Journal of Taibah University Medical Sciences (2016) 11(6), 559–565

Taibah University

Journal of Taibah University Medical Sciences

www.sciencedirect.com

Educational Article

Extending the scope of interprofessional education: Integrating insights from policy, management and economics for improved health outcomes

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Received 24 August 2016; revised 7 October 2016; accepted 9 October 2016; Available online 23 November 2016

الملخص

تكشف هذه الدراسة عن إمكانية إحداث ابتكارات في تعليم الصحة العامة عن طريق رسم رؤى من التخصصات المتعلقة بالاقتصاد, والسياسات والإدارة لتطبيقها في قطاع الرعاية الصحية. إن العمل مع الخبراء في هذه التخصصات يمكن أن يعزز من فهم عمل النظام الصحي والتحسينات المطلوبة لنتائج صحية أفضل. والاعتماد على مجال واحد أو انحراف مسار الموارد في بعض الجهات قد لا يؤدي إلى تحقيق الهدف المنشود من الرعاية الصحية. من الان فصاعدا, فإن الجهود الشاملة المتكاملة لمعالجة الأسباب الجذرية لمختلف المشاكل الصحية مع التركيز على الحوكمة الجيدة هي مهمة. تعرض هذه الدراسة مجموعة من الخيارات لتقديم تقنيات حديثة لتصميم وتطوير المناهج بناء على رؤى من مختلف التخصصات للاقتصاد, والسياسات والإدارة. وتتضمن أنشطة التعليم والتعلم المقترحة والمبتكرة مشاركة الطلبة في حوارات السياسات من خلال نظام الإدارة لشبكات السياسات الصحية؛ أنشطة حقلية لتعزيز روابط صناعية طويلة المدى، وفرص مؤسسية للطلبة للتفاعل مع الطلبة في البرامج ذات الصلة من جامعات عالمية أخرى في الدول النامية والمتقدمة، وإشراك الطلبة للحفاظ على سجلات الزيارات والدروس المستفادة للاستخدام مستقبلا لتطوير التعليم المتداخل بين التخصصات. ومن المفترض أن التربية النموذجية لتدريس دورات الصحة العامة منفصلة دون تدخل مع الخبراء/ الطلبة من المجالات المتنوعة قد تنتج المفكرين الروتينين فقط بدلا من قادة الرعاية الصحية, ومفكري النظم والمبدعين.

الكلمات المفتاحية: الصحة العامة؛ اقتصاديات الصحة؛ نتائج تعلم الطلبة؛ التعليم؛ المنهجيات؛ استراتيجيات التعلم المبتكرة؛ التعليم المتداخل بين التخصصات

Abstract

This study explores the potential of bringing innovations in public health education by drawing insights from the specialised disciplines of Economics, Policy and Management for their applications in the health sector. Working with subject experts from these disciplines can enhance the understanding of a working health care system and the necessary improvements for better health outcomes. Sole reliance on one field or skewed allocation of resources in certain areas may not result in achieving the desired health targets. Henceforth, overall integrated efforts for addressing the root causes of various health problems with an emphasis on good governance are important. This study presents a range of options for introducing new techniques in the curriculum design and development based on insights from the diverse disciplines of Economics, Policy and Management. The proposed innovative teaching and learning activities include students' involvement in policy dialogues through the departmental setup of Health Policy Networks (HPN); field activities to foster long-term industry linkages; institutional opportunities for students to interact with students of the related programmes in other international universities from the developing and developed countries; and the engagement of students to maintain records of visits and lessons learned for use in future interprofessional development. It is postulated that the typical pedagogy of teaching public health courses in isolation without interaction with experts/students from these diverse fields may only produce routine thinkers instead of healthcare leaders, system thinkers and innovators.

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Peer review under responsibility of Taibah University.

Production and hosting by Elsevier

 http://dx.doi.org/10.1016/j.jtumed.2016.10.013

Keywords: Health economics; Innovative learning strategies; Interprofessional education; Public health; Student learning outcomes; Teaching methodologies

Introduction

The field of public health concerns all aspects of promoting and protecting health. Over the years, research and development activities in the field of public health have focused mainly on prevention activities, identifying causes of diseases, community involvement, population-based health determinants and health system improvements through commitment and policy-making.[1,2]

Research conducted by the World Health Organization,[3,4] the World Bank,[5] and Hanson et al. (1994)[6] reveal the significance of the socio-economic determinants of health. The evidence revealed that countries such as Sri-Lanka and China did manage to improve health outcomes (reduced infant/child mortality rates in the 1990s), despite being low-income countries, which was made possible through better female education, female economic empowerment and a woman's involvement in health decision-making.[3,5] With an ever-increasing population, technological developments and globalisation, healthcare costs are on the rise, giving birth to issues such as access to adequate care for all, affordability and health disparities. As resources now have to be divided to bigger masses than before, there are growing concerns about scarcity that will demand wise allocation, further generation and more equitable and fair distribution of resources to meet healthcare demands. Not all these issues will be addressed through medical/healthcare alone; instead, health systems will require improvements in the structure, functions and policies for health.

Current day challenges of globalisation, population diversity, health care finance, universal healthcare coverage, and governance can be guided by insights from disciplines such as Economics, Policy and Management. They also relate to public and health policy priorities in and across countries. The inter-connected nature of the issues faced by the health sector requires that various tools and techniques are taught, learned and adopted from these disciplines for successful applications in the health sector. The potential for innovation in public health curriculum design appears to be ample with expectations of significant improvements in the student learning outcomes. The potential needs to be explored for innovations in Public Health curriculum, both at the undergraduate and postgraduate levels. As many universities across the globe award degrees in different specialisations, the scope of integrating certain disciplines for the common cause of resource saving and health improvements needs to be explored. CAIPE (1997) defined "interprofessional education where students learn from and learn with students of two or more professions … for the purpose of cultivating collaborative practice".[7] WHO (2010) defined "collaborative practice where multiple health workers from different professional backgrounds work together… and allows to engage any one whose skills can help achieve health goals".[8] It is in this backdrop, that the present study explores the potential of integrating insights from multi-disciplines and proposes a framework that may initiate debate on how to revise public health curriculum whereby public health students can "learn from" and "learn with" students of Economics, Management and Policy for the purpose improving health outcomes. Review of the study plans/curricula available online for some of the Universities in the Gulf region reveal that undergraduate and postgraduate public health programmes do offer related courses, but how far they integrate insights and provide room for collaborative practice is unclear or not highlighted.[9–13]

Materials and Methods

Most of the works in curriculum theory developments took place in the US and Europe with emphasis on different concepts in different eras. MacDonald (1971) defined curriculum as a "fundamental unit with which to build conceptual systems, relating either to rational decisions, action processes, language patterns, or any other potential unit that has not been agreed upon by the theorists".[14] Kliebard (1989) defined curriculum theory as "concerning values".[15] Pinar (2004) defined "the contemporary field of curriculum theory as the effort to understand curriculum as a symbolic representation".[16] Tedesco and Amadio (2014) focused on the need for "continuous revisions/innovations in the curriculum".[17] Table 1 summarises the contribution of different schools of thought in curriculum theory and how contemporary developments required revisions and innovations to address "why", "what" and "how" of education.

Different schools of thought emphasised specific theoretical underpinning for curriculum developments and learning outcomes overtime. The focus varied from rote memorisation to a more advanced understanding of the socio-cultural dynamics and the need for science and technology. This paper proposes to incorporate in public health curriculum, measures to enhance human welfare by exploring diverse factors that contribute to attaining this goal. Students need to understand, comprehend and analyse situations influencing health; understand factors that contribute to health inequality or unequal access to healthcare; and be familiar with policies and strategies that promote health. These goals can be achieved by adopting interdisciplinary and multidisciplinary approaches for teaching public health. The following gains can be expected (i) resource saving – resources can be pooled and expertise shared across disciplines (ii) improved student learning through innovative interdisciplinary learning strategies and training students to become future leaders, analysts, professionals and health managers. Student motivation can be enhanced through case study discussions chosen from real life situations and can be encouraged to reflect on their probable solutions. Such interdisciplinary activities can inspire critical thinking and raise questions in young minds that need expert guidance. Some recommendations for future

Table 1: Curriculum development theories overtime: (major work carried out in the US and Europe).

Source: "E F Pinar (2004)".[16,27]	Curriculum Developments
"Faculty of Psychology in the US"[16,27]	"This school of thought stressed that the working of the brain could be improved by exercise of memorization and prepared curriculum for elementary, secondary and high schools. They formed committees for preparing rules for College Entrance". [Ref. 16, pp. 75; Ref. 27]
"National Herbart Society"[16,27]	"This school of thought advocated that rote memorization had little value for educational and moral ends". [Ref. 16, p. 78]
"Social Efficiency Movement"[16,27]	"This school of thought focused on scientific management of knowledge and advocated for the societal control through curriculum. They developed socially efficient curriculum and emphasized concepts of experimental science and social efficiency. IQ test were developed". [Ref. 16, pp. 75]
"The Progressive Reform Movement"[16,27]	"In the Progressive Reforms Movement, emphasis of curriculum theory moved away from child centeredness towards generalized behaviours. Tyler's Rationale focused on educational and school purposes, educational experiences, effective organization of school curriculum". [Ref. 16, pp. 90, 100, 148–151]
"The Multi-Cultural Education"[16,27]	"This school of thought recognized plurality within teaching and learning for students coming from diverse backgrounds. The scholars believed that curriculum and institutional changes were required to support the development of students from diverse ethnic and cultural backgrounds. However, other views acknowledged that by incorporating cultural diversity in the curriculum, certain controversies might arise".[16,27–30]
"National Defense Act of the US (1958)"[16,27]	"This school of thought proposed that the curriculum developers have to think beyond the traditionalist approaches. Rickover (1959) showed that "Schools must return to the tradition of formal education in Western civilization-transmission of cultural heritage, and preparation for life through rigorous intellectual training of young minds to think clearly, logically, and independently". [Ref. 16, pp. 154; Refs. 13, 14]
"Contemporary Theory"[16,27]	"The curriculum is the outcome of a process reflecting a political and societal agreement about the what, why, and how of education for the desired society of the future". [Ref. 16, pp. 5; Ref. 27]

Table compiled from the following sources: "Pinar, W.F." (2004)[16]; "Curriculum Theory"[27], "Banks, J. (1995)"[28]; "Banks and Banks" (1995)[29]; "Rickover, H. (1959) in W.F. Pinar (2004)".[30]

interprofessional learning in the field of public health are discussed below.

Literature has shown the importance of setting up networks for knowledge generation. The study is proposing setting-up Health Policy Networks (HPNs) that will have the potential for improved student learning and practice. Scott and Hofmeyer (2007) described the usefulness of networks in "knowledge translation and exchange between people and organizations".[18] Hara and Hew (2007) discussed the "role of networks in professional development".[19] Monge and Contractor (2003) found that there was no single type or model or theory of social networking but that networks are complex adaptive systems and communities of practice.[20] Paula Robeson (2009, pp. 7) described, "Networks as relational organizational forms that involve interconnected individuals, groups or organizations within a specific domain of knowledge and practice that interact socially and share knowledge with each other to achieve a common goal".[21]

The proposal to set-up HPN within the Public Health Departments aspires to link students with experts and entrepreneurs so that they can have wider exposure and first-hand information of the new developments taking place in the field. The proposed HPN can invite policymakers, policy experts, policy analysts, leaders, managers, academicians and researchers working in the public health and allied areas so that collaborative/joint academic or research activities can be initiated. Such initiative can be mutually beneficial because experts can have feedback from the youth for innovative ideas and new solutions for pressing public health problems; whilst, students can benefit from the expert advice on how to get involved in policy and work through the systems of bureaucracy. Through the HPN, students will have an opportunity to (i) interact with policymakers to find out how policy processes take place, (ii) voice youth feedback in framing health and public policy, and (iii) undertake activities that will bring improvements in health and services delivery.

Through the health policy networks, policy dialogues can be arranged for student learning. Participation in these dialogues will enhance student understanding of the culture specific health policy strategies; local and global leadership required for improving health outcomes; and developing skills that are required for evaluating and monitoring public health policy through a civil society perspective. Involving students early on in these activities will help them develop critical thinking skills and a problem-solving attitude. The proposed activities can become part of a formal student assessment and curriculum. These activities will empower students through interaction with experts from the field, develop linkages for future engagement, and build their career prospects. Students will learn how to advocate and campaign for addressing critical health issues; mobilise stakeholders and liaise with the community (See Figure 1 for conceptual model and Box 1 for focus areas). WHO-EMRO has already supported a closely related network (PHEN) in 2010[22] where public health and health economics students had a chance to interact with multi-stakeholders and policymakers, and gained valuable experience. This network can be reactivated for achieving some of the proposed objectives for interprofessional public health education.

Public Health Programs usually require the completion of internships at specified organisations to gain practical

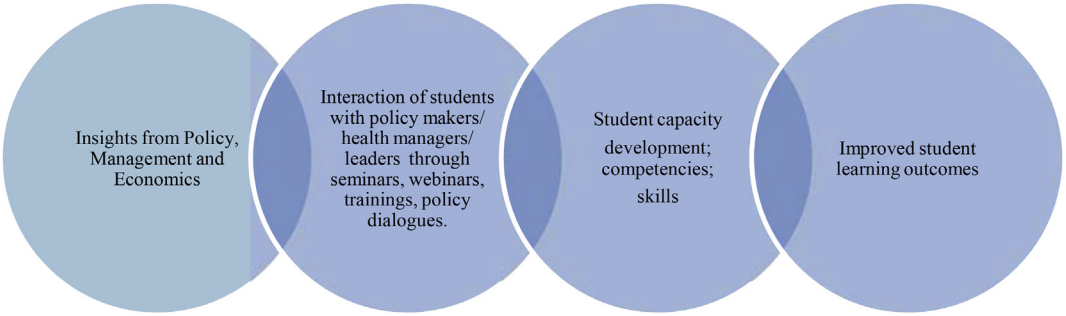

Figure 1: Conceptual framework for innovative learning.

Box 1
Focus areas for integrated insights.

Health policy: Formulation, implementation, monitoring, evaluation, agenda setting, decision-making.
Health management/leadership: Health service delivery organizations (Vision, mission, strategies, governance).
Health economics: Economic and political aspects of health ystems: Health care finance and delivery, economic evaluation, health services, workforce development, health disparities.

experience. Early involvement of students in networking activities will foster student learning through increased opportunities. Students' opinions can provide new, innovative ideas for perpetual public health problems requiring out of the box solutions. Students can be encouraged to disseminate policy-learning experiences through their writings shared through different dissemination forums. Table 2 summarises, need, activities and expected outcomes, and Table 3 summarises the expected student learning outcomes. These outcomes may be realised through interprofessional public health education.

The importance of field visits in enriching student learning has been demonstrated in many studies. Bonderup Dohn (2011) found that "exposing students to new experiences and can increase interest and engagement regardless of prior interest in a topic".[23] Nadelson and Jordan (2012) found that "field visits result in more positive reaction towards an area".[24] Salmi (2003) found that "field visits are recalled with passion and leave a long-lasting impact on students".[25,26] In public health, students can benefit from compulsory academic field activities to reap the following expected benefits:

1. Routine lectures will be substantiated with first-hand experience in the field (interaction with the community, leaders and managers).
2. Field trips will impart skills that are necessary for community and professional engagement (feedback from top-level management).

Table 2: Policy, management and economics: potential for interprofessional learning.

Need for inter-disciplinary curriculum	Proposed activities	Expected outcome
Identify multi-stakeholders: usually they work in isolation.	Connect stakeholders/actors from • Public Health • Pharmacy • Economics • Management • Policy and Planning	Enhanced interprofessional communication Engagement with the experts in the community Innovative policy solutions
Undertake joint/collaborative activities with strategic planners/partners Undertake inter-university or inter-organization initiatives Better understanding of health care perspectives	Build connections/ties with multi-stakeholders.	Knowledge generation Knowledge development Develop problem solving attitude Identify patterns of institutional relationship Identify patterns of institutional working
Common access to specialized resources Better input for policy development	Capacity building through seminars, specialized short trainings	Enhanced learning for key concepts Better technical/professional communication Participation in policy forums and dialogues Better linkages from theory to practice Professional development Better response to health challenges
Awareness raising	Engage in advocacy	Learn about best practices in public health and identify existing gaps for advocacy. Learn how to make efficient and effective use of resources and motivate the community.

Table 3: Expected student learning outcomes.

Areas	Learning/ Understanding	Training/ Application	Analysis	Synthesis/ Evaluation	Critical Thinking	Knowledge Creation/
Health Policy/Public Policy	√	√	√	√	√	√
Management/Leadership	√	√	√	√	√	√
Economics	√	√	√	√	√	√
Health System/Programs/ Projects	√	√	√	√	√	√

Source: For learning stages, refer to "Bloom's Taxonomy".[19]

Public health students will understand that improvements in public health are possible through simple, cost effective strategies that can prevent, protect and promote health compared to more expensive clinical/medical care. Students will appreciate the need for protecting populations from environmental hazards; adopting healthy behaviours; controlling food and water borne diseases; communicable diseases, effective immunisation programmes and other areas that require public health policy interventions and good governance.

A policy priority to enhance public health can be part of joint attention of taught public health programmes and health/finance Ministries. Interaction with these institutions will enable students to understand policy formulation processes, how Government provides public health services and the relative importance of health sector compared to other sectors in the economy, understanding of the managerial and administrative functions and their probable future engagement with these institutions. Having an opportunity to gain experience in the field will impart a deeper understanding of the policy/economics courses taught in the Universities and will allow for the application of concepts, ideas and theories to real life practices. The following gains are expected from field visits:

1. Students will acquire skills and develop competencies as are required in their future professional life and discover their own strengths and weakness in this regard.
2. Students will develop increased communication, observational and report writing skills.
3. Students will have an opportunity to witness the working of the governmental and non-governmental organizations.
4. Students will understand how formulation of policy takes place and the importance of agenda setting for public health.
5. Students will become aware of the political economy of health.

As part of the policy and management courses, some University level mechanisms can be proposed through which public health students can be encouraged to interact with students in similar programmes to explore diversity, remain informed of new advancements in the subject, build international linkages and become familiar with the local and global challenges. The preferences can be local, global and regional coordination. One major student-learning outcome is a student's ability to develop professional writing skills. By encouraging students to engage in professional writing about policy issues through essays, term-papers and assignments, and making it part of their formal evaluation, valuable student opinions can be generated. Students can be encouraged to engage in scholarly writings and disseminate learning experiences for knowledge sharing. Presently, such activities remain detached from one another and are left up to the choice of an individual teacher or instructor. However, early engagement of students in writing about the critical issues surrounding public health issues may produce some creative solutions and may serve to develop critical or analytical thinking. Through interprofessional education, students may be encouraged to (i) track new developments taking place in the health and public policy domains (ii) gather policy perspectives on emerging public health policy and management issues (iii) identify leadership roles in addressing critical health issues (emergencies, disease outbreaks, preparedness and cultural diversity). Through such professional writings, students can keep an eye on the new happenings in policy, management and economy that need to be tracked for better health.

The possible learning outcomes can be:

1. Students will appreciate the importance of interdisciplinary and multidisciplinary techniques needed in public health.
2. Students will learn skills adopted from various disciplines (focus on finance, economics, behavioural sciences, policy, and politics).
3. Students will learn how diverse economics and management tools that can be successfully applied to the field of public health.
4. Students will learn to work for a shared vision for better public health and health outcomes.

Results

The potential of introducing innovations in public health teaching and curriculum is huge. There is increased appreciation that public health can benefit from skills and competencies of economists, managers and other allied professionals for addressing critical issues facing the health sector. Some of these pressing issues and challenges include accessibility, affordability, equity and equality, fair distribution of scarce health resources, governance, political economy of health, priority setting, measures to spend scarce resources wisely and cost effectively, improving the efficiency of healthcare institutions and organisation, and the role of the civil society in assuming responsibility for health improvements. Building the capacity of public health students through interdisciplinary techniques, while maintaining the focus on the health sector, can help address some of these challenges. It is expected that working in coordination with these subject experts will boost the capacity of public health

students and help improve health outcomes compared to the work that they complete in isolation.

Conclusions

Introducing innovations in public health curriculum are desirable. The purpose is to improve health outcomes by strengthening the capacity of the public health students/professionals through shared learning and collaborative practices. Interprofessional education is witnessing significant success stories in medicine, pharmacy and nursing, which underscores the need to explore similar potential in public health education.

Recommendation

This study recommends revising public health curriculum by incorporating insights taken from the disciplines of policy, management and economics. Interprofessional education needs to be the focus of the proposed revisions.

Conflict of interest

The author has no conflict of interest to declare.

Author's contribution

SS is the sole author who conceived, conducted, organized, analyzed, reviewed, and revised the study. She is responsible for the content and similarity index of the manuscript.

Acknowledgements

The author is extremely thankful to Professor Hugh Barr, President, Center for the Advancement of Interprofessional Education, United Kingdom, for providing valuable comments on the initial draft. The author is also thankful to other anonymous reviewers for their valuable comments. Thanks are due to Qatar University for providing an opportunity to attend an interprofessional conference that inspired the writing of this paper. The usual disclaimer applies.

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How to cite this article: Shehzad S. Extending the scope of interprofessional education: Integrating insights from policy, management and economics for improved health outcomes. J Taibah Univ Med Sc 2016;11(6):559–565.