School health: the challenges to service delivery in Botswana

Sheila Shaibu and **Nthabiseng A. Phaladze**

Faculty of Health Sciences, School of Nursing, University of Botswana, Gaborone, Botswana

This paper reports an evaluation of the implementation of the School Health Policy (SHP) in Botswana schools. Historically, school health originated with a concern for the number of children being excluded from school owing to communicable diseases. In 1999, the three ministries, Ministry of Health, Ministry of Education and Ministry of Local Government, developed the Botswana School Health Policy and Procedures Manual. The school health services are organized at national, district and local levels. The purpose of the evaluation was to explore how school health services were delivered in schools in Botswana. Data on current practices on school health were collected using observations, field notes and interviews of various school personnel in 27 schools located in the Gaborone district, and surrounding villages using the assessment guide in the SHP. Content analysis was used to analyse the data. Several challenges to implementing the school health policy were identified, for example, lack of human resources, lack of equipment supplies, lack of health knowledge among teachers, as well as organizational problems. This has budgetary implications for Botswana at both central and district levels. Commitment of all stakeholders in all ministries concerned would also improve the implementation of school health services.

Key words: Botswana; health services; HIV and AIDS; school health; school health policy

Received 8 March 2009; accepted 12 November 2009; first published online 28 January 2010

Background to this evaluation

Health is a major priority in Botswana and integral to the policy initiative Botswana Vision 2016 (Presidential Task Force, 1997). This policy sets down the government's vision of a healthy, compassionate population that is fully informed and contributing meaningfully to the country's development. Of central importance in achieving this vision is promoting the health and wellbeing of school children, since this group makes up one third of the total population of Botswana (Ministry of Health, 2006).

Correspondence to: Sheila Shaibu, Faculty of Health Sciences, School of Nursing, University of Botswana, P. Bag 0022, Gaborone, Botswana. Emails: shaibus@mopipi.ub.bw, sheilashaibu@yahoo.co.uk

The efforts of the government are supported by researchers such as Adamson *et al.* (2006) who view schools as organizations designed to influence and promote cognitive development and behavioral change and recognize that healthy pupils are likely to perform better at school. Good health amongst school children is therefore fundamental for producing a fully informed population contributing meaningfully to the development of Botswana.

School health services were initially introduced in Botswana in 1972 by the country's first cohort of community health nurses, who trained in India and were subsequently integrated into district health teams. In 1999, three ministries of the Botswana government: the Ministry of Health; Ministry of Education; and Ministry of Local Government; developed the Botswana school

health policy (SHP) and procedures manually. The services listed in the manual include: dental care; environmental health; health education; immunizations; health surveillance; regular physical and mental health assessments. The manual recommends that the implementation, organization and delivery of the SHP be overseen by school health committees, formed at national, district and local level, with a common goal of promoting the health and welfare of school-going children.

The SHP, as produced by the Government, is a comprehensive programme of health promotion and health education with elements touching all aspects of school life. In practice, the SHP broadly comprises four elements: 1) detailed health assessments of pupils in their first and final years at primary school; 2) an immunization programme; 3) a programme of health education aimed at teachers and pupils; and 4) a detailed assessment of the school environment. Information about each pupil is supposed to be recorded on individual pupil record cards maintained within the school. The card documents and records immunizations and mental and physical health assessments conducted between grades 1–10 at age 7–12 years at primary school and 13–15 years at junior secondary school. This card is designed to be transferred with the pupil if and when they move from the school.

Within each area the policy specifies key indicators. This approach is supported by St Leger (2000) who suggests that health indicators be identified to foster understanding of the objectives, processes and outcomes of both the health and education sectors. Indicators, he further says, will provide a better understanding of the factors, which influence a young person's health capacity and status.

The SHP is, therefore, well supported by the current literature and to be effective it must have adequate resources, the commitment of all stakeholders and effective communication at all levels of implementation. In reality, however, the implementation of SHP within Botswana has been fraught with difficulties, with many ongoing deficiencies in the school health services. For this reason, we wished to explore at first hand how school health services are currently being delivered in Botswana; what is the current practice, to reflect on some of the factors that have limited the success of the SHP; and determine if solutions are possible.

Methods of this evaluation

The evaluation of school health services was done over a period of 28 months, from January 2004–April 2006, by two different groups of observers.

Firstly, two faculty members from the University of Botswana's School of Nursing led the evaluation. The two faculty members were both qualified to PhD level. They have both specialized in community health nursing and nursing administration.

The faculty members were supported in the evaluation by three MSc students and approximately 50 fourth year Bachelor of Nursing Science (BNS) students from the University of Botswana School of Nursing who were doing school health as a part of their community health nursing practicum in the Gaborone district, South East district and Kweneng district. Students were attached to different local government clinics where they did outreach work in schools for a school health attachment for a period of 14 weeks. They were assigned in small groups of 5–10 for undergraduates and 1–4 for MSc students. Students were given a guide for writing the reports. The SHP acted like a checklist because it specified all the critical activities to be addressed in the program.

Setting and schools visited

The evaluation was conducted by observing school health activity in a total of 27 primary (7–12 year old) and junior secondary schools (13–15 year old) in Gaborone district, South East district and Kweneng district in Botswana. The schools observed were in the city of Gaborone and in the villages of Mogoditshane, Nkoyaphiri, Mmopane, Gabane and Ramotswa. These are all semi-urban villages outside the capital Gaborone.

Data collection and analysis

In each school, the two faculty members observed activity. The MSc and BNS students joined the existing school health team and participated in all aspects of school health activity (health assessments of grade one pupils, immunizations, health education and environmental inspections). In some schools, where there were no existing school health teams, the faculty members took responsibility for the supervision of school health services.

The data presented in this study were collected using the school health assessment guide in the Botswana SHP. Data were collected using field notes, where faculty members and students had recorded their practical experiences and reflections on delivering school health in each particular care setting. In the case of students, the field notes took the form of a report prepared for their assessment for the clinical attachment. In some cases we also conducted interviews of school personnel who included principals, teachers and cooks. Interviews were conducted face to face and were recorded using field notes by both faculty and students. In total, 20 interviews were conducted with school personnel.

Information about school health was obtained from Gaborone city council. The two nurses responsible for school health in Gaborone were visited by the faculty members in their offices in Bontleng and extension two clinics. Discussions about the school health program and the SHP followed and time for the interview was scheduled. These officers shared their knowledge and experiences during the interview and during the expanded immunization program at the different schools. So, the interviews were done during actual school health activities as well as in the officers' offices.

The school health coordinator of the South East District Council was also interviewed as having overall responsibility for school health in that district. The Kweneng school health program was coordinated by a group of nurses from neighboring clinics. The bulk of the schools (19) were in the Gaborone district. Information was collected using the school health guide in the SHP and field notes and observations were made. None of the interviews were tape-recorded. Other individuals who were interviewed included cooks, teachers and principals of schools.

At the conclusion of the 28 months observation period the two faculty members collected together all of the observational field notes, the student reports and the interview field notes and subjected them to content analysis. The situation in each school was described, with comparisons and contrasts being noted. We sought to summarize what had been observed throughout the exercise, reflect on problems with the implementation of SHP and reflect on potential solutions.

Results of this evaluation

Practical issues around delivering the SHP

Conducting health assessments (first and final year pupils)

The researchers observed health assessments being conducted in schools in far from ideal circumstances. For example, due to the lack of private space, individual health assessments on pupils were being performed in crowded classrooms in front of other pupils. Physical examinations that required privacy such as screening for scoliosis and other conditions were simply not done. This situation also precluded more intimate examinations should these be necessary. Furthermore, many classrooms had broken windows with no heating system.

Some successes were identified, however, and students with several conditions (Table 1) were generally being effectively identified and referred to health facilities for further assessment and management. However, the utility of mass screening needs to be supported by social and health contexts (DeBell, 1998). In Botswana, while it seemed important, it has not been supported by research.

Delivering health education

As part of the evaluation the researchers participated in and supported the school health programme in selected primary schools. Examples of this were participation in educational activities based around HIV and AIDS, personal hygiene, child abuse and substance abuse. We observed that many students had many questions for us, particularly on reproductive health issues, and there would seem to be a clear need for such information in Botswana's schools. We also

Table 1 Result of a typical session of 122 classroom health assessments done by faculty and students in Nkoyaphiri

Condition	Number of cases identified	% of pupils affected
Dental caries	12	9.8
Ringworm	5	4.0
Tonsillitis	4	3.2
Septic scores	6	4.9
Ear infections	6	4.9

noticed that pupils seemed to ask more questions in the absence of their teachers, which has clear implications for the way in which the health education on potentially difficult topics should be delivered in the future. The main barriers to providing effective health education that we observed were time, lack of age-appropriate teaching materials and the lack of space. In some instances, where there were no halls to accommodate large classes, students were taught under the shade of a big tree.

Assessing the school environment

In general terms, the researchers found that the environmental health assessment was the most neglected aspect of the SHP. The vision of the SHP is that an environmental health assessment is conducted every year with problems being addressed in a timely manner. An assessment of the school environment at several schools, however, revealed several major problems.

Most schools relied on students for cleaning of the school grounds. In some schools, the school grounds were full of plastic papers and during the rainy season the grass was very long, potentially harboring snakes and rodents. In some schools, the numbers of toilets were few compared to the number of pupils in the school. The Botswana national school health policy stipulates the accepted ratio of toilets to the number of students as 5 : 76–100. In many schools the actual ratio was much lower. Toilet paper was generally not provided in toilets, although sometimes there would be a roll of toilet paper kept in the classroom. Toilets were usually filthy, because cleaning was frequently delegated to the students without supervision. Some pupils were not even provided with gloves for cleaning toilets. Where gloves were provided we observed occasions of pupils afterward filling them with water for play. On the other hand, some districts provided boots and gloves for cleaning or provided paid staff for the task. Hand basins were generally not available in toilets, particularly in schools where pit latrines were in use. In some schools, hand-washing facilities were available, but in some cases this consisted of a large communal bowl of infrequently changed water placed outside the classrooms. Soap was also frequently unavailable.

The SHP stipulates that kitchen staff should have an annual physical examination. In many cases, this condition was not being met. Other problems were incomplete or dirty uniforms, poor personal hygiene among catering staff and having the school kitchen in proximity to toilets.

Taken together this clearly indicated that this aspect of the SHP, the assessment and maintenance of a healthy school environment, is being neglected in many of the schools that we observed.

Barriers for implementing the SHP

Implementation and awareness of SHP

In Gaborone and Ramotswa, the students (MSc and BN) were attached to the school health team, but in a number of schools in the Kweneng district (in Mogoditshane, Nkoyaphiri, Mmopane and Gabane) there were no school health teams in existence. In these cases the students delivered the school health services under the supervision of faculty members. In these communities, once the students and faculty completed their clinical block, school health services generally ceased.

This differing implementation of school health between districts in Botswana has been previously described and is evidence that there are problems with getting the SHP in place everywhere, a fact that became patently obvious during a national meeting of key stakeholders in 2006. A study of school health services was conducted by the Ministry of Health in 2005. Out of the 24 health districts, 13 districts were surveyed and of these seven did not have a school health programme (Global School-based Health Survey, 2005).

We found that many teachers, families and communities are not aware of the SHP. For example, at one meeting in Mogoditshane that was held with parents and teachers, both groups indicated almost total ignorance of the SHP. In another case, in Mogoditshane, teachers similarly appeared to know nothing of the SHP. To address this, a workshop on the SHP was run for those teachers, at which copies of the SHP were also distributed.

Co-operation within schools

From our experiences and observations in most districts where a school health service was being delivered, the school health teams usually comprised nurses only. Other professionals, most

notably environmental health officials, and dental health technicians were absent in most districts. This is, disappointing, since the manual recommends that all of the constituent services of the SHP be implemented by a multidisciplinary team (Ministry of Health, 2006).

We also found that in practice in many cases, health issues are considered the realm of the school nurse by teachers, leading to low participation by them in the school health programme. For example, teachers are expected to fill in the children's school health cards at the beginning of the academic year in order to provide data regarding the child and the immunization status. However, in some cases, this was not done. Some teachers claimed that they had a lot of work to do while others maintained that it was the nurses' duty. This led to a further problem with pupils transferring schools not having the card sent on in a timely manner. This could be particularly problematic for children of around six or seven years of age as there would be no evidence of whether they had been immunized against polio and diphtheria at the previous school. This lack of understanding of roles further contributes to poor implementation and an additional problem is that school health is excluded from the budget during financial planning by teachers because many do not see school health as an integral part of the school curriculum.

Lack of health knowledge amongst teachers

A related problem was that in some cases we observed a clear need for health education for teachers. In one particularly striking example at a particular school students had all been asked to bring their own cup for drinking water, as one pupil was HIV positive. Hence teachers as well as pupils may well be in need of appropriate health education (Brooks *et al*., 2007) and the current situation where education is entirely focused on pupils may need to be re-thought.

Human resource constraints

The researchers observed that the nursing officers assigned to the school health in Botswana are typically overwhelmed by the number of pupils and students they serve, as illustrated above. Another particular problem is the fact that most personnel currently involved in school health work in Botswana have not been specifically trained for that role. Currently, in most cases, school health work is being conducted by registered nurses with no specialised training or background in school health and the particular problems and challenges inherent in this work. Sometimes the conditions they come across in schools require a particular understanding of childhood diseases and an adequate knowledge of systems, for example, referral mechanisms. One potential solution to this problem is to recruit and train nurses in school health so that they can provide the critical thinking needed for the assessment of the problems of the current situation in Botswana and support the identification of appropriate solutions (Hoyle *et al*., 2008). Yet, this could be difficult given that since the inception of a minor in School Health offered at the University of Botswana, fewer than 10 students have taken this course and none of them work in school settings.

Challenges in central organization

Organizational problems

At the district level, the researchers observed in Gaborone that the programme was left to two nursing officers who could barely cope with the workload, with very little or no support from their supervisors. For example, some schools have a roll of over 600 pupils and when one nurse is off sick, only one nurse is available for the whole school. The district of Gaborone has 29 public schools and more than 13 private schools; an overwhelming challenge for two nursing officers.

Discussion

In reality, although the school health programme was established more than three decades ago, the implementation of the SHP has been beset by difficulties. Local problems, compounded by poor communication amongst the three key national ministries, means that implementation is patchy at best. In some districts, no school health programme is in place at all, and in other districts, no identifiable school health coordinator has been appointed. Overall, implementation of the school health programme has not been comprehensive, with the focus being more on expanding the immunization programme and introducing some

limited screening and surveillance programmes, to the particular detriment of other services, particularly health education and environmental health (School health team, Ministry of Health, 2009, personal communication). We have been able to witness at first hand how poorly the elements of health and environmental health have been realized by the SHP.

We believe that several key factors have limited the implementation of the policy, operating at several levels. Nationally, although the roles and responsibilities of the Health Ministry are clearly defined in the policy, the roles and responsibilities of the other two ministries (local government and education) remain less clear. This has created confusion amongst policy makers, practitioners and the clients they serve. The lack of role clarity has weakened the programme and in the process deprived pupils of the health care services they badly need. That communication among the three ministries is suboptimal is evidenced by the fact that meetings of the government's school health committee are not always attended by representatives of all the three ministries (School Health Meeting, April 2006). This situation is problematic. Hoyle *et al.* (2008) argue that effective leadership is necessary at multiple levels in a school health system. We agree, and have observed that in the current national situation, although there is political stability at the highest levels, means that the already overstretched district organization is not receiving strong leadership and in consequence is unable to provide strong leadership to those working at the local level. We would argue strongly for coordinated national support for interdisciplinary health teams in Botswana who, in turn, must provide leadership to health workers in the field, so that instances like those detailed above are avoided, and positive change can be implemented and sustained.

This lack of national and district leadership is compounded at local level by lack of human and physical resources, knowledge of the SHP, stakeholder commitment and communication. As Hoyle *et al.* (2008) argue, a health promoting school should be a place where all members of the school community work together to provide students with integrated and positive experiences and structures which promote their health. Before this can happen we believe that the way in which the policy is organized and resourced at every level needs to be carefully rethought. We also believe that the academic nursing community in Botswana has much to contribute to this process.

Conclusions and Recommendations

At present school health remains a challenge because of human resource constraints, poor communication between the three ministries and inadequate leadership in this area. Given this situation there is need for research on school health implementation to enable Botswana to provide evidence based school health services. Coordination of school health services throughout all districts, and availability of all required health personnel necessary to implement the school health programme, is essential. Above all, commitment of all stakeholders would go a long way in ensuring the successful implementation of school health services.

References

Adamson, G., Mcaleavy, G., Donegan, T. and **Shevlin, M.** 2006: Teachers'perceptions of health in Northern Ireland: reported differences between policy and non-policy holding schools. *Health Promotion International* 21, 113–20.

Brooks, F., Kendall, S., Bunn, F., Bindler, R. and **Bruya, M.** 2007: The school nurse as navigator of the school health journey: developing the theory and evidence for policy. *Primary Health Care Research and Development* 1–9.

DeBell, D. 1998: The changing role of school nursing within health education and promotion. *Health Education* 98, 107–15.

WHO. 2005. Global school – based health survey. *Botswana FactSheet*. 1–3. Geneva: World Health Organisation.

Hoyle, T.B., Samek, B.B. and **Valois, R.F.** 2008: Building capacity for continuous improvement of health-promoting schools. *Journal of School Health* 78, 1–8.

Ministry of Health. 2006: *Botswana national school health policy and procedure manual*. Gaborone, Botswana: Government Printers.

Presidential Task Force. 1997: *Long term vision for Botswana. vision 2016*. Gaborone, Botswana: Government Printer.

St Leger, L. 2000: Developing indicators to enhance school health. *Health Education Research* 15, 719–28.