Mentoring and the Public Health Workforce: A Scoping Review

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Abstract

This study aimed at better understanding mentoring in public health workforce training and identifying key issues in mentoring conceptualization and application and its potential relevance to public health. Methods included scoping literature reviews in the repositories of Medline, CINAHL, and Web of Science following recommendations in the PRISMA code. Between 2000 and June 2014, 1809 references were listed, of which 27 met inclusion criteria. The main thematic areas were the models used in mentoring, the value of mentoring, mentors' and mentees' perceptions and needs, attributes of successful mentoring relationships, elements for the design and evaluation of mentoring programs, and authors' recommendations. The main conclusion is that mentoring is a growing interest in relation to developing the public health workforce. To improve mentoring models and practices, further research should be conducted.

Keywords: Mentoring; mentorship; public health workforce; public health education; public health career development; public health training

Introduction

The public health sector continuously strives to improve its workforce to better respond to the health needs of diverse populations worldwide. The quality of this workforce contributes to the quality of public health policies and services for populations, communities, and individuals, as well as the engagement and empowerment of communities for dealing with public health issues. To improve the public health workforce, in addition to addressing staff shortages and organizational needs for appropriate resources and structures along with effective and efficient practices, new professionals must acquire the necessary competencies, i.e., the knowledge, skills, and attitudes needed for effective performance (Palermo & McCall 2008). Mentorship has been put forward as a promising approach to augment the competency development of public health students and new professionals seeking to advance their careers. However, very little research on the topic has been published so far. Therefore, this study has three objectives; (1) Mapping the key concepts underpinning mentoring in the training of the public health workforce, (2) Describing mentoring programs that have been reported in peer reviewed journals, and (3) Developing recommendations regarding the potential utility and effectiveness of mentoring, as well as recommendations for improving mentoring in public health and maximizing opportunities for the person being mentored to better apply knowledge.

Literature Review

Definition of Mentoring

Mentoring has been defined in a variety of ways. One of the most common definitions in the scholarly literature, from a 1998 report by the Imperial College School of Medicine's Standing Committee on Postgraduate Medical and Dental Education (SCOPME) positions mentoring as, "A process whereby an experienced, highly regarded, empathetic person (the mentor) guides

another (usually younger) individual (the mentee) in the development and re-examination of their own ideas, learning, and personal and professional development". Elaborating on the processes involved in mentoring, Blackwell defines mentoring as "a process of instructing, counseling, guiding and facilitating" (Mahayosnand & Stigler, 1999). The differences between the various definitions are often subtle, as Battams (2005) offers a similar definition but focuses largely on the characteristics of the mentee, regarding mentoring as "a voluntary and mutually beneficial relationship where an experienced and knowledgeable mentor supports the development of the mentee with leadership potential." While Battams (2005) claims the mentor-mentee relationship to be mutually beneficial, she focuses on the development of the mentee.

Sambunjak, Straus and Marusié (2006) offer another alternative, noting that both parties can benefit from the mentoring relationship in terms of their development; they define mentorship as 'a dynamic, reciprocal relationship in a work environment between an advanced career incumbent (mentor) and a beginner (protégé), aimed at promoting the development of both'. Lengerich, Siedlecki, Brownson, Hedberg and Remington (2003) review article reported that mentoring has been practiced for many years in many professions, including education, entrepreneurism, and businesses run by corporations. As there has been a greater focus on professional development in numerous professions, mentoring has become increasingly common as part of professional training and thus career advancement among employees. Mentoring has become especially important as economic and employment environments in society have become increasingly complex.

Today, employees are expected to continually develop their individual skill sets over the course of their careers, aware that they may have to apply these skills in various, and perhaps unexpected, places. Professional mentoring is quite common in business (Underhill, 2006) and educational institutions (Myers & Anderson, 2012). A cursory scan of resources about mentoring and education of doctors and other health care professionals also shows a great many relevant programs and research articles (Sambunjak et al., 2006). Lengerich et al. (2003) based on their review of the literature relevant to epidemiology, mentoring is noticeably less studied in the area of public health.

Benefits of Mentoring

The benefits of mentoring are numerous. As an example of experiential learning, it has been shown to help reduce the gap between theory and practice in not only the area of health but also about education and commercial endeavors (Palermo & McCall, 2008). Experiential learning involves gaining knowledge through practical experience, which can be very positive, but if this learning is undertaken without appropriate supervision and support, then it may lead to the adoption of practices that are not safe or effective (Palermo & McCall, 2008). Thus, the mentor-mentee relationship is crucial to ensure that experienced professionals offer novices their knowledge and expertise (Battams, 2005). It is worth noting, however, that training for mentors is not normally delivered in a clear manner, with most mentors being trained in the field or simply gaining experience as mentors through educational practices (Zannini, Cattaneo, Brugnolli, & Sainai, 2011).

Mentorships have been associated with various positive outcomes, including the sharing of knowledge, stimulation of both parties involved, professional development, improvement of interpersonal skills, and increased reflectivity and growth (Zannini et al., 2011). To succeed in efforts to improve the public health workforce, public health schools, programs, agencies, and

associations focus on building students' and new public health workers' competencies, fostering their professional development, linking experienced professionals with up and coming generations, and developing leadership. However, it has been found a lack of mentorship skills among the senior public health mentors whose focus is on training new graduates and beginning workers. These mentors are important for providing less experienced individuals with the knowledge and skills that are essential to effectively practice public health in various public health settings, but in reality there is limited follow up and guidance in this regard.

Considering how very multi-faceted public health is as a field, it is clear that mentoring could be developed and used to deal with a number of the most significant issues in the area of public health (Nelson, Kasper, Hibberd, Thea, & Herlihy, 2012). These issues include a lack of leadership in public health, shortages of personnel in practically all areas of public health, and the lack of consistently updated skills among public health professionals. Furthermore, about more specialized areas of research, additional specific skills must be developed. These specialized areas include epidemiology, environmental health, occupational health, health education, health promotion and disease prevention, biostatistics, and ethics. Coursework at the graduate level as well as a combination of mentorships along with experience in the field could help individuals develop the skills required to succeed in these areas of research (Nelson et al., 2012).

New graduates may find that mentoring helps facilitate their transition into a place of employment by helping them to develop more quickly as a professional (Furgeson, George, Nesbit, Peterson, Peterson, & Wilder, 2008). This review is based on the assertion in the broader mentorship literature that, generally, mentoring is a highly important and productive strategy that allows experienced professionals to share their knowledge and expertise with novice professionals. As part of the mentor-mentee relationship, mentoring is able to generate passion and commitment in individuals, helping to inspire these individuals to move in new directions and develop new opportunities within their field of practice. Despite the very limited number of research studies and other publications on mentorship in public health education and training, it appears that the public health workforce might benefit substantially from the contributions that mentoring could make to its development (Palermo & McCall, 2008).

Jung (2014) has noted that mentoring is generally accepted to be an excellent means of improving practice competencies related to communication and for sharing information and experiences more generally. The Public Health Practice Program Office also supports the use of mentorships to benefit the public health system and its workforce, noting that various aspects of professional development, which are necessary to ensure that a competent workforce is able to provide public health services in a sustainable manner, could be facilitated via mentorships (Jung, 2014). These necessary elements for the development of a strong and stable public health workforce include focusing on key competencies, offering more lifelong learning opportunities, and incentivizing competency development at the institutional and individual levels (Jung, 2014). However, public health educators and employers should be made more aware of the extent to which mentorship programs can benefit public health workers' professional development and, as a result, the quality of public health service that is provided (Jung, 2014).

In case the importance of the public health workforce might be overlooked or misjudged, it is worth noting that this workforce is a significant determinant of how well a population is able to deal with public health issues. At the international level, the public health workforce faces major challenges, as it attempts to address various public health issues that exist now or will in the

future (Sidibé & Campbell, 2015). Among the various strategies that might be used to enhance the public health workforce, in order to make it more capable of addressing public health issues, is mentoring, which could enhance workforce practices and competencies in addition to helping develop organizational capacity (Palermo & McCall, 2008).

A variety of factors impact workforce capacity, including the size of the workforce, how well prepared the workforce is, if they are exposed to continued professional development, the organizations that they are part of and the support provided (Palermo, Hughes & McCall, 2011). Thus, a range of strategies is necessary to help a workforce develop its capacity. Competency development is a particularly important aspect of workforce development, concerned with how individuals develop knowledge, skills and attitudes that help them to be effective workers within their chosen field (Palermo & McCall, 2008).

Competency development is necessary as it helps workers to meet competency standards, which outline the roles that individuals should be able to complete at their work and are an important factor in relation to credentialing, which is a system whereby it is ensured that individuals have the appropriate credentials and competencies to practice within their field (Palermo & McCall, 2008). In public health, it is understood that many competencies only develop after an individual has entered the workforce.

Consequently, focusing on how well prepared individuals are prior to their entering the workforce may miss some key aspects of competency development. The development of professionals both as they study for university credentials and for professional development of individuals in their postgraduate years are important areas to focus on in terms of workforce development in public health. Mentoring holds promise as a strategy to achieve these ends.

Methodology

For the search of literature, the study also drew on methods guidelines set forth in the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) standards (Moher, Liberati, Tetzlaff & Altman, 2009). Preliminary literature searches helped formulate a search strategy that encompassed the main concepts, appropriate terms, and the most relevant databases. Multiple strategies have been employed to search for relevant studies and materials that focus on mentoring in the education and the training of public health workforce. The search strategy was piloted and refined during consultations with an information specialist, and tested in various databases to insure that relevant results were appearing. Three electronic databases were searched, Medline, CINAHL, and Web of Science, following PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) guidelines.

The databases were chosen for their multidisciplinary focus and relevance to the research questions. Citations that included any of the following subject terms, and MeSH headings in the case of Medline and CINAHL databases, were identified: "Mentor*," “Public health,” “Health promotion,” “Public health workforce,” “Public health education,” “Public health competencies,” “Public health career development,” “Epidemiology,” “Occupational health,” “Environmental health,” “Public health training,” “Health education,” and “Public health schools.” Since Web of Science has no subject headings, the strategy focused on keyword searches.

Total 1809 references were obtained for the analysis. A process of discrimination was then carried out by means of assessing the titles and abstracts of the remaining 1434 citations. This led to the further exclusion of 1367 references for a variety of reasons, including that they

focused on mentoring patients, K-12 students and teachers, adolescents, physicians and health care providers in areas other than public health. The 67 documents that passed this filter were then further screened based on a reading of the complete texts, which led to the elimination of an additional 40 papers because the titles and abstracts were not found to reflect the content of the documents or the documents mentioned very little about mentoring in public health. In the end, 27 articles were found to meet the inclusion criteria and were included in the review. Citations focused on mentoring in public health, health education, health promotion, public health nursing, public health nutrition, epidemiology, global health or any other public health areas. All citations were published between 2000 and June 2014. Meanwhile, citations focused on mentoring patients, K-12 students and teachers, adolescents, physicians, and other health care providers in areas other than public health were excluded.

A standardized data extraction form was designed to improve the reliability and validity of the review. Data extracted from relevant references were: the source, the title, author/s, year of publication, settings, type of references, the field of practice, the purpose of the references, target population, the focus of the mentorship program/activity, study design, methods, results, model of mentoring, practice of mentoring, the value of mentoring, mentor's perception, mentee's perception, characteristics of mentors, attributes of mentees, mentor's needs, mentee's needs, attributes of successful mentoring relationship, elements for the design of mentoring programs, and authors' recommendations. Notably, Microsoft Excel was utilized in order to organize the extracted data and facilitate analysis.

Results

Types of Articles and Mentoring Programs in the Scoping Review

Within the identified period of 2000 to June 2014, among the 27 articles that met the inclusion criteria, the publication rate was the highest in 2009 and 2013, with 5 papers from the sample published each year. From 2001 to 2003 and in 2006, one paper was published each year. A total of 2 papers were published in 2010 and 2014, and 3 papers from the sample were published in 2006, 2008, and 2011. Out of the total of 27 articles in the sample, in terms of setting, 16 were situated in the United States, five in Australia, two in Puerto Rico, one in Guatemala, one in Switzerland, one in Uganda, and one in the United Kingdom.

The articles in this scoping review are divided into three main types, which are research studies (n=4), reviews (n=3), and commentaries (n=20); the last category includes 12 program descriptions, 6 editorials, and 2 letters. The first type in this scoping review concerns research reports that explore, investigate, or evaluate the role and utility of mentoring in improving the knowledge, skills, or competences of the public health workforce.

The second type is reviews that aim to describe key findings or lessons from others' studies on mentoring, while the commentaries that include program descriptions, editorials, and letters offer descriptions of how mentorships work in practice and describe, often in a journalistic style, what mentoring should or could involve. The data revealed several thematic groupings and a number of interrelated subthemes. The main themes that appeared are the models used in mentoring, the value of mentoring, mentors' and mentees' perceptions and needs, attributes of successful mentoring relationships, elements for the design of mentoring programs, and the author's recommendations.

Mentoring in Different Public Health Fields

This scoping review identified 27 articles that focus on mentoring in the training of public health workforce, and investigate how mentoring is used in specific public health domains or fields. The articles were identified as pertaining to the following fields: research and practice (n=7), public health nursing (n=5) epidemiology (n=3), public health nutrition (n=3), environmental health (n=3), health promotion (n=2), mental health (n=1), rural health (n=1), injury prevention (n=1) and general public health (n=1).

Research and Practice

Most of the articles gave attention to mentoring in terms of mentors and mentees' research activities. Kahn and Greenblatt (2009) expressed that mentoring can help create bridges within projects involving multiple disciplines, create a more diverse group of investigators, and help senior investigators to recognize the value of the mentoring process. Among early-career HIV researchers, Kahn and Greenblatt (2009) believe that mentoring is key for work satisfaction, productivity, workforce diversity, and retention of investigators in a variety of research settings. Singh (2011) highlights the positive impact of mentoring among early career researchers and abstract submitters in resource-limited developing countries as they received online help from experienced mentors. Through mentoring, the abstract submitters were able to share their work at international conferences on the issues of preventing and managing HIV and AIDS. James, McGlone, & Madrid (2013) report that mentorship helps the mentees to share perspectives and express their excitement over minority health research presentations and experiences that reinforce their academic ambitions. In addition, mentoring enables the participants to gain a positive perspective on research. James et al. (2013) believe that mentorship programs create a foundation for college retention and recruitment into health and research careers.

Barnoya, Monzon, & Colditz (2013) have perceived mentoring as an approach to flexible teaching and learning to achieve learning objectives. They mentioned that mentoring with additional research training methods could build research capacity successfully and facilitate positioning the mentees in clinical or research careers. Rabionet, Santiago, & Zorrilla (2009) point out that becoming involved in research projects can also provide young researchers with opportunities to engage in hands-on learning and mentorships.

In this case, mentors are expected to actively participate throughout the research process, by sharing skills and offering guidance during both early and later stages in the research process, from conceptualization through to dissemination. They stated that mentoring in the area of research is regarded as able to encourage systematic engagement while at the same time offering inspiration and empowerment to mentees as well as mentors. In addition, mentoring can help researchers to improve their understanding of what they have to share and what exists beyond their own discipline, as it can move across disciplines.

Mentoring and Public Health Nursing

Smith, McAllister, & Crawford (2001) indicated that mentoring could offer a variety of benefits, including the enhancement of clinical competencies, increased personal satisfaction, and empowerment, greater political perceptive and greater satisfaction with their employment. They felt that, considering the quickly changing health care environment, mentoring could help develop a nursing workforce that will be able to respond to change creatively (Smith et al., 2001). Miller, Devane, Kell, & Kuehn (2008) pointed out that a public health nurse requires

multiple skills and a high degree of internal motivation, and mentoring can contribute to the development of these skills and attitudes. Mentorships can be beneficial to public health nurses as they create coalitions, a public identity, and various prevention programs (Smith et al., 2001). Overall, mentoring can provide the public health nurse workforce with the skills, knowledge and attitudes that will help them to improve population health and create a healthy future for everyone (Sowan, Moffatt, & Canales, 2004).

Mentoring and Epidemiology

According to Lengerich et al. (2003), chronic disease epidemiologists can benefit substantially from mentoring, especially in cases where this capacity needs to be built up, such as public health agencies with constrained resources and personnel systems, which results in a limited ability to recruit and employ new employees. Among senior epidemiologists, it has been noted that having the support of an effective mentor was one of the main factors leading to a successful career in epidemiology. Chronic disease epidemiologists may also be able to develop particular competencies through the mentoring process, supporting the idea that mentorship opportunities should be increasingly developed. According to this review, mentoring has the potential to have a significant impact on the public health workforce, specifically regarding the practice of applied chronic disease epidemiology, through the role it can play in the development of particular competencies (Lengerich et al., 2003).

According to Davis (2013), like all sub-fields in public health, epidemiology is a very multidisciplinary area. It involves a range of research skills, from qualitative to quantitative methods, and from behavioral observations to laboratory work, all in the context of trying to improve population health. In response to this diversity, mentoring programs in epidemiology (and the methods used to evaluate them) should consider the variety of elements within this discipline. In some epidemiology mentorship programs, a mentee is matched with a number of mentors, with the mentee learning about a specific area of interest from a mentor specializing in that area. This is just one of a number of possible alternative approaches.

Mentoring and Public Health Nutrition

Mentoring has been shown to be beneficial in terms of the development of nutrition-related public health competencies (Palermo et al., 2011). Palermo's team asserts that mentoring may be developed as a means to help public health nutritionists gain various competencies, as research has shown that these competencies are best gained through experiential learning. A public health nutritionist must be able to engage in various nutrition-related activities, as well as management and administrative duties. The public health practitioners who offer mentoring to mentees should therefore be selected based on the mentees' career goals, and the mentoring process should be facilitated across a variety of settings. They believe that, overall, mentoring should be an integral part of a multi-strategy approach to the development of public health nutrition competencies, and future policies and plans related to the development of the public health nutrition workforce should include a focus on mentoring.

Mentoring and Environmental Health

In the field of environmental health, Roberts (2010) found that novice professionals are influenced by mentoring and use the knowledge and experience they gain through the mentoring process in their environmental health careers. As such, mentoring is of importance to the development of the environmental health workforce. Mentors share their experiences with

novices who are then able to use this knowledge as they develop their technical, management and leadership skills, making them better prepared to address environmental health problems.

Mentoring and Health Promotion

Mentoring to aid individuals involved with health promotion in their development of competencies appears to have been discussed very little in the peer-reviewed literature in the period for this scoping review. Oliver and Aggleton (2002), drawing primarily on literature in the 1990s, discussed different models of mentoring and their potential relevance to those involved in health promotion. The authors recommended the development of a clear operational definition of mentoring, policy framework, good fit between the underlying ethos of health promotion and the model of mentoring adopted and prepare resources and administration.

Mentoring and Rural Health

The literature on mentoring in the context of rural health or remote health settings is also relatively small, as only a small number of mentoring programs have been reported in academic journals in recent years (Bourke, Waite, & Wright, 2014). However, Bourke et al. (2014) noted that exposing rural and remote health professionals to the mentoring process might contribute to their development, helping them to focus on the achievement of goals and providing support when they face particular difficulties. While, programs targeting the rural and remote health workforce have not tended to focus on supporting distinct individuals, it is hoped that more mentorships will be implemented in this area to benefit individual practitioners.

Types and Models of Mentoring

There are different ways in which a mentoring system for the development of the public health workforce can operate. This review characterized these ways or models described in the articles as: one to one mentoring (n=2), peer mentoring (n=3), mentoring circles (n=1), mentoring partnerships (n= 2), on-line mentoring (n=2),apprenticeship mentoring (n=3), trans model/cis model (n=1), multiple models (n=6), as some references cover many models), mentoring during the field experience (n=1), conceptual model (n=1), multifaceted mentoring model (n=1), and articles with unspecified models (n=4).

One to One Mentoring

One-to-one mentoring is mentioned in numerous articles in the literature included in this review. Barnova et al. (2013), who reported on a Guatemalan mentoring program, refer to it as a form of dyad mentoring, where a mentee is paired with a senior mentor. They specify that the purpose is for the mentor to provide the mentee with guidance concerning a particular project and that outcomes (such as publications) should be measurable. Finch and Poulos (2008) report on a mentorship program related to a grant, where a mentor from a different research group mentors the mentee in order to broaden the mentee's knowledge, skills, and experience in relation to public health over the course of the grant. Kreuter et al. (2011), reported on a public health mentorship program as well, noting that the one-to-one mentorship style was attractive to mentors as it provided them with a keen graduate student for their project team, as well as being free of cost and having salary support attached to it.

Peer Mentoring

According to Thorpe, Tunny, Adams and Palermo (2013), peer mentoring is particularly valuable in situations where reciprocity and equality must be ensured. James et al. (2013)

regarded peer mentoring as beneficial to groups of students, allowing them to discuss potential career opportunities while avoiding the possibility of cultural marginalization. In addition, this style was shown to lead to a reduction in cultural isolation and benefitted students when they engaged in later professional meetings. Forsyth and Stoff (2009) similarly reported that peer mentoring offers novice public health workers or students social support, socialization into the academic realm, clear role models, and new individuals to possibly collaborate with.

Mentoring Circles

Palermo et al. (2010) reported on mentoring circles in the Australian public health context as involving a mentor and a small group of peers who gather to share feedback and advice that will be useful in terms of the mentees' professional development. The authors state that this mentorship style could help increase the number of mentees, allow for fewer mentors with fewer responsibilities, and broadly help promote a mentoring culture within public health and other disciplines.

Mentoring Partnerships

Anderson, Richmond and Stanhope (2004) reported on a mentoring partnership program, whereby baccalaureate students were matched with a preceptor and a public health agency. Through their mentorship with a practicing public health nurse consultant, students gained the opportunity to be involved in practicum placements, and the experience benefitted both the college of nursing and health departments (Anderson et al., 2004). In terms of how this mentorship style is facilitated, Rube, Veatch, Huang, Sacks, Lent, Goldstein (2014) reported that the program they focused on (a built environment mentoring program) involved group calls on a monthly basis, occasional individuals calls, webinars on a quarterly basis, and two face-to-face "Fit Nation" conferences. As Sowan et al. (2004) explain, their mentoring partnership model considered both preceptor needs (roles, responsibilities, etc.) and how to offer students extra clinical opportunities.

On-line Mentoring

In the case of on-line mentoring, Singh (2011) noted that one such program simply involved mentors and mentees participating in two-way communication, through the exchange of emails concerning mentees' writing and topic choices, as well as how to develop abstracts (the focus of the program). James et al. (2013) reported on a similar program in which mentors and students, with the support of nursing faculty coordinators, worked on course assignments together, shared their experiences in relation to public health, and solved public health problems, all through e-mentoring channels.

Apprenticeship Mentoring

Matovu et al. (2011) reported on an apprenticeship-mentoring program conducted in Uganda in relation to HIV/AIDS program leadership. Through a fellowship program, the fellows/mentees worked with host and academic mentors. The academic mentors provided the mentees with guidance in their writing of reports, scientific paper preparation, and proposal writing, as well as playing other roles. In the case of host mentors from host institutions, they offered mentees a supportive environment in the field, allowing the mentees to share ideas and experiences as well as challenges they faced. As the main source of everyday contact for the mentees/fellows, the host mentors provided support, encouragement, and supervision during the fellows' field

attachment, ensuring that they learned about management and leadership, challenges faced, and career opportunities, assisting the fellow in integrating into the host institution.

Trans / Cis Model

Kahn and Greenblatt (2009) reported on "trans mentoring" as a relatively new form of mentoring, where a mentee is paired with a mentor who comes from outside of the mentee's main research area, in contrast with "cis mentoring," where both mentor and mentee share the same main area of focus. In the case of trans mentoring, mentor- mentee matching is particularly important, to ensure that there is no conflict and that the mentor is willing to not focus exclusively on their discipline, but will benefit the mentee in their own discipline, in terms of stimulating networking and collaboration opportunities. The greater independence associated with this mentoring style, facilitated by the mentor and mentee focusing on different areas, is seen as a primary benefit, but more research is required to fully outline the differences between and relative advantages of trans and cis mentoring styles.

Mentoring During the Field Experience

Hayes (2014) reported on a mentorship program that took place during field experience through Hawaii's Department of Health, whereby students (mentees) learned to apply skills developed in the classroom first-hand in a field setting. Hayes (2014) regarded this program as mutually beneficial to both mentor and mentee, as mentors tended to learn from students while providing them with guidance. This specific program led to various outcomes, including the production of fact sheets, reports, and conference presentations. Ronczkowski, Lafollette and Bellingar (2004) reported that communication between mentorship coordinators and mentees (in this case, through daily logs and weekly reflections emailed to the coordinator, thus an example of on-line mentoring as well to an extent) was essential to this form of mentoring.

Multifaceted Mentoring

Rabionet, Santiago, and Zorrilla (2009) reported that multifaceted mentoring involves the establishment of multi-institutional collaborations. Through these arrangements, systematic and continuous training is provided to support competency development, in order to facilitate cross-disciplinary research teams involving both mentors and mentees. They held that this style of mentoring is appropriate to address health disparities, and ideally creates relatively long-lasting relationships between mentor and mentee.

Conceptual Model

Lengerich et al. (2013) reported on a conceptual model for mentoring, wherein mentees employed by a public health agency were paired with a senior epidemiologist to work on specific competencies. Outcomes of this model included increasing public health capacity in relation to chronic disease epidemiology specifically, and improving the public health workforce more generally. Combined with other mentorship programs, this model could help in developing a mentorship program to be implemented among chronic disease epidemiologists in particular.

Discussions, Conclusion and Recommendations

In the past, mentoring has mainly been regarded as a top-down approach to educating novices, where the mentor is in a higher position due to their wealth of experience (Miller et al., 2008). The literature reviewed suggests that such an approach is still very common, and perhaps the typical arrangement. The mentoring process has been elaborated in detail by the author of several

books on mentoring and mentorship. Lois Zachary asserts that it is helpful to regard mentoring as passing through a number of stages, the first of which is preparation (Miller et al, 2008). This stage involves finding a suitable match between mentor and student in order to facilitate education. During this stage, if a mismatch occurs in the mentor- mentee relationship, a different mentor may be required. The second phase Zachary describes concerns an interactive negotiation of the relationship. This involves deciding on the responsibilities of both the mentor and the student about the learning process, how the attainment of goals will be measured, and how to eventually arrive at the conclusion of the mentoring relationship.

During phase 3, enabling occurs, as this is the stage during which learning occurs and the mentor-mentee relationship is at its strongest. This phase of the relationship between mentor and mentee should ideally be characterized by trust, respect, effective communication, the open sharing of ideas, and comfort. The final phase of the mentoring process, phase 4, concerns closure and the end of the relationship. The relationship should be concluded at a clearly established endpoint, according to a previously planned exit strategy. When wrapping up the mentoring process, as Miller and colleagues recommend, mentor and mentee should assess the learning situation, reflect on the positive and negative elements of the mentoring process, and evaluate how well predetermined learning outcomes were or were not achieved (Miller et al, 2008).

In Darwin's version of the mentoring process, as the mentor and mentee develop their relationship, the mentor eventually provides a decreasing amount of input as the mentee takes an increasing amount of charge of their own self-directed learning (Darwin, 2000). Thus, the mentor becomes less responsible for facilitating the relationship and merely offers assistance when the mentee asks for it specifically, as the mentee spends an increasing amount of time practicing and working on their own. At the end of the relationship, the mentor should help the mentee to recognize what the latter has learned over the course of the process, and help them to become a more effective self-directed learner in the future.

Evidently, students agree that mentoring could be beneficial to them in terms of their future careers. As Furgeson et al. (2008) note, students feel that mentorships existing outside of the normal curriculum could offer them more concrete experiences, as opposed to abstract ones, as well as facilitate networking and the strengthening of their relationships with professional associations. Students are likely to graduate with a number of questions, and mentorships can provide them with important opportunities to learn, for example, what their professional practices will be like, what sorts of problems they may face in the workplace, how to deal with those problems, and how the students can find the employment position that is most appropriate for them. Offering mentorships to students outside of the standard curriculum provides them with the opportunity to emerge from their education more fully developed as professionals, and thus arguably more prepared to enter the workforce.

Moreover, mentorships could be especially valuable for public health organizations that depend upon a workforce that must be constantly developed as new research and practices come into effect. While mentorships offer benefits to mentees and the mentors, they are also likely to benefit public health agencies that offer these mentorship programs. Organizations with mentorship programs increase productivity in the areas of technical skills, individual performance, leadership, and motivation. Participants in mentorship programs exhibit increased loyalty and commitment to the organization, resulting in reduced turnover and improved retention of skilled staff. In addition, the presence of mentorship programs gives companies a

competitive edge in their hiring and recruitment efforts. These organizational benefits may be important reasons that businesses develop mentorship programs (Lengerich et al., 2003).

In public health nursing, mentoring has similarly been shown to have a positive influence, especially in terms of mentees gaining enhanced clinical competencies, being more personally satisfied, experiencing greater empowerment, being more savvy in relation to politics, and being more satisfied with their employment situation.

Overall, mentoring can assist those in public health nursing to gain the skills, knowledge, and attitudes that will help them to effectively support public health. In addition, mentoring has been shown to benefit the professional development of individuals engaged in epidemiology, public health nutrition, environmental health, and rural health.

Regarding the various models of mentoring, there is a wide variety for public health organizations to choose. The one that most people would likely be familiar with is the one-to-one model, where mentor-mentee dyads meet together so that the mentor can provide the mentee with assistance in building knowledge, skills, and related competencies through sharing on a one-to-one basis. With the advent of the Internet, this form of mentoring can also occur as on-line mentoring, where the same basic interaction takes place but via the Internet. Another model that has been discussed in this review involves multiple mentees, such as is the case with peer mentoring. In peer, mentoring multiple mentees may join, in order to be less isolated as a group (these individuals are often culturally marginalized or face some other form of marginalization) as they gain the benefit of their mentor's experience. The mentoring circle model is very similar to the peer-mentoring model, although the emphasis is on shared characteristics among the mentees in relation to professional development, rather than marginalization.

Other models focus to a greater extent on the context of the mentorship and how organizations might benefit more from the mentorships, as is the case with mentoring partnerships. In this model, public health agencies are an integral part of the mentoring relationship, whereby mentees are involved in practicum experiences that act as mentoring experiences for them while also providing health organizations with useful workers in the form of the mentees. The apprenticeship-mentoring model is quite similar, as host institutions match mentors, mentees, and the mentees' experience benefits themselves as well as the host organization that provides them with the fellowship. Another model that is closely related to these is the mentoring during field experience model, which involves mentees being mentored as they undertake a practicum that involves field experience. A similar but different model is the multifaceted mentoring model. In this model, specific institutions also guide the mentorship experience, but a greater variety of institutions are involved, allowing mentees to gain experience in a wider variety of areas.

A different way of looking at mentoring is offered by the trans/cis mentoring model. The cis model is arguably more common, whereby mentees gain experience in their own field, but the trans model involves pairing mentees with mentors whose field is different from their own. The trans model would therefore work well in combination with the multifaceted mentoring model, where multiple institutions are involved that likely have different areas that they focus on. One example of the cis model is the conceptual model, whereby mentees are mentored in specific competencies by a senior epidemiologist. Overall, it is encouraging to see that mentoring models are being developed to meet various needs on the part of public health organizations as well as

mentees, and it will be interesting to see what new additional models of mentoring are developed as this area of practice continues to progress as a field of study.

No matter what model of mentoring is employed, research has revealed that mentoring relationships are likely to be most productive when a number of positive attributes characterizes them. Since the mentors in the relationship are the individuals with more experience and who likely have more influence on the directions that the relationship moves in, much of the discussion in this regard has focused on mentors.

It has been suggested that training mentors can be valuable, as well as having a philosophy for the mentors to adopt that guides their mentoring work. The responsibility for the relationship is not only the mentors'; however, as it is also beneficial when organizations develop a well-outlined mentorship structure to help mentors understand how they should implement the mentorship. Similarly, the evaluation of mentorship programs can offer useful insights, into which aspects of the mentorship either are working or are not working, which can help in improving such programs in the future.

It is understandable that researchers suggest that mentorship programs include the various elements that will make mentoring relationships successful. One aspect of mentorship programs that is not noted above, however, is the careful matching of mentors with mentees. While it is important to recognize differences and to overcome difficulties, in some cases mentors and mentees might be so poorly matched that there are difficulties in this regard that cannot be overcome. Since individuals will not always be known personally before matches are made, it may be especially difficult for organizations to match mentors with mentees in a suitable manner all of the time. However, for the success of mentoring relationships and well as mentorship programs more generally, it is important that the matching of mentors with mentees be carefully considered.

Mentees have noted that mentorships play an important role in their professional/career development as well as positive feelings surrounding knowledge sharing, increased confidence, being encouraged in their work, and the clearer definition of goals. Among mentors, it has been noted that mentorships are beneficial in terms of gaining recognition from the mentor's home organization or institution, the personal feeling that the experience was rewarding or the gaining of extrinsic credit for mentoring work, and the growth within one's profession that mentoring facilitates, including increased familiarity with current cultural and community-related issues, and the creation of a stronger social network. In addition, mentoring has been noted to be beneficial by mentors in terms of its ability to refresh their knowledge and skills as well as being able to reinforce what they had previously learned, as they pass this knowledge or these skills along to their mentees.

When designing mentorship programs, in addition to considering the positive attributes and facilitators of successful programs, and the challenges that should be overcome to make them more effective, it is also worth considering the specific needs that have been noted by mentors and mentees in the literature. Mentors feel that they need more training, which should be a major priority for mentorship program administrators. Many would benefit from having specific project goals to work towards, which could be related to another need, which is for more input and follow-up from the program coordinator.

Workplace support could also be beneficial in terms of ensuring that mentors are given adequate time to dedicate to their mentorship responsibilities. Among mentees, it has been noted that they

need more tailored mentorships, especially to meet the needs of early versus advanced trainees. The mentees, according to the literature, also feel that they need to feel more inspired and empowered, more challenging assignments that better encourage them to learn and develop new skills under their mentor's guidance, and appropriate matching with mentors. It could be argued, of course, that meeting mentors and mentees needs in a more effective manner could also help facilitate the creation of more effective mentorship programs.

This study had as a research objective the intention to develop recommendations about the potential utility of mentoring and factors to improve mentorship programs. However, since there are so few research studies to draw from, generating recommendations for mentorship programs and practice based on the evidence is fraught with methodological weaknesses. Nevertheless, I believe that the preponderance of expert opinion or the commonsensical nature of certain comments, as expressed in the body of literature that was reviewed, supports a set of recommendations.

The evaluation of mentorship programs is one of the most powerful tools to improve mentoring and encourage retention. It is important to determine where the successes and challenges occur regarding the program, to inform the design of future mentoring initiatives and knowledge translation regarding evidence-based mentorships. The evaluation components should focus on process-related activities in order to improve the program processes and materials. The evaluation should also assess the satisfaction of those directly involved. Participants should be encouraged to self-reflect or self-evaluate in order to identify areas for professional development using a recognized competency framework relevant to their practice. These frameworks help focus partnerships and areas for learning.

In addition to the importance of evaluating mentorship programs, various stakeholders need to come together to develop an agreed-upon and clear operational definition of what mentoring is and what it is expected to achieve, along with a policy framework, so that those in mentoring relationships are aware of the mentorship program's aims and expectations. In addition, they need to come together to develop national and local mentorship programs. Universities, medical schools, and funding agencies need to cooperate and implement national- and local-level programs to help develop and reward mentors.

In order to create a public health workforce that is part of a broader community of learners, it can be useful to move beyond the traditional mentoring model involving the mentor and mentee in one-to-one relations. E-mentoring, or on-line mentoring, can help connect mentees in various public health disciplines to a broad learning community regardless of various barriers, such as physical distance, organizational isolation, and conflicting timetables (Miller et al., 2008). Future research on mentoring might address whether findings from one academic or practice domain, such as public health, apply to others, such as education, counseling, and medical professions.

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