Survey on Knowledge, Attitude and Practice (KAP) on Professional Nurses Working at Primary Health Care Level in KwaZulu Natal.

D. Mariani*, R. Gcaba**, J. Dalton**

April 2003

* D. Mariani, MD, MPH, DTM&H, Professional Training Consultant, Italian Co-operation
** R. Gcaba, Deputy Director Human Resource Development, Department of Health KwaZulu Natal, SA
** J. Dalton, Senior Primary Health Care Professional Trainer, Human Resource Development, Department of Health, KwaZulu Natal, SA
Acknowledgements

This study would not have been possible without the technical support, challenging criticism and encouragement of many colleagues. We would like to give particular thanks to Ms. Noel Phillips, former Director of Mother, Child and Women Health Programme; Dr. Stephen Knight Lecturer at School of Family & Public Health Medicine -University of Natal; Mrs Liz Dartnall, AMREF Programme Officer; Dr. Christiane Horwood, Programme Officer Mother, Child and Women Health; Dr. Antonio Silvestri, Team Leader Italian Co-operation and Dr. Venanzio Vella, Epidemiologist, Italian Co-operation.
Special thanks for their efforts to the District Managers of DC 21, DC 22, DC 23, DC 25, DC 26, DC 27, DC 28, eKtewini and to the Retired Nurses for their commitment and time spent for the completion of the survey.
The study has been sponsored by Italian Co-operation.
Executive Summary

Background

Previous surveys have reported a lower performance of Health Service delivery in KwaZulu Natal (KZN) compared with other provinces. To identify the possible reasons for these findings a survey was conducted to:

- estimate the proportion of Professional Nurses (PNs) trained in Tuberculosis (TB), Sexually Transmitted Diseases (STD) and Integrated Management of Childhood Illnesses (IMCI);
- know the impact of training on knowledge; and
- assess the magnitude and reasons for overseas migration.

Methodology

Between November 2002 and February 2003, 79 Health Clinics (HC) were visited and 208 PNs were interviewed by 13 retired professional nurses trained as enumerators.

Results

- The proportion of PNs trained in TB, STD, IMCI was respectively 86%, 84%, 80%;
- After one year from the course the knowledge of TB and STD declined and was not different from the knowledge of those who did not receive training;
- 56% of PNs expressed the willingness to go overseas and 1/3 of them had plan to leave in 2 year time;
- Reasons for going overseas included “needs for more education” (55%) and “better salary” (36%); and
- During the day of the interviews ¼ of the Primary Health Care PNs employed in the HC were not present in the clinic.

Recommendations

- The PNs who did not receive training should be trained in TB, STD and IMCI with more emphasis on treatment prescription, dosage of drugs and programme management.
- Training courses focusing on management issues such as leadership, staff motivation, problem solving should be offered to HC managers.
- Health District Offices should implement refreshers courses programmes, timely supervision and coaching activities.
- Staff performance appraisal system should be implemented.
- A plan to retain PNs should be adopted by the DOH to contain overseas migration with major emphasis in giving staff recognition, decreasing staff burn-out through adequate task delegation to a lower level of Health Personnel such as Enrolled Nurse Assistant (ENA) and Auxiliary Service Officer (ASO).
- Concerned authorities should design a clear career structures with salary differentiation according to functions and responsibility.
- Further research to understand reasons for absenteeism, effective training methodology and how to facilitate attitude changes in health personnel are needed.
## Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction</td>
<td>5</td>
</tr>
<tr>
<td>Methodology</td>
<td>6</td>
</tr>
<tr>
<td>Results</td>
<td>6</td>
</tr>
<tr>
<td>Discussion</td>
<td>14</td>
</tr>
<tr>
<td>Conclusion</td>
<td>15</td>
</tr>
<tr>
<td>References</td>
<td>18</td>
</tr>
</tbody>
</table>
Introduction

The Department of Health (DOH) of KZN is concerned about the low performance of essential public health programs. Furthermore, issues related to human resources management such as emigration of qualified health personnel, performance appraisal, motivation, promotion, and staff behaviour are increasingly gaining importance.

A survey done in 2001 by the Ministry of Health of South Africa, WHO and UNICEF on the implementation of IMCI showed that KZN had a lower performance than other provinces. The performance score, which was based on several questions related to the implementation of IMCI was 6.1 for KZN against 8.4 for Mpumalanga and Northern Province and 6.5 for Northern Cape. Besides IMCI, KZN is underperforming in other programs such as TB, where treatment cure rate of new smear positive cases in 2000 was 38% against a national rate of 64%.

The DOH of KZN is experiencing a dramatic shortage of qualified health personnel. This situation is particularly difficult to solve because it is even experienced in developed countries such as the US and the UK. This phenomenon is characterized by high rates of emigration, attrition to the private sector, and job dissatisfaction. Furthermore, the AIDS epidemic is pounding the Health Service in terms of substantial overall increase in workload and health consequences on health staff workforce. According to recent projections HIV seroprevalence in 2004 is expected to be 10%, 15%, 18%, and 35% respectively among Medical Doctors, Professional Nurses, Staff Nurses, and Nursing Students. The number of Professional Nurses in KZN has decreased from 9,195 to 8,770 between 2000 and 2002. A study from the US showed that 39% of registered nurses were unsatisfied with their salary and 48% had low levels of recognition from their managers.

A recent cross-national study involving 43,000 nurses in 5 developed countries found that job dissatisfaction ranges from 17% in Germany to 41% in USA, and the percentage of leaving the job varied from 17% in Germany to 39% in England. Major reasons for demotivation included inadequate staffing, heavy workloads, and overtime. All the above findings highlight the crucial importance that Human Resource Management has in keeping a satisfactory Health Care delivery.

A survey was carried out to assess if problems related to working relationship, aspiration and needs of Professional Nurses, motivation behind the phenomenon of migration and training quality were behind the lower performance of KZN health personnel. The aim was to identify possible barriers to the implementation of learned skills and to suggest solutions on how to improve the quality of service and retain staff.

---

2 South Africa Health Review 2002, Chapter 15 Tuberculosis, Health System Trust.
4 South Africa Health Review 2002, Chapter 21 Health and Related Indicators, Health System Trust.
5 National Survey on Registered Nurses. Federation of Nurses and Health Professionals, 2001
6 Nurses reports on hospital care in five countries. Health Affairs 2001
**Methodology**

A survey was designed to interview Professional Nurses working at Primary level. The questionnaire was divided into two sections, section A dealt with questions related to training and knowledge, section B dealt with questions on attitude and motivation. The questionnaire was designed with a battery of questions for all types of Professional Nurses and others questions focusing on the three different categories namely Primary Health Care Professional Nurse, Sister in Charge and Area Manager Supervisor. The questionnaires were piloted in two Health Clinics and modified accordingly. The sample size was based on the hypothesis that at least 50% of PN were trained in TB, STD and IMCI. The sample of PN’s was calculated according to $n = \frac{1.96^2 \times P(1-P)}{e}$ where $n$ is the sample, $P$ is the expected proportion of PN’s who received the training and $e$ is the error of the estimate (+_ 10%). The sample $n$ was multiplied by two because of the design effect associated with cluster sampling. This lead to a sample size of 192 PNs to be interviewed by retired nurses who were resident in the Districts. The selection of PNs was carried out accordingly to cluster sampling methodology for “Primary Health Care Reviews”\(^7\). The clusters were the Clinics and the PN’s within the Clinics were the primary sampling units.

The Geographical Information System Dept. (GIS) of the DOH provided a list of 663 Health Clinics (HC) from where 96 Health Clinic were selected with simple random sampling. This sample was to be taken from 96 Clinics because this was the maximum number allowed by the budget of the survey. However, of the 96 clinics only 79 (i.e. 82%) were visited because for 9 Clinics no retired nurse was found in the relative district to work as enumerator, while 8 Clinics were excluded from the analysis because there were problems in the data collection.

In each HC 2 PN’s were interviewed plus the PN’s with the function of Area Manager Supervisor for Primary Health Care activities (n=50), that usually is in charge for up to 6 Clinics.

A total of 208 PN’s were interviewed.

**Results**

The study found that about 86% of PNs were trained in TB, 84% in STD and 80% in IMCI. Nearly 2/3 said that the training received was appropriate to their needs and Management was the most valuable training course received followed by TB, IMCI and STD. However ¼ found no value in the training received. When requested to mention additional training needed 49% mentioned Management and 23% stated IMCI.

Figure 1 shows that about half of the 208 PNs interviewed, were willing to migrate abroad and 1/3 of them said that they had plans to emigrate in two year time and the major motivating factor to emigrate was to increase their professional growth.

\(^7\) Primary Health Care Reviews, Guidelines and Methods, A. El Bindari-Hammad, D. L. Smith, WHO, 1992
The motivating factors for emigrating are shown in Fig. 2 and include higher education and financial reasons. There is a significant difference when cross tabulating career development with willingness to go overseas, in fact of those who did not expect a career promotion 44% expressed the willing to emigrate against 56% that will not emigrate because they have career prospects. This pattern is more striking when comparing results across different categories of PNs. Among PNs, the AMSPNs who have more career prospect are less willing to go overseas (5%) than PHCPNs who have with less prospect of career (44%). About 58% of PHCPNs, 65% of SCPNs and 82% of AMSPNs answered that there was a career structure in their profession. This feeling toward the career influenced willingness to leave. More than half of PHCPNs and SCPNs had plan to go overseas against ¼ of AMSPNs and plans to migrate in 2 year time was 41% for PHCPN, 32% for SCPN and 14% for AMSPN.

Figure 2. Reasons for Migration among PNs.
The research attempted to describe proxy of absenteeism. The majority of HCs employed between 2 and 10 PNs, except for 2 Polyclinics where the personnel was around 133 and 63 (circled dots in Fig.3).

Figure 3. Proportion of Health Staff Employed and Present Nurses in HC

After eliminating the 2 Polyclinics, the number of PNs employed (Y axis) was plotted against the number present in each clinic (X axis) the day of interview. Figure 4 shows that the relation between Nurses employed and present at work followed a linear pattern except for three clinics where a higher percentage of staff was absent. While in most clinics about 75% of the nurses employed were at work, in the three clinics well above the line less than 50% of nurses employed were at work.
Figure 4. Ratio Between Staff on Payroll and PN effectively present.

Another way of presenting this information is shown in Fig. 5. In this figure the percentage of health staff who was absent the day of the interview is on the X axis while the number of clinics is on the Y axis.

Figure 5. Proportion of Health Staff on Payroll not Present at HC
In 20 HC all the PNs employed were at work and the absenteeism was 0%. The central tendency in the middle of the distribution shows that 25% of employed staff were not at work. The right tail of the distribution shows that in a few clinics more than 50% of staff was not at work.

The retention of knowledge after 1 year was used as proxy indicator of the quality of the training courses received. Table 1 shows that in the case of TB the training courses have not been very effective because there was no difference between those trained and those not trained on how to manage correctly a new TB patient. A better retention of knowledge was shown by STD training, at least during the first year after the training, when there was still a significant higher knowledge among those who has been trained vs. those who were not. However for the STD training the superior knowledge disappeared after 2 years from the training. The training courses in IMCI seemed to score better than the others in terms of retained knowledge with a significant difference after the first and second year from training between those who received training and those who were never trained.

Table 1. Proportion of correct answers in PHCPNs after 1 year since the end of the Training in TB, STD and IMCI compared with those who were not trained.

<table>
<thead>
<tr>
<th>Correct Management of New TB smear+ patient</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TB course</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less&lt;1 year</td>
<td>17 (59%)</td>
<td>12 (41%)</td>
<td>29 (100%)</td>
</tr>
<tr>
<td>More&gt;1 year</td>
<td>16 (64%)</td>
<td>9 (36%)</td>
<td>25 (100%)</td>
</tr>
<tr>
<td>Not attended</td>
<td>13 (65%)</td>
<td>7 (35%)</td>
<td>20 (100%)</td>
</tr>
<tr>
<td>Total</td>
<td>46 (62%)</td>
<td>28 (38%)</td>
<td>74 (100%)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>STD treatment for urethral discharge + swollen testis</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>STD course</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less&lt;1 year</td>
<td>11 (100%)</td>
<td>11 (100%)</td>
<td></td>
</tr>
<tr>
<td>More&gt;1 year</td>
<td>19 (63%)</td>
<td>11 (37%)</td>
<td>30 (100%)</td>
</tr>
<tr>
<td>Not attended</td>
<td>21 (64%)</td>
<td>12 (36%)</td>
<td>33 (100%)</td>
</tr>
<tr>
<td>Total</td>
<td>51 (69%)</td>
<td>23 (31%)</td>
<td>74 (100%)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>General Danger Sign of IMCI</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>IMCI course</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less&lt;1 year</td>
<td>8 (35%)</td>
<td>5 (22%)</td>
<td>10 (43%)</td>
</tr>
<tr>
<td>More&gt;1 year</td>
<td>4 (40%)</td>
<td>2 (20%)</td>
<td>4 (40%)</td>
</tr>
<tr>
<td>Not attended</td>
<td>2 (5%)</td>
<td>8 (19%)</td>
<td>31 (76%)</td>
</tr>
<tr>
<td>Total</td>
<td>14 (19%)</td>
<td>15 (20%)</td>
<td>45 (61%)</td>
</tr>
</tbody>
</table>
There were some problems in attitude of the PNs towards the clients. This was measured with questions on AIDS, TB, STD and IMCI. More than half of PHCPNs blamed mothers for children having diarrhoea, and men for been less compliant than women in taking correctly the TB drugs while 15% of PHCPNs thought that it was a waste of time to teach youth to use condom. Ways to measure attitude of PNs towards clients is summarized in Table 3.

Table 3. Summary on PN’s Attitude.

<table>
<thead>
<tr>
<th></th>
<th>PHCPN</th>
<th>SCPN</th>
<th>AMSPN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mother are to blame for children having diarrhoea</td>
<td>53%</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Men are less adherent than Women in TB Rx</td>
<td>58%</td>
<td>60%</td>
<td>64%</td>
</tr>
<tr>
<td>Waste of time to explain condom to youth</td>
<td>15%</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Teenager Mother do no take proper care of their children</td>
<td>-</td>
<td>38%</td>
<td>20%</td>
</tr>
<tr>
<td>Women to be blamed for STD</td>
<td>-</td>
<td>23%</td>
<td>24%</td>
</tr>
<tr>
<td>Men are to be blamed for STD</td>
<td>-</td>
<td>70%</td>
<td>64%</td>
</tr>
<tr>
<td>HIV+ people are to be blamed for their status</td>
<td></td>
<td></td>
<td>33%</td>
</tr>
</tbody>
</table>

Performance depends also on regular supervision, feedback and presence of a clear job description. Nearly 40% of PHCPNs did not receive any supervision from Area Manager Supervisors and 15% received one visit more than 1 year ago as shown in Figure 6, moreover 68% of PHCPN did not have any feedback on their working performance and 44% of PNs did not receive any job description.

Figure 6. Supervision received by PHCPN
Working relationship between Health District Offices and Health Clinic managers were satisfactory. In fact 66% of SCPN and 84% of AMSPN said that they received supervision and other form of support from District Office Managers.

“Unsafe working conditions” was the most important de-motivating factors for PHCPNs working at HC, followed by “dissatisfaction with salary” and “poor equipment” as shown in Fig.7

Figure 7. De-motivator Factors in PHCPN in Health Clinics in KZN (2002).

“Staff shortage” ranked first as major de-motivator factors among SCPN followed by “Responsibility for others mistakes” and “Extra-work”. (see Fig. 8)

Figure 8. De-motivator Factors in SCPN in Health Clinics in KZN (2002).
Among AMSPN “Extra-work” ranked first as de-motivator factors followed by “Lack of Recognition” and “Low salary” as shown in Fig. 9.

Figure 9. De-motivator Factors in AMSPN
Discussion

The study attempted to answer questions about quantity and quality of training done in KZN by the DOH, felt needs and complaints of PNs working in rural area. Although the “KAP methodology in recent years have come under criticism” and ” the relationship between health-related behaviour and the characteristics measured by KAP surveys are complex and difficult to quantify”\(^8\) this survey has been useful in suggesting causes and solutions to the problems investigated. Although a lot of training has been implemented in 2002, quality could have been higher.

An alarming scenario for Health Service delivery is depicted by the high proportion of PN’s wanting to emigrate overseas. This is a matter of urgency as 1/3 of those wanting to go overseas are planning to do so in the next two year time. This is a gloomy picture because Clinics and Hospitals are being flooded with AIDS patients who will put an huge burden on the remaining PN’s.

The first reason given to emigrate is the “needs for more education” and suggests possible actions to mitigate the overseas migration trend. Ways to contain that trend would be to:

- Improve professional growth through training focused on clinical but also in managerial and Human Resource skills overall for HC managers.
- Provide better career prospects that include a fair salary difference taking into consideration the responsibilities attached to the managerial functions of PNs.
- Establish a better staff appraisal system based on results or output and linked with career management.
- Provide training budgets to District Offices to improve relevance of training; and
- Close relationship between management and staff to identify gaps during staff performance appraisal and ability to act quickly on the results of appraisal.

The de-motivating factors given by PN’s show that the main reasons for wanting to emigrate are not economics. Adequate reward is a prerequisite for achieving the minimum level of acceptable performance, however others conditions are important including job security, housing, sick and maternity leave and benefits for school children. Others studies suggest that “salary is just one of the reasons why nurses are quitting and that dissatisfaction with training and promotion opportunities has a stronger impact than workload and pay”\(^9\). Motivation can be risen through clear job descriptions related to the tasks to be performed.

This study found that a few clinics were affected by high rates of absenteeism. This way of presenting the data suggest how the clinics with unexpected high rates of absenteeism could be identified for further investigation. Reasons to be studied can include: staff

---


workload in the afternoon hours at HC, reason for sick leave and leave of absence, poor supervision and feedback received by PN’s. The study did not collect data on such causes but it has provided ideas on how to investigate the problem.

As already stated substantial training was carried out in the past few years but quality should improve because knowledge is not retained. Training should be strengthened both on the technical issues and on attitudes towards clients.

**Conclusion and Recommendations**

This is the first study of its sort that was realised in KZN by utilising the structures of DOH in collaboration with the Italian Co-operation. Interactions between HRD, MCWH, GIS, PERSAL, District Offices, HC’s and Italian Co-operation has been instrumental in lowering the cost of the study at less than R50 000. Moreover the results of this operational research is the sole ownership of DOH.

The following steps should be included to improve health personnel motivation and performance:

- Definition of performance management targets starting at Provincial level and followed by District level and Health Clinic level before to undergo individual staff performance appraisal.
- Periodical performance review to identify gaps and actions to be swiftly taken.
- Training on management skills such as organizational management, leadership, problem solving, motivation and clinical skills.
- Clear career structure linked with adequate salary differentiation.
- An equitable geographical staff distribution with benefits for those working in remote rural areas.
- Presence of well defined job descriptions.
- Better open communication and feedback between managers at Provincial and District level and health personnel.
- Implementation of a record system where is possible to track down type and time of training attended by each health professional to avoid duplication and to enhance timely refresher courses.

Policy focusing on enhancing performance should be implemented along with the present staff appraisal. Instead “to verify that staff are doing their job properly” the nature of performance management is more positive pointing at “to ensure that staff get the necessary help to do their job well”11, emphasising more on positive supervision and staff development than only staff control.

Policies for retaining staff such as recognition awards for better performances of health staff should be put in place by the DOH. In order to create rewards that may produce a real impact on motivation, it is critical to identify what is of value to health personnel and what is perceived fair and equitable. This could be done by carrying out a mail
A survey was conducted to ask what motivates nurses to address health staff motivation. Examples of incentives to enhance motivation include:

- Subsidies for child education (i.e., books voucher, discounted computers, etc.)
- Housing
- Sick and maternity leave more generous
- Outstanding PN’s of the month in the HC
- Time off
- Cash substitutes (gift certificates)
- Certificate of achievement

More attention should be paid by District Offices on organising quarterly workshops and review meeting regarding different Programs implemented at District level. Although increasing the salary is considered the most important incentive for job motivation and satisfaction, there are other ways of increasing morale and motivation such as appreciation for the work done and provision of appropriate equipment, updating knowledge with the latest information on health issues and sympathetic managers who take the time to listen. In each District a “Day of Excellence” can be organized where all health personnel can be gathered together to prize best performers, know each others and develop an overall sense of teamwork.

Another important issue emerging from the survey is the need to differentiate functions and salaries of the Sisters in Charge, Area Manager Supervisors and Primary Health Care Nurse. The DOH should also take in consideration a mechanism to facilitate the reintegration of the PN’s returning from overseas at the same level of seniority that they have before leaving.

To obviate qualified health staff shortage a possible solution could be the institution of a new professional cadre, similar to that already existing in other neighbouring countries. These are the Medical Licenciate or “Tecnico de Medicina” in Zambia and Mozambique, with a shorter and less demanding training covering the major components of morbidity in the country. In South Africa the role of Enrolled Nurses and Auxiliary Staff Officers could be upgraded with training courses held at Provincial level. This will cost less than PN’s formal training, the workforce will be more stable (since the qualifications are not accepted by other countries) and will make posts vacant in rural areas easier to fill. The severe shortage of health personnel concomitantly with the severity of AIDS epidemic could lessen that opposition expected from professional associations.

The study has also found grey areas where more in depth investigations are needed such as:

- Reasons for absenteeism;
- Effective training methodology to maximize retained knowledge in adult learning
- Investigations on changing staff attitude

---

10 Motivating Employees in the 21st Century, David C. Allen, 2001
Last but not least, Human Resource Development are often mistakenly equated with training. Whilst this is certainly an important component of HR management, without strategic HR planning, policy development and management, good performance in the health system will not be achieved.
References


Federation of Nurses and Health Professionals, (2001). National Survey on Registered Nurses.

Health System Trust, South Africa Health Review 2002


