

The Use of Strategic Planning in Healthcare Organizations: (Review Artical)

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Abstract

Background: Knowledge brokers (KBs) collaborate with important stakeholders to enable the transmission and exchange of information in a specific environment. At present, there is a widely held belief that there is insufficient data about the efficacy of knowledge brokering and the elements that impact its performance as a method for knowledge translation (KT).

Aim of Study: The objective of this research was to comprehensively collect information on the characteristics of knowledge brokering in health-related environments and assess the effectiveness of knowledge brokers in facilitating knowledge translation in these contexts.

Methods: A comprehensive evaluation was performed using a search technique devised by a librarian specialized in health research. A comprehensive search was conducted in eight electronic databases (MEDLINE, Embase, PsycINFO, CINAHL, ERIC, Scopus, SocINDEX, and Health Business Elite) as well as relevant grey literature sources, with a focus on English language materials. Two reviewers autonomously evaluated the abstracts, examined whole publications, extracted data, and conducted quality evaluations. The analysis used a confirmatory thematic method. In order to be eligible, the research must have taken place in a health-related environment, documented a practical implementation of knowledge brokering, and be accessible in the English language.

Results: The findings demonstrated that knowledge brokers (KBs) carried out a wide variety of duties in various health-related environments. The results provided evidence for the function of KBs as knowledge managers, linking agents, and capacity builders. In this review, we analyzed outcome data from a specific group of studies (n=8) to identify any evidence of changes in knowledge, skills, and policies or practices associated with knowledge brokering. Two researches adhered to rigorous methodological criteria, resulting in equivocal data about the efficiency of KB.

Conclusion: In conclusion, KBs, as knowledge managers, linkage agents, and capacity builders, carried out several duties to facilitate the transmission and sharing of information

across stakeholders, contexts, and sectors relevant to health. The extent to which they successfully carried out their function in enabling knowledge translation processes is uncertain; further rigorous study is necessary to address this subject and determine the potential influence of knowledge brokers on education, practice, and policy.

Key Words: Health-related environments – Review – Knowledge managers – Knowledge brokers.

Introduction

PRACTITIONERS and decision-makers have a continuous difficulty in effectively and promptly using research information in health-related situations [1]. Inadequate use of research findings may lead to a decline in the quality of treatment [2], ineffective allocation of resources [3,4], and worse health outcomes for people and communities [5]. In order to address the difficulties related to exchanging information among academics, practitioners, and decision-makers [6], several specialists in knowledge translation (KT) have proposed the use of an intermediary called a knowledge broker (KB) [7,8].

KBs have been characterized as “knowledge managers,” “linkage agents,” and “capacity builders.” Knowledge management activities include the facilitation or management of the generation, translation, dissemination, and application of knowledge [8,9]. Linkage and exchange activities aim to foster constructive relationships between knowledge creators, such as researchers, and knowledge users, such as decision-makers and clinicians. The goal is to encourage the sharing of new information, collaborative knowledge exchange, and the adoption of evidence-based approaches [8]. Capacity development efforts have the objective of enhancing the understanding and abilities of knowledge consumers, facilitating decision-making based on evidence, and improving the ability to access and use informa-

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tion [8,10,11]. However, in practice, KBs are likely to function as a combination of these functions, depending on the objectives of the KT endeavor [12].

KBs primarily engage in collaborative efforts with stakeholders to ease the transmission and sharing of pertinent information. They serve as the human element in KT strategies by promoting interaction, fostering a shared understanding of stakeholders' objectives and circumstances, identifying emerging issues that require attention, expediting the process of identifying, evaluating, and applying evidence in practice and policy, and facilitating the management of relevant knowledge [13,14]. Although knowledge bases (KBs) have been in use in the corporate sector for many years, their implementation in the health sector has been rather restricted until recently [8,13].

Aim of work:

The research recognized the need for further evidence to evaluate the effectiveness of knowledge brokering techniques and identify the most effective methods. Several individuals have expressed the same suggestion [15-18]. While some individuals have supported the use of knowledge brokers (KBs) to aid in knowledge transfer (KT) [17,19,20], others argue that the absence of empirical data on the functioning and efficacy of knowledge brokering hinders the advancement and implementation of the KB role [8]. In order to fill this void, our objective was twofold: (1) To define and analyze the specific actions and tasks that constitute the knowledge broker function in health-related contexts, and (2) To evaluate the extent to which knowledge brokers have successfully contributed to knowledge translation in health-related settings.

Functions and responsibilities of knowledge bases:

The findings suggest that knowledge brokers (KBs) in health-related contexts carried out a wide variety of activities in line with the three domains identified by Oldham and McLean [9] and Ward et al. [8]. This supports the idea that KBs play a role as knowledge managers, linking agents, and capacity builders. Furthermore, the results indicated that KB actions often coincided with these theoretical notions.

KBs attempted to locate and establish communication with stakeholders possessing relevant knowledge, as well as influential persons or organizations addressing comparable issues or engaged in related fields of study [15,21-30]. More precisely, this process required identifying the appropriate individuals [15,31] or organizations to support the KT goals and then securing their involvement [32-34] via phone

calls, emails, or face-to-face meetings [15]. It was shown that maintaining a physical presence among stakeholders was beneficial [35]. In order to facilitate stakeholder involvement, KBs played a crucial role in finding shared objectives among stakeholders by assisting in the clarification of their requirements [30,36,37], recognizing possibilities that would be mutually advantageous [17], and convening persons with similar interests and relevant experience to tackle the problem at hand [15,29]. KBs had in-person interactions with stakeholders' organizations, including site visits [21] and meetings [29,38]. These interactions included both one-on-one and larger group talks [29,34,39].

KBs facilitated cooperation by coordinating various group forums, including workshops [17,31,40], journal clubs [41], online forums [15,41], and multi-sector advisory committee meetings [41]. In order to foster cooperation, knowledge brokers (KBs) facilitated communication among stakeholders by establishing channels of communication [31], creating a secure platform for sharing research activities [31], facilitating group discussions or problem-solving sessions [15,28,29,39,40], resolving misunderstandings [42], leading focus groups [15], and overseeing teleconferences [15]. KBs had a role in promoting agreement by enabling stakeholders to articulate their requirements and expectations [17,36]. They also aided stakeholders in understanding each other's standards for rigorous methods and helped negotiations for agreed project goals, deliverables, and results [17,28,31,36]. Furthermore, knowledge bases (KBs) played a crucial role in fostering the development of relationships among stakeholders [15,29,31,38,43,44] by assisting in the negotiation of partnership conditions [15,31], promoting collaboration [15,44], and enabling contacts [43].

KBs performed environmental scans [15,21,32,33,45] and needs assessments [15,21,39,46] to ascertain local requirements [28,37,38,47], estimate the extent of the project [28,36], evaluate the resources at hand [15], and examine the organizational capability [32,33]. In addition, they collaborated with stakeholders to identify and articulate issues or research inquiries by converting clinical/management inquiries [37,47] or policy deficiencies into research inquiries that can be implemented [17,28,30,31,36]. They also assisted stakeholders in establishing research priorities based on policy considerations [17,30], and collaborated with practitioners to identify areas of practice where research findings would be beneficial [37].

Once the research topic was established, KBs performed searches to locate and collect valuable

material [17,37,39,45,46,48], sometimes using reference software [38] to organize it. KBs evaluated the quality of the evidence by considering its relevance, credibility, and utility [43]. Additionally, they enhanced stakeholders' ability to comprehend [21] and critically evaluate the evidence [37]. After evaluation, knowledge brokers linked stakeholders to the appropriate sources of information either directly [15,35,49] or by working along with library support personnel [38] or networks [35]. KBs also recognized possibilities to incorporate empirical findings into practical application [39,42] and assessed the consequences for local programs, policies, and practices [21,37] by offering insights into frontline practices [50] and performing analyses relevant to the health-care system [30]. Finally, KBs ensured they stayed up-to-date with the latest evidence in KT methods and the specific content area(s) by actively engaging in various strategies. These strategies included subscribing to listservs [21,38,46], receiving e-table of content alerts from relevant journals or using really simple syndication (RSS) feeds [38,46], bookmarking relevant websites [21], reading journal articles [39], organizing and cataloguing useful resources [15], and utilizing available training materials [39].

KBs developed and provided educational programs for policy makers and clinicians to enhance their analytical and interpretive skills. These initiatives included workshops, seminars, webinars, courses, public lecture series, informal mentorship, and public meetings with international experts. The purpose of these sessions was to improve decision-making based on evidence [28,31-33,50] and improve practical skills [37,39,44,45]. They also intended to strengthen the ability to critically evaluate information [21,48], raise awareness of knowledge translation theory and processes [15], and boost technical skills or expertise in particular subjects [15,32,34,39,45]. KBs were shown to provide continuous learning opportunities [44], educate in clinical environments, and exemplify desirable behaviors (such as utilizing evidence to guide decision-making) [45]. Knowledge brokers (KBs) played a role in interpreting research [35,37,46] and facilitating peer-to-peer learning, such as stakeholder-led education sessions [15,44].

KBs created customized knowledge products and summaries for stakeholders by condensing evidence [28,35,37,47,49], adapting relevant findings to the local context [17,21,37,41,44,45], and writing or assisting in the creation of tailored knowledge products [17,21,30,37,49,51] such as resource binders [39], reports [30,34], policy briefs [28,32,33], logic models [49], clinical reasoning flowcharts [35], patient education materials, journal article summaries, blogs

[35], presentations, fact sheets [33], newsletters [15,35], websites [37,39], and peer-reviewed manuscripts [15]. KBs guaranteed that knowledge products were succinct [28,37], pertinent to stakeholders' requirements [17,28,51], and delivered in a user-friendly style [51]; the significance of maintaining openness throughout the process was also acknowledged [37].

In order to guarantee that the knowledge products were relevant to the requirements of stakeholders, knowledge brokers (KBs) collaborated directly with stakeholders [30] to integrate research results with their professional skills [45]. Knowledge brokers (KBs) customize evidence by assessing, analyzing, and condensing information for various target groups [45] in order to ascertain the implications of key messages for different stakeholders within their particular circumstances [17,49]. For instance, in a particular study, KBs converted patient safety guidelines into departmental protocols and furnished employees with concrete illustrations of how these policies would be implemented in their specific work environment [50].

Knowledge brokers (KBs) frequently handled project coordination responsibilities, including tasks such as creating and managing contact and distribution lists [15,46], organizing email filing, planning and overseeing meetings and events, updating and maintaining websites [15,37], managing web-based tools, collaborating with IT personnel [39], and keeping a log to track stakeholder-related activities [21]. KBs further facilitated grant applications via the process of completing evaluations and composing funding bids [31,34].

In order to facilitate the exchange of information, KBs created communication channels [29,31] and took the lead [46] in organizing and managing ongoing contact [15,28,35,48] with stakeholders. They provided professional updates via emails, briefings, and other forms of communication [35,48-50]. In order to promote the spread of knowledge, knowledge brokers (KBs) created research syntheses and made evidence easily accessible through websites and other platforms. They also provided summaries to practitioners who were making decisions at the service level. KBs advocated for effective policy briefs and presented their findings to decision-makers. Additionally, they supported stakeholders in presenting policy briefs to high-level officials in order to gain their endorsement and ensure the policy was implemented. KBs facilitated knowledge sharing by leveraging members' experience and disseminating it to others [29]. They also facilitated inter-organizational communication [35] and promoted internal knowledge sharing via team email distributions

and meetings with team members and management [21,38].

Management of network infrastructure, upkeep, and support:

KBs established, sustained, and fostered networks and communities of practice (CoP) to promote the sharing and exchange of information among both stakeholder groups and themselves. KBs discovered networking possibilities [21,35] by engaging with professional associations [15,47] and scholars [34], recognizing people who may benefit from a Community of Practice, and proactively enlisting individuals and organizations [32] with shared interests [15]. KBs facilitated the growth of networks or Communities of Practice (CoPs) [15,21,35,38,42,46] by arranging collaborative gatherings for stakeholders [17,49] and establishing procedures, guidelines, and systems for the network [15]. After the networks were set up, KBs ensured the smooth running of network operations by creating strategic plans, facilitating the exchange of information, promoting and advertising the network, assisting in the growth of membership [15], and cultivating relationships with researchers [30], academics [30,34], and decision-makers from various sectors [29,30,34]. Occasionally, knowledge bases (KBs) established direct connections with other KBs [15,39,52].

In order to assess preparedness for change, knowledge brokers performed needs assessments and used evidence to develop stakeholder support for the need of change [15,32,38,45]. KBs played a crucial role in promoting organizational change by creating strategies for managing change, fostering openness among stakeholders, urging decision-makers to set an example (such as demanding evidence to support recommendations), and taking charge of developing and executing evidence-based guidelines, interventions, and program plans [15,38,43,46,49]. During these organizational changes, KBs closely observed the effects of the modifications on policy and important metrics. In addition, they carried out continuous assessments throughout the process to guarantee that stakeholders used pertinent evidence, that resources addressed stakeholder concerns, and to gain insights from the overall knowledge sharing process [17,35,38,43,45,47].

In order to ensure the long-term viability of intended knowledge transfer results, knowledge brokers concentrated their efforts on enhancing the capabilities and promoting self-sufficiency among stakeholders. They encouraged stakeholders to engage in reflective practice [35,38] in order to enhance their understanding of their own practices connected to the use of evidence. KBs facilitated the devel-

opment of evidence-based policies and knowledge products such as policy briefings [31-33], reports [30,50], and books for various stakeholders. KBs sometimes had a part in predicting and encouraging the wider health agenda to support the long-term viability of stakeholder goals. KBs also ensured ongoing involvement of stakeholders by advocating for allocated staff resources for knowledge translation (KT) initiatives, and by promoting the integration of evidence-informed decision-making components in performance evaluations and professional development plans for senior staff and decision-makers [21,29,30,43,48,38].

Efficacy of knowledge bases:

After evaluating the quality of the methods used, it was found that two studies Russell et al. [39,44,52] and Dobbins et al. [21,38,46,49] satisfied the criteria for acceptable methodological rigor. One research found that the KB approach had a beneficial impact on stakeholders' knowledge and practices, as supported by [39,44,52]. However, another study did not observe a statistically significant influence on stakeholders' practices, as shown by [21,38,46,49]. Due to the conflicting results and inadequate quality of the methods used in previous studies, it is unclear if KBs are beneficial in health-related situations.

Skills transformation:

According to Waqa et al. [33], their participants acquired skills in evidence-informed policymaking through a series of training workshops led by knowledge brokers (KBs). They provided evidence of this skill development by referring to the participants' perceptions [32] and the creation and presentation of 20 policy briefs by the participants to high-level officials [33]. Furthermore, Yost and colleagues [48,49] assessed the efficacy of customized knowledge brokering techniques in improving the ability to make decisions based on evidence. They discovered that participants who closely collaborated with the knowledge broker exhibited a positive shift in their abilities for making evidence-informed decisions [49]. Nevertheless, because to the methodological constraints, we are unable to assert that the KB treatments conducted by Waqa et al. [32] and Yost and colleagues [48,49] were the causes of the observed improvements in participants' abilities.

Alteration in policy or procedures:

Van Kammen et al. [51] detailed the process by which the Netherlands Organisation for Research and Development, a knowledge base institution, produced a study that led to the Dutch Society of Obstetrics and Gynecology revising their policy on the definition of in vitro fertilization therapy. In their study, Campbell et al. [36] found that their

knowledge brokering (KB) project had direct effects on policy or practice. They used a technique called “evidence check” which included giving policy makers with fast evaluations of evidence.

Furthermore, Waqa et al. [32] conducted a sequence of knowledge-based workshops focused on creating evidence-informed policy briefs. They found that three out of the six participating firms successfully established policies aimed at promoting a healthy work environment. In addition, Yost and colleagues [48,49] discovered that participants who used customized knowledge base (KB) procedures had a significant improvement in their ability to make decisions based on evidence. Regrettably, because to the constraints of the methodology used, we are unable to definitively establish that the KB interventions conducted by van Kammen et al. [51], Campbell et al. [36], Waqa et al. [32], and Yost and colleagues [48,49] were the direct cause of the observed changes in policies and practices.

Russell and colleagues [39,44,52] observed improvements in practice when assessing the influence of their knowledge-based intervention on the use of four clinical evaluation instruments by physiotherapists. Participants provided self-reported data on their tool use using questionnaires administered before the knowledge base intervention, immediately after the intervention, and again at 6 and 12 months after the intervention. Except for one tool, the reported use of the tools in practical application rose, and the impact persisted even after one year, indicating a successful knowledge base approach. No notable methodological issues were found.

Dobbins et al., conducted a randomized controlled experiment to assess the effects of three knowledge translation (KT) methodologies on the integration of research findings into public health programs and policies. The study referenced four sources, namely [21,38,46,49]. The interventions aimed to encourage children to maintain a healthy body weight and differed in their level of intensity. The least intensive intervention involved providing access to a web-based collection of systematic reviews. The moderately intensive intervention included personalized, targeted messages along with access to the website. The most intensive intervention included support from a knowledge broker, personalized, targeted messages, and access to the website. The results showed that the KB method did not effectively promote evidence-informed decision-making. However, the authors saw a potential tendency towards a positive impact when the research culture inside the business was low. The lack of observed impact of the KB intervention may

be attributed to the significant turnover of participants and inadequate exposure of health department workers to the intervention. The authors recognized the difficulties in using an empirical study methodology to assess the success of KT initiatives, while no major methodological issues were found.

The KB function within KT is founded on the principle that interpersonal interaction increases the probability of modifying behavior [53]. Thus far, the available data about the role and usefulness of KBs has mostly consisted of anecdotal or theoretical information. Nevertheless, considering that KBs are an expensive and demanding knowledge transfer approach, it is crucial to comprehend their functioning and obtain rigorous proof of their impact before promoting their broad use [49].

The practical functioning of knowledge bases:

This review aimed to enhance theoretical understanding of knowledge brokering by examining the specific functions performed by knowledge brokers (KBs), as there is currently no universally recognized job description or set of qualifications for KBs. The findings of this study may contribute to the development of knowledge translation-focused education and practice for both current and future KBs. In the last ten years, KBs have been extensively used in many health-related situations across the world [17,21,32,33,36,38,39,42–44,46,48,49,51,52]. Although there were differences in the contexts, treatments, and job descriptions, we found that the activities and tasks associated with these roles aligned with the definition of KBs as individuals who manage knowledge, facilitate connections, and enhance capabilities [8,9]. Additionally, our research discovered a substantial similarity between each of these job descriptions, showing that knowledge brokers functioned as a combination of the knowledge manager, linkage agent, and capacity builder responsibilities. The specific role undertaken by knowledge brokers depended on the extent and goals of the information transfer project.

Difficulties in quantifying the effects of a knowledge base:

Assessing the influence of knowledge bases (KBs) is a difficult task, made more difficult by the fact that some KBs are hesitant to take credit for the accomplishments that arise from their work [15]. However, several brokers proposed that their influence was primarily centered on expediting the process and enhancing capabilities, and that any ensuing results (such as policy changes) should be credited to the team that the broker collaborated with. KBs essentially act as the driving force for transforming how individuals involved in a pro-

ject get, understand, and use information. To bring about this shift, knowledge brokers (KBs) must successfully traverse settings that are sensitive to context and effectively negotiate solutions that are both timely and realistic to meet the different demands of stakeholders. When trying to assess the effects of these different knowledge-based activities, it is necessary to consider several contextual aspects that inevitably make the measuring process more complex.

Conclusion:

Knowledge brokers (KBs) play a crucial role in knowledge transfer (KT) initiatives by working together with stakeholders to ease the transmission and exchange of information in various and complex situations. Upon investigating the practical functioning of KBs, we discovered that the activities and duties associated with these roles aligned with the suggested description of KBs as knowledge managers, linking agents, and capacity builders. Furthermore, these roles often intersected with one another. The results of our study also showed substantial variation in the venues, treatments, and job descriptions of the brokers. When evaluating the practical success of KBs, we examined the stated changes in knowledge, skills, policies, and practices resulting from the KB interventions. However, due to the scarcity of outcome data that satisfied rigorous methodological standards, the results were equivocal. Hence, it is important for researchers to document quantifiable results of knowledge base interventions to provide robust proof of their impact prior to promoting their wider adoption.

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الاستخدام الاستراتيجي للتخطيط في المنظمات الصحية: مراجعة

الخلفية: يتعاون وسطاء المعرفة (KBs) مع أصحاب المصلحة الهامة لتمكين نقل وتبادل المعلومات في بيئة محددة. في الوقت الحالي، توجد اعتقادات متسعة بأنه لا توجد بيانات كافية حول فعالية وسطاء المعرفة والعوامل التي تؤثر على أدائها كأسلوب لترجمة المعرفة (KT).

هدف العمل: الهدف من هذا البحث كان جمع معلومات شاملة حول خصائص وسطاء المعرفة في بيئات ذات صلة بالصحة وتقييم فعالية وسطاء المعرفة في تيسير ترجمة المعرفة في هذه السياقات.

الطرق: تم إجراء تقييم شامل باستخدام تقنية البحث التي وضعها أمين المكتبة المتخصص في البحث الصحي. تم إجراء بحث شامل في ثمانية قواعد بيانات إلكترونية (MEDLINE, Embase, PsycINFO, CINAHL, ERIC, Scopus, SocINDEX, Health, Business Elite) بالإضافة إلى مصادر الأدب الرمادي ذات الصلة، مع التركيز على المواد باللغة الإنجليزية. قام اثنان من المراجعين بتقييم النصوص الخلاصات بشكل مستقل، فحصوا المنشورات بأكملها، واستخرجوا البيانات، وأجروا تقييمات الجودة. استخدم التحليل الأسلوب النمائي التأكيدي. من أجل أن تكون مؤهلة، يجب أن يكون البحث قد تم في بيئة ذات صلة بالصحة، وثق استخداماً عملياً لوسطاء المعرفة، ويكون متاحاً باللغة الإنجليزية.

النتائج: أظهرت النتائج أن وسطاء المعرفة (KBs) قاموا بمجموعة متنوعة من الواجبات في مختلف البيئات ذات الصلة بالصحة. قدمت النتائج دليلاً على دور وسطاء المعرفة كمديرين للمعرفة، ووكلاء ربط، وبناء القدرات. في هذه المراجعة، قمنا بتحليل بيانات النتائج من مجموعة معينة من الدراسات ($n=1$) لتحديد أي أدلة على التغيرات في المعرفة، والمهارات، والسياسات أو الممارسات المرتبطة بوساطة المعرفة. اتبعت دراستان معايير منهجية صارمة، مما أدى إلى بيانات مبهمه حول كفاءة وسطاء المعرفة.

الاستنتاج: في الختام، قام وسطاء المعرفة، كمديري معرفة ووكلاء ربط وبناء قدرات، بأداء عدة وظائف لتسهيل نقل ومشاركة المعلومات بين أصحاب المصلحة والسياقات والقطاعات ذات الصلة بالصحة. من غير المؤكد إلى أي حد نجحوا في أداء وظيفتهم بفعالية في تيسير عمليات ترجمة المعرفة؛ فإن الدراسات الصارمة الإضافية ضرورية لمعالجة هذا الموضوع وتحديد التأثير المحتمل لوسطاء المعرفة على التعليم والممارسة والسياسة.