

Health-promoting schools as a service learning platform for teaching health-promotion skills

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Background. Health sciences students have traditionally been taught their practical skills in community health facilities. However, clinics and hospitals are not necessarily ideal settings for teaching students health-promotion skills.

Objective. To explore health-promoting schools (HPSs) to teach Stellenbosch University (SU) undergraduate dietetic students health-promotion skills.

Methods. In this descriptive, cross-sectional study, students completed structured reflective journals and conducted interviews with teachers. The chief professional nurse interviewed the school principals.

Results. The students were positive about HPSs, but only fully understood its implementation and practice after entering the school setting. They felt that they could play a role in increasing its efficacy. The teachers were positive about the initiative and thought that they had adequate knowledge to take it further, but were open to gaining more knowledge and insight. Teachers and students had similar views on the role that students could play in HPSs, including educating learners, parents and teachers on health and nutrition, assisting with growth monitoring and promotion, developing educational tools, obtaining various resources for schools, planning menus, budgeting for meals, and growing vegetables. Resources required by the schools could best be addressed by a team of healthcare professionals in collaboration with government departments and with community support.

Conclusion. HPSs offer extensive opportunities where SU undergraduate dietetic students, and possibly other healthcare profession students, could serve the needs of communities while learning and practising health-promotion skills.

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We live in a world of problems which can no longer be solved by the level of thinking that created them. – Albert Einstein



Frenk *et al.*^[1] highlighted that professional health education has not kept pace with current global health challenges. Fragmented, outdated and static curricula were largely to blame for producing ill-equipped graduates. Re-design of professional health education is therefore necessary and timely.

Service learning is an educational method enabling students to learn and develop through active participation in thoughtfully organised service experiences that meet actual community needs.^[2] Howard^[2] identified three criteria for service learning: a relevant and meaningful service provided to the community; enhanced academic learning for students; and a structured opportunity for reflection. Bringle and Hatcher^[3] pointed out that students should reflect on activities to gain a deeper understanding of module content, gain a broader appreciation of their discipline, and enhance a sense of personal values and responsibilities.

Traditionally, medical schools attempted to meet the bulk of their students' practical learning outcomes in healthcare facilities. In South Africa, the burden of disease and the focus on strengthening of the primary healthcare (PHC) service delivery in the country necessitate a move away from curative services to preventive approaches, with health promotion at the core, now more than ever before. This strengthening includes a shift from health facility-based services to community-based services. However, clinics and hospitals are not necessarily ideal settings for health promotion, as the target audience may not be ready to receive information and learn

new skills, and waiting areas are often overcrowded. Therefore, these settings are not conducive to teaching students health-promotion skills. The question arises where health sciences faculties should place their students to teach them the necessary skills and empower them to fully understand and perform health promotion.

From the perspective of a settings-based approach to health promotion, schools could be an ideal service-learning platform, considering that children constitute a large population and schools are accessible over prolonged periods of time. Schools are recognised places of learning, with existing structures and systems that provide opportunities for the integration of new knowledge and skills into the regular curriculum in an acceptable and a cost-effective manner. Furthermore, the informal or 'hidden' curriculum of a school can significantly influence learners' attitudes and behaviours. Schools have the potential for accessing nearly the entire population of young people, including minority and disadvantaged groups.^[4] Learners can be reached at an influential stage, i.e. childhood and adolescence, and a school is a relatively sheltered learning environment. In the school setting education and learning are the norm and the wider community can be influenced, i.e. school personnel, families and community members.

In 1995, the World Health Organization (WHO) launched its Global School Health Initiative of health-promoting schools (HPSs). An HPS is defined as 'a school that is constantly strengthening its own capacity as a healthy setting for living, learning and working.'^[5] The foregoing

initiative aims to advance the health of the community by using the school as a platform for health promotion and education. This may ultimately improve the health of school personnel, families, learners and the wider community, as nutritional education and promotion is a cardinal element in an HPS.^[5]

According to Waggie *et al.*,^[6] many educators do not initiate or sustain the concept of HPSs. It is viewed as an additional task by which they are not assessed, and which is the duty of the Department of Health and Welfare. The WHO, however, states that in every country collaboration between the Department of Education and Department of Health is crucial for the HPS concept to succeed. Although the health sector has a longstanding relationship with schools, usually in screening and treating learners – while occasionally engaging in preventive measures^[7] – the health and education agendas of schools are often in competition with each other. Schools' agendas are filled with educational material and teachers often struggle to find time to cover health topics.^[8] The literature suggests that school health services could be more effective if attention is paid to working collaboratively on partnerships and if school health services are integrated with other components of an HPS. More successful partnerships are possible, but need both the education and health sectors to work more closely together to develop organisational and interventional strategies consistent with the needs of the school community.^[7]

The newly launched South African Integrated School Health Policy (ISHP) was developed jointly by the Department of Basic Education and Department of Health. This policy recognises the HPS concept as a key component of its programme and focuses on the importance of nutrition.^[9]

Objective

BSc Dietetics students at Stellenbosch University (SU) follow a 4-year undergraduate course. During their internship, 4th-year students do a 6-week Community Nutrition rotation in an urban setting. In deliberation with the Western Cape Government: School Health Services, a service-learning agreement was formulated to include a week-long HPS exposure in the students' community experience. This exposure includes assisting the school health team (consisting of a chief professional nurse, a professional nurse and an enrolled nurse) by weighing and measuring Grade 1 learners as part of routine school health screening to assess early indications of growth problems. Thereafter, students interpret the anthropometry and suggest appropriate action, where applicable. They perform a health education and promotion session with Grade 1 learners as well as an advocacy presentation on the dietetics profession to secondary school learners.

The aim of this study was to assess the experiences and opinions of 4th (final)-year dietetic students with regard to HPSs as a setting to learn about health promotion and to identify opportunities in which they could play a role in optimising the HPS initiative. Furthermore, knowledge, attitudes, beliefs and practices (KABP) of teachers and school principals regarding the HPS initiative and the role of nutrition in health were assessed.

Methods

Study design and population

A descriptive, cross-sectional study was conducted in the western border area of the Cape Town City District, Western Cape, South Africa. The study population consisted of 4th-year SU dietetic students ($N=17$), teachers ($N=30$) and school principals ($N=10$) from 10 selected primary schools in a low socio-economic community, who consented to participate.

Data collection methods

Reflective journals. Students were requested to write structured reflective journals regarding their experiences during the week of service learning in a school setting.

Questions students had to answer, or statements they had to consider in the reflections, included: their experience of the platform and how this influenced their thoughts/perceptions regarding the school setting as a service-learning platform for student training; the role they could play in the school environment; and whether the school(s) they visited required any additional resources to implement the HPS initiative. They could also share additional thoughts they considered to be valuable.

KABP survey. A questionnaire used for the structured interviews with teachers and school principals consisted of 12 open-ended and three closed-ended questions addressing the following aspects:

- Knowledge of the concepts of healthy nutrition and malnutrition and how these can be addressed in the school and community settings.
- Attitude towards and knowledge about the HPS initiative.
- Beliefs regarding health-related knowledge and training needed in this regard.
- Practices to improve their schools' health knowledge.

The students acted as field workers and interviewed the teachers, while the chief professional nurse (co-investigator) interviewed the school principals. Students were standardised in terms of 'prompts' for the interviews.

Pilot study

A pilot study was conducted in one of the schools in the study area to test the face and content validity of the questionnaires. These results were excluded from the study data. Minor adaptations were made to the questionnaires after the pilot study.

Data analysis

Qualitative data from the reflective journals and responses to the open-ended questions were regarded as transcribed text. The text was coded manually by two researchers to identify themes. Themes were induced and established into units of meaning or codes. The data were read and re-read and notes were made to illustrate links between different themes and codes. The two researchers compared their findings and discussed different interpretations to reach consensus.

Ethical and legal aspects

Ethics approval to conduct the research was obtained from the Health Research Ethics Committee of the Faculty of Health Sciences, Stellenbosch University (Ref.: N10/02/039).

Participation was voluntary and all participants were required to provide written informed consent before the study. Coding of each questionnaire ensured anonymity and confidentiality of the participants.

Results

The results were divided into two broad themes, i.e. experiences and opinions of undergraduate dietetics students; and knowledge, attitude and behaviour of the teachers and school principals. Within the themes, seven categories emerged: (i) a positive attitude to HPSs; (ii) the students' role in HPSs; (iii) community outreach; (iv) resources required (common themes); (v) importance of service-learning experience (students); (vi) suitability of

platform (students); and (vii) staff knowledge levels. There was an overlap of four of the categories in the two themes.

Experiences and opinions of undergraduate dietetic students

The students were positive about the HPS initiative, even before entering the schools, but only fully understood its implementation and practice when they worked in the school setting and engaged with schools that had been exposed to the initiative.

'I think that this last week was a brilliant learning experience for us. Only once health promotion in schools was seen in practice did I fully grasp the theory of it.'

'Without this experience I would never have properly understood health promotion this well, thus I feel that it is an amazing platform for student training.'

'This experience made me realise the crucial need for ... taking part in health promotion above just learning of the concepts.'

The students were of the opinion that schools are a good platform to instil nutritional concepts and basic health skills in young children, as the learners are an available and receptive target audience. They enjoyed the interaction with the eager learners and sensed the beneficial effect of health promotion on the learners, their families and the broader community.

'This [exposure] proves once again to us students that there are ways to make changes in society.'

'The exposure to health promotion in schools made me realise that us as healthcare workers have to engage in the community and help them to help themselves.'

The students felt that they had a role to play in increasing the efficacy of this initiative and suggested becoming involved in educating learners, parents and teachers in health and nutrition. Suggestions were made about how they could assist with growth monitoring and promotion, developing educational tools for use in the classrooms, planning menus, budgeting for meals for the school feeding schemes, advising on tuck shop items, and lending a hand with training in vegetable gardening.

'We can design and create teaching tools regarding healthy lifestyles and nutrition and we can teach the children in creative ways.'

'I think our role with regard to the weighing and measuring helps with the identification and the assessment of the school's nutritional status. The information that we provide can help with the early prevention measures ...'

Resources needed by the schools, as noted by the students, included: a dietician who visits the schools once a week, nutritional education tools, funds, sports grounds, an equipped kitchen, first-aid kits, volunteers and proper sanitation.

KABP of teachers and school principals

Teachers described HPSs as a concept applied in schools where healthy eating habits and lifestyles are promoted, including the physical, mental and emotional well-being of learners. The link between a hungry child and subsequent poor school performance was also mentioned.

'You can't teach a hungry child.'

Teachers had a basic understanding of the concept of healthy nutrition, but struggled to describe malnutrition correctly.

Overall, the teachers were positive about and supported the HPS initiative. Factors contributing to their attitudes included remarks about

well-fed children concentrating better, improving school facilities and personal hygiene, producing vegetables in school gardens, providing support to poor families and increasing children's self-esteem.

They felt that they had enough knowledge to apply the HPS initiative, but were open to gaining more knowledge. A few teachers agreed that they lacked knowledge about the initiative. Areas in which training was needed included first aid, healthy living, intervention strategies from specialists with health knowledge and nutritional requirements of children.

Teachers responded that dietetic students have a role to play in HPSs by assisting with growth monitoring, alerting parents to nutritional problems, educating learners, teachers and parents about nutrition, as well as developing nutritional education tools.

'The students' presence makes the children feel special and helps the school healthcare team's work load to be lighter.'

Resources needed, as identified by teachers, included first-aid, screening and sports equipment, nutritious food for the National School Nutrition Programme (NSNP), vegetable seeds, and health resources. Financial assistance, a designated plate and suitable cutlery for each child, and volunteers to assist with food preparation for the NSNP were also listed.

Teachers believed that the HPS initiative could improve the nutritional status of their community. Examples were addressing parents on such issues at parent-teacher meetings, and vegetable gardens and soup kitchens run by the school to assist the vulnerable and elderly in the community.

Discussion

The need to shift the healthcare focus in South Africa from curative to preventive, with health promotion at the core, has been expressed. The recently launched ISHP envisages optimal health and development of school-going children and the communities in which they live and learn.^[9] This vision supports the necessity to strengthen the HPS initiative in the country. In an attempt to align the SU BSc Dietetics Community Nutrition curriculum with actions required from these relevant and updated policies, the authors investigated the school setting as a location where future dietitians could be taught the necessary skills to perform health promotion.

In this study the students indicated that they only fully understood the HPS initiative after they had been exposed to it. This illustrates that practical exposure to real-life health promotion scenarios should be an essential element of the professional health education curriculum. By observation and reflection students identified and reported concrete examples of health-promotion activities where they could become involved in furthering the initiative.

Dharamsi *et al.*^[10] explored the international service-learning experience of three medical students and the value of critical reflection. In their study, students kept reflective journals and wrote essays including detailed accounts of their experiences. Students noted an increasingly meaningful sense of what it entails to be vulnerable and marginalised, to create a heightened level of awareness of the social determinants of health and the related importance of community engagement, as well as developing a deeper appreciation of the health advocacy role and key concepts embedded within it. The reflective journals completed by the dietetic students in the study indicated that the criteria for service learning can be met when utilising the HPS as a service-learning platform.^[2] The lecturers' response to the need for providing students with the opportunity to improve skills building in preventive healthcare therefore proved to be of value.

Ridge *et al.*^[8] highlighted an array of changes that take place in HPSs. These include changes for the learners (e.g. increased awareness of health, happier learners who feel cared for, improved learning outcomes and health practices); changes for the school (e.g. proactive health strategies, improved staff morale, improved health and physical environment); and changes in community links (e.g. better networking, increased involvement and satisfaction of parents). The health-promotion skills acquired by students in the study included early health assessment for preventive action, and nutritional education and promotion in schools. The students and school staff could identify more opportunities where the students' input could positively contribute to the improvement in the school nutritional environment, ultimately resulting in further healthy lifestyles in the school community. The reciprocity established between the school health service team, students, teachers and learners through this service-learning agreement can partially explain the overall positive attitude noted by students and teachers towards the HPS initiative.

A systematic review by Wang and Stewart^[11] concluded that there is a need for more professional training for teachers in the HPS approach, as well as more qualitative studies to assess future school-based nutritional promotion programmes.

An evaluation of HPSs in Hong Kong by Lee *et al.*^[12] found that there was insufficient staff training in health promotion and education. Teachers can be perceived as role models for students and are central to a school's functioning; hence interventions involving students may potentially change the health-risk behaviours of teachers. Schools also provide a valuable link with parents and the community. Involvement of parents, caregivers and local community members can act as strong reinforcement and support for strategies implemented in schools.^[4] In the schools included in this study, the teachers and school principals could identify their own shortcomings and needs to optimise the HPS initiative. They expressed their willingness to learn more and voiced concrete ideas of how the school community could benefit from the students' involvement. Furthermore, teachers were willing to work with the students and were eager to learn more.

Individuals and communities often have complex health needs and typically require professional inputs from more than one discipline to address issues regarding their health.^[13] In 2001, a recommendation by the Institute of Medicine Committee on Quality of Health Care in America suggested that healthcare profession teams can best communicate and address these complex and challenging needs.^[14] The resources needed by the schools, as identified by the students and teachers in this study, should be addressed by such a team. The HPS platform furthermore lends itself to establishing opportunities for intraprofessional learning and teaching. With concerted efforts from different sectors (e.g. medical, dental, occupational therapy, physiotherapy, speech and audiology, nursing and dietetic students, as well as trans-faculty involvement), schools could be supported to access more resources and receive expert advice on best practice intervention strategies to further the health and well-being of the school community. This interprofessional approach may allow sharing of expertise and perspectives towards the common goal of restoring or maintaining an individual's health and improving outcomes while combining resources.^[15]

Conclusion and recommendations

The new ISHP embraces a comprehensive approach to ensure the health of all learners. Higher education institutions have a responsibility to engage with communities and assist in addressing their needs. Service learning is one way of fostering such engagement in a structured, practical way. An HPS service-learning agreement offers abundant opportunities for undergraduate SU dietetic students for health-promotion activities. This exposure should be extended to students of other healthcare professions.

Limitations

Using the students to conduct the interviews with the teachers as well as using reflective journals as a data collection instrument, could have led to incomplete data gathering owing to their limited experience in conducting research.

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