¹⁴

OHNPs had a lower perception of the role activity related to extending health programmes to workers’ dependants, with a majority (36%) indicating that it was not an important function and 10% reporting that they did not perform this role activity. This result can be seen in the context of the geographical area of Gauteng in which many primary healthcare clinics exist for workers’ families. This finding could be influenced by the fact that different occupational service delivery models are used in different workplace settings. According to the World Health Organization’s Healthy Workplace Framework and Model, to bring about positive changes in the health of workers, which will support organisational success, the health of workers should include non-work-related factors and this includes embracing the workers’ families.²⁰ It is therefore recommended that OHNPs advocate for the inclusion of workers’ families in workplace health programmes.

LIMITATIONS

A limitation in this study was that it was restricted to OHNPs in the Central
Gauteng district and the findings are thus not generalisable to the entire country.

Triangulation of research instruments, instead of just utilising the self-report method, might have added further useful insights to the research. For instance, in-depth interviews with the OHNPs through focus group discussions and observations of OHNPs in their natural settings would have yielded qualitative data that could have enriched the quantitative aspect of this research.

CONCLUSIONS AND RECOMMENDATIONS

OHNPs attach importance in varying degrees to traditional and expanded roles and role activities as demonstrated in this study. Some role activities were rated as being of low importance and others of high importance. The findings highlight areas for OHN practice development and, therefore, OHNPs should be encouraged to 1) engage in research activities; 2) conduct situational analyses of the organisations in which they are employed; 3) assist in the rehabilitation and relocation of disabled workers; 4) participate in environmental monitoring; and 5) engage workers’ families in health promotion activities. It is also recommended that perceptions of OHNPs with regard to their roles and role activities be investigated in different regions of South Africa, as well as the factors that influence OHNP role perceptions and enactment of role activities.

LESSONS LEARNED

1. OHNPs are vested in their traditional roles, although movement has been demonstrated into the expanded roles and role activities.
2. OHNPs generally undervalue the importance of research, as evident from the low importance attached to this role.
3. OHNPs are eager to participate in assessing, monitoring and evaluating workers’ health, but might lack the resources or support systems required for expanding into health promotion role activities.

REFERENCES