World Medical & Health Policy

WILEY

WMHP

RESEARCH ARTICLE OPEN ACCESS

Evidence Use at the Regional Health Agency of Ile-de-France: Analysis of Practices, Obstacles, and Needs

Tony Zitti[1] | Lola Traverson[1] | Amandine Fillol[2] | Andrainolo Ravalihasy[1] | Christian Dagenais[3,4] | Aurélie Hot[3] | Valéry Ridde[1]

[1]Université Paris Cité, IRD, Inserm, Ceped, Paris, France | [2]Université de Bordeaux, Inserm, BPH, U1219, Mérisp/PHARES Equipe Labellisée Ligue Contre le Cancer, CIC 1401/CHU de Bordeaux, Service de prévention/Université de Bordeaux, ISPED, Chaire prévention, Bordeaux, France | [3]RENARD Team, University of Montreal, Montreal, Quebec, Canada | [4]Department of Psychology, University of Montreal, Montreal, Quebec, Canada

Correspondence: Tony Zitti (tonyjonan@yahoo.fr)

Received: 24 April 2024 | **Revised:** 24 April 2025 | **Accepted:** 31 May 2025

Funding: The CourtISS project is co-financed by the Regional Health Agency of Ile-de-France (AAP ISS 2021) and the Agence Nationale de la Recherche (SAPS-RA-MCS 2021).

Keywords: evidence | evidence-based policy | France | knowledge translation | social inequalities in health

ABSTRACT

Professionals and decision-makers in regional or local administrations often face time and resource constraints that hinder evidence-based decision-making. This article examines the practices, obstacles, and needs relating to evidence use within the Regional Health Agency of Ile-de-France, a decentralized agency of the French Ministry of Health and Access to Care. We used a mixed-methods action research approach, including an online questionnaire completed by 60 agents. In addition, we conducted 27 semi-structured interviews with certain staff members. We also conducted an exploratory group interview with three documentalists. The results of the structural equation models show that agents' skills in accessing evidence, institutional support and being a project leader were correlated with evidence use in decision-making 89% ($p = 0.009$), 35% ($p < 0.001$), and 48% ($p = 0.031$) respectively. Respondents reported having skills in identifying and accessing experiential (84.1%, $p = 0.007$), contextual (84.8%, $p = 0.002$), and scientific (73.6%, $p = 0.486$) knowledge. In addition, 79.5% ($p = 0.274$) of respondents stated they felt competent in assessing the reliability and relevance of evidence to inform their decision-making. Although the quantitative results show that respondents generally declared moderate to moderately high levels of competence in accessing and assessing the quality and reliability of evidence, the qualitative analysis highlights partial discrepancies. Several agents mentioned lacking the necessary skills to access and evaluate evidence effectively. This discrepancy can be explained by several factors, including a subjective overestimation of respondents' 'competence' in the closed-ended questionnaires, resulting in an overall positive self-perception, as well as obstacles to identifying and accessing scientific knowledge (language barrier), difficulties in accessing paid scientific journals, lack of time on the part of agents, and work overload. These findings highlight a disconnect between agents' perceived competence and actual capabilities in accessing and evaluating evidence. It is therefore essential to go beyond simple self-reported measurement by using mixed-method approaches to understand better the complexity of the factors that influence the use of evidence in decision-making in public health agencies. Building an evidence ecosystem in decentralized organizations could lead to better-informed policies, reduced social inequality in health, and improved resource allocation.

Summary

- Both individual skills and institutional support influence access to evidence. Staff who report skills in identifying and accessing evidence are more likely to use it in their professional practices.
- Although agents perceive themselves as competent to assess the quality and reliability of evidence, it is important to consider the social desirability biases that may influence their response.
- Although the agents say that they have the personal skills to synthesize and adapt evidence, the vast majority believe that they do not have the time to do so and that it is not their role. They need support in synthesizing the evidence.
- Scientific knowledge is used less frequently than contextual and experiential knowledge by agents in decision-making, revealing a major challenge in anchoring a culture of evidence-based decision-making.

1 | Introduction

There is a gap between the available evidence and its use in public policy-making (Oliver et al. 2014). The *evidence-based policy* (EBP) approach, initially developed in the 1990s in the medical field, has since been extended to various sectors of public decision-making (Laurent et al. 2009). To enhance the effectiveness and adaptation of public decisions to the needs of society, EBP aims to help public decision-makers at all levels and professionals in the field to make informed decisions by effectively using available knowledge in their decision-making processes and practices (Agence nouvelle des solidarités actives 2017; Galluccio 2021).

Although many decision-makers are familiar with the principles of EBP, the use of evidence in daily practice remains limited (Laurent et al. 2009; Floyd et al. 2019). In this article, we define evidence as scientific knowledge (articles published in peer-reviewed journals, books, literature reviews, meta-analyses, experiential knowledge (professional articles and reviews, blogs, policy narratives, databases, promoters' activity reports), and contextual knowledge (working documents, activity reports, study or research reports, collective expertise, best practice guidelines, local health diagnoses, consensus conferences) (Institut national de santé publique du Québec 2009; Cambon 2021).

Evidence is the result of a search for useful knowledge. The characterization of evidence is linked to the explanation given for the knowledge (Banta 2003). Public health knowledge can be categorized into three main types: knowledge derived from research (research reports or scientific articles, literature reviews, systematic reviews and meta-analyses), knowledge derived from tacit knowledge (public health and expert opinions) and knowledge derived from analyzed data (data on the state of health and well-being of the population, sociodemographic data, etc.) (Institut national de santé publique du Québec 2009). In this article, we use the concepts of *evidence* and *public health knowledge* interchangeably because they are closely related.

1.1 | Evidence-Based Policy Practice in France

Policymakers and practitioners face many challenges in developing and implementing EBP (Agence nouvelle des solidarités actives 2017). The France 2030 investment plan aims to position France as a leader in healthcare research and innovation (Campus France 2023). While EBP is gaining traction in France, with growing recognition of the importance of integrating scientific evidence into public decision-making (Agence nouvelle des solidarités actives 2017; Maxim 2024), several familiar obstacles persist. These obstacles include limited access to existing knowledge, language barriers that make it difficult to understand evidence, and a lack of time and skills to synthesize and apply the evidence effectively (Laurent et al. 2009; Agence nouvelle des solidarités actives 2017).

While evidence is encouraged as a foundation for public health policies, its implementation is often complex and depends on the context of implementation (Orton et al. 2011). In France, efforts have created a favorable environment for evidence-based health promotion. However, interventions are shaped by specific contexts, making it difficult to apply universal evidence (Cambon et al. 2010). Addressing these local contexts is essential to effectively implement evidence-based policies (Andersen and Smith 2022).

1.2 | The Practices of the Regional Health Agency of Ile-de-France in Terms of Using Evidence to Reduce Social Inequalities in Health

The Ile-de-France region has a great capacity for producing and promoting knowledge, which makes a major contribution to strengthening links between local players (Benamouzig 2023). One of the missions of the Regional Health Agency (RHA) is to translate evidence into public policy at the regional level (Benamouzig 2023). An RHA is an administrative body under the authority of the Ministry of Health and Access to Care, which manages the health system in each French region and oversees local initiatives. A study in France showed that vulnerable populations face a combination of social inequalities in health (SIH) when exposed to risks, differential vulnerability to illness, differences in care, or even confinement (Bajos et al. 2022). A study found that at the start of the COVID-19 pandemic, there was excess mortality in departments, particularly those with the most pronounced territorial inequalities in urbanization, population density, housing conditions, and occupational exposure (Mangeney et al. 2020; Ridde et al. 2024). The French departments are administrative divisions at an intermediate level between the region and the municipality. They are placed under the authority of a prefect. The department's areas of responsibility are mainly health and social services, rural amenities, departmental roads, and investment and running costs for colleges.

In the field of public health, one of the major advances of the COVID-19 health crisis has been the use and discussion of evidence by players in the health field and beyond (Benamouzig 2023). While there is unanimous agreement on the existence of SIHs during the COVID-19 pandemic in the Ile-de-France region, efforts by the RHA Ile-de-France to take into

account the social determinants of inequalities in public action have "come up against a dearth of knowledge, and/or poor translation of this knowledge into an understanding of levers for action in real-life situations" (Ginot and Grémy 2022). For RHA Ile-de-France, as for most public organizations, a number of structural obstacles stand in the way of better use of evidence: (1) a lack of strategies on the use of evidence, (2) an over-abundance and fragmentation of available knowledge, (3) weak links between research and public players, (4) difficulties in translating the results of studies into decision-making processes and professional practices, (5) divergent temporalities between the pace of knowledge production and the pace of public action (Benamouzig 2023). To improve evidence-use, RHA Ile-de-France has proposed establishing a *knowledge brokerage* function (Ibid).

1.3 | Knowledge Brokerage as an Interface to Facilitate Evidence-Based Policy

The term *knowledge translation* (KT) encompasses "all the efforts made to help publicize and recognize research activities and results.... with a view to their use by practitioners, decision-makers and the general public, whether interactive or not" (Fonds de recherche du Québec—Société et culture 2011). Knowledge brokering is a key component of KT strategies (Yamanie et al. 2023). For several years now, knowledge brokering has been increasingly promoted as an innovative systemic approach to reducing the gap between the production of knowledge and its use by decision-makers, managers, and stakeholders in the field (Langeveld et al. 2016; Dobbins et al. 2007; Clark et al. 2022). Brokering at the science-policy interface can be described as an essential intermediary function between the world of research and decision-makers, practitioners, or the general public. Brokering enables evidence to be adapted, interpreted, and synthesized according to the needs and demands of decision-makers, thereby facilitating its practical use (Gluckman et al. 2021).

Using a knowledge broker can increase the likelihood of evidence-based policies being adopted (Combs et al. 2022; National Collaborating Centre for Methods and Tools 2022). Knowledge brokers are individuals or organizations whose role is to facilitate access, sharing, development, and use of evidence by an organization's actors. However, we lack scientific evidence of the effectiveness of knowledge brokering, including the factors that influence its success and the mechanisms for achieving impact (Chapman et al. 2017; Chapman et al. 2021).

The structure of the interface between science and public policy and the associated work processes determines whether and how scientific knowledge reaches decision-makers (Maxim 2024). In France, several structures play the role of interface between science and public policy, for example, universities, engineering schools, research institutes (which account for the bulk of scientific knowledge production), ministry departments, etc. (Maxim 2024). These organizations can act as producers of scientific knowledge, synthesizers (meta-analyses, literature reviews), or knowledge brokers (Maxim 2024).

1.4 | Decentralization of the Healthcare System and the Use of Evidence

The use of evidence is influenced by factors such as the level of centralization, democratization of the state, bureaucratic organization, and the relationship between evidence and social norms (Liverani et al. 2013; Ansah et al. 2024). The majority of KT schemes operate at the national level (Lacouture 2016). In the United Kingdom, for example, some knowledge brokering organizations aim to promote research by middle managers and professionals in the field (Agence nouvelle des solidarités actives 2017).

When policies are decentralized, it is more important to inform decision-makers and professionals at the regional or local level (Agence nouvelle des solidarités actives 2017). When these players have more room to manoeuvre to adapt public policy to the local context, the question arises of their ability to make evidence-informed decisions, this challenge is compounded by their generally limited time and resources (Agence nouvelle des solidarités actives 2017). It is necessary to consider these political and institutional factors that influence the use of health evidence in decision-making (Liverani et al. 2013).

In France, the directorates and departments of the Ministries play a key role in brokering scientific knowledge (Maxim 2024). However, these structures remain a research field that is often difficult to access for studies on the science-policy interface (Maxim 2024). It is essential to understand the needs, practices, and obstacles of decision-makers in a decentralized intermediary organization to improve the integration of evidence into the practice of decision-makers and professionals. In France, to our knowledge, no scientific articles have explored the influences of facilitating factors or obstacles to using evidence within a decentralized institution like the RHA at the regional healthcare level. To address this gap, we conducted a study to understand the barriers, practices, and needs in terms of using evidence for decision-making in a decentralized intermediary organization of the French health system, such as the RHA Ile-de-France.

2 | Methods

2.1 | Study Context

RHA Ile-de-France is a public body under the authority of the Ministry of Health and Access to Care (Agence Régionale de Santé Île-de-France 2023). Its primary missions are to steer public health and regulate healthcare provision. The Agency has a workforce of around 1200. It is structured into eight departmental delegations (local RHA branches responsible for implementing public health policies at the department level), five business divisions at head office (Department of Autonomy, Innovation, Research and Digital Transformation Department, Healthcare Services Department, Public Health Department, Health Monitoring and Safety Department), and three support directorates (accounting agency, directorate for resource allocation and steering, and the general secretariat), (Agence Régionale de Santé Île-de-France 2023).

2.2 | The CourtISS Project

In France, knowledge brokering initiatives within institutions like the RHA are rare. To bridge the gap between available evidence and the public response to SIH in Ile-de-France, the head office of RHA Ile-de-France, on the recommendation of the Public Health Department, decided to pilot a knowledge brokering intervention in November 2021. Two research teams (Centre Population et Développement [Ceped] and Équipe RENARD) and members of the Public Health Department administration thus implemented a knowledge brokering action research project to reduce SIH (CourtISS).

CourtISS was an action research project testing knowledge brokering intervention within RHA Ile-de-France to improve staff use of evidence in reducing SIH. *Action research* is defined as a process *with*, *for*, and *by* the people involved in both the questioning and the production of meaning, to inform the research and intervention of which it is at the heart (Reason and Bradbury 2011) (Reason and Bradbury 2011). This scientific approach is advocated in research on health systems and policies to promote their social relevance (Gilson et al. 2013).

The project's senior investigators have the experience and expertise in setting up such action research on healthcare systems and knowledge brokering (Ridde et al. 2011; Boaz and Nutley 2019; Mc Sween-Cadieux et al. 2019). The project was carried out by a research team from the Ceped laboratory at the Institut de Recherche pour le Développement (IRD) in collaboration with the RENARD team, KT experts from Quebec (Canada), and RHA Ile-de-France staff.

The CourtISS project ran from April 2022 to September 2023. It consisted of two components: a *research* component and an *action* component. The action component includes the implementation of several knowledge brokering activities (thematic working groups, expert presentations, training, practical exercises) within RHA Ile-de-France over a 12-month period (September 2022–September 2023). The research part includes (1) the study of the context and the evidence-use needs of RHA Ile-de-France staff (the subject of this study); and (2) the evaluation of the effectiveness and implementation of the knowledge brokering intervention.

This action research approach was characterized by the involvement of the staff members from RHA the very beginning of the co-construction of the research questions. The project was co-developed by researchers and RHA staff members, and the agency co-funded 50% of the action-research project, demonstrating its commitment and involvement.

The data collection tools were developed and validated in collaboration with three ARS agents involved in the action-research. The presence of a broker (T.Z.), who joined the staff members from RHA, made it possible to work iteratively with the agents to define and adapt the knowledge brokering activities. This iterative process, which is the very essence of action research, made it possible to incorporate feedback from participants to adjust and improve the intervention in real time.

Action research is distinguished from other approaches to public health research by its participatory approach, its democratic impetus, and its simultaneous contribution to the social sciences (production of knowledge) and to social change (improvement of policies and practices) (Koshy et al. 2011). Table 1 shows the knowledge brokering activities carried out within RHA Ile-de-France. Coordinated by two knowledge brokers (T.Z. and L.T.), these activities had the following objectives: (i) to identify scientific knowledge relating to SIH that would inform decision-making and to make this knowledge available in a concise and accessible format; (ii) to train and support the professional staff involved so that they identify and use scientific knowledge in their work; and (iii) to test reflective tools for observing, understanding and analyzing the inclusion of SIH in public health interventions.

Thirty-four staff members from RHA Ile-de-France participated in the CourtISS project activities. For more details on the conceptual framework of the knowledge brokering activities, see the action research protocol (Traverson et al. 2024), and the progress of the action research (Traverson and Zitti 2023).

2.3 | Research Strategy

To realize our research in a complex organizational context, we used a mixed-methods action research approach (Ivankova and Wingo 2018; Proudfoot 2023). Action research is a collaborative process that involves participants in both the questioning and the production of meaning, allowing for ongoing adjustments to research and action (Reason and Bradbury 2011). We used a convergent mixed-methods approach (quantitative and qualitative collected simultaneously from June to July 2022) to identify stakeholders' perceptions and practices regarding evidence use within the RHA (Creswell and Plano Clark 2018). We analyzed qualitative and quantitative data separately and then compared these findings to draw more general conclusions.

2.4 | Data Collection Tools

We adapted the validated tool from the Canadian Foundation for Healthcare Improvement (Canadian Foundation for Healthcare Improvement 2014); see Supporting Information S1: Appendix 1. The reliability and validity of a measuring instrument are elements that help to guarantee its quality (Kimberlin and Winterstein 2008; Mohajan 2017). The four dimensions for assessing the use of evidence within a healthcare organization, as identified by the validated Canadian Foundation for Healthcare Improvement tool, are shown in Table 2.

We used a three-stage methodology to translate and test data collection tools based on the original tool. The questionnaire adaptation process took place in three phases: (1) the questionnaire adaptation phase; (2) adaptation of the questionnaire by means of a test; and (3) development of the final version of the questionnaire. The first phase involved selecting questions relevant to our context and translating the questionnaire from English to French. The questionnaire was adapted in line with the action research objectives pursued in our research and the various dimensions derived from the validated tool we selected.

TABLE 1 | Activities carried out as part of the knowledge brokerage intervention.

Activities	MOOC introduction to knowledge translation (KT)*	Creation of thematic groups (TG)**
Objectives	■ Familiarize yourself with the concepts, main activities and tools of KT	■ Apply what is learned from the MOOC ■ Enhance the skills of RHA Ile-de-France staff (training in bibliographic research, bibliographic management tools, realizing summaries and computer graphics) ■ Meet with researchers who are experts in the topics in question ■ Create networks of practice
Method	■ Four months of viewing ■ One meeting organized by the brokers per month	■ One meeting organized by the brokers per month per TG
Benefits for RHA Ile-de-France staff	■ Better understanding and grasp of KT concepts, activities, and tools ■ Useful routine learning ■ Better understanding and grasp of themes ■ Opening up to the humanities and social sciences	■ A better understanding and grasp of the issues involved ■ Opening up to the human and social sciences ■ Reflections on the functions and missions of RHA Ile-de-France staff
Challenges encountered	■ Low MOOC completion rate (26.66% obtained a certificate of achievement)	■ The challenge of engaging staff over the long term ■ The institution does little to value staff involvement ■ Difficulty for professionals to apply learning in their routine work

*MOOC accessible at: https://catalogue.edulib.org/fr/cours/umontreal-renard101/.
**The three SIH-related themes selected—'Discrimination and/or health', 'Atmospheric pollution and health', and 'Complementary human resources in health' - were chosen by the professionals at RHA Ile-de-France who wanted and needed to acquire more scientific knowledge of the subject.
Source: Traverson and Zitti 2023.

TABLE 2 | Four general areas for assessing evidence use within a healthcare organization.

Dimensions	Questions
Acquire	Can your organization find and obtain the research findings it needs?
Assess	Can your organization assess research findings to ensure they are reliable, relevant, and applicable to you?
Adapt	Can your organization present research to decision-makers in a useful way?
Apply	Are there skills, structures, processes, and a culture in your organization to promote and use research findings in decision-making?

Source: Canadian Foundation for Healthcare Improvement 2014, p. 4.

The questionnaire adaptation phase consisted of a questionnaire test, the aim of which was to adapt the questions so that they were clear, relevant, and appropriate for our sample. The first version of the questionnaire was submitted to four external researchers and by members of the action research team—including six researchers and three RHA staff involved in designing and implementing the project. These reviewers provided feedback on question order and wording. The final version of the questionnaire incorporated all the changes made to the initial questionnaire.

The interview guides focused on key questions exploring the resources available to staff for identifying and using evidence; the role of evidence in decision-making processes and practice; staff skills in analyzing the quality, relevance, and reliability of evidence; and proposals for increasing the capacity (individual and organizational) to mobilize evidence within the Agency.

2.5 | Sampling

The questionnaire survey and semi-structured interviews were carried out with staff who used evidence in their work in two departmental delegations (DD 1 and DD 2) and three business divisions at the head office level (Research and Digital Transformation Department, Healthcare Services Department, Public Health Department). To collect quantitative data, we distributed an online questionnaire to all staff concerned ($N = 100$). Seventy-five

people responded, with a total of 60 fully completed responses to the questionnaire (80% completion rate). The reference population for the quantitative survey consisted of staff (project managers, project officers, thematic advisers, department heads) from the Public Health Department ($N = 40$), Healthcare Services Department ($N = 20$), Research and Digital Transformation Department ($N = 10$), DD1 ($N = 15$), DD2 ($N = 15$).

To target the staff using evidence, we sent the questionnaire to the heads of the business divisions and the departmental delegations. Then, it was sent to those staff who had to use evidence in their routine work. We followed up twice with the staff to complete the questionnaire, which took an estimated 15 min to complete.

We collected qualitative data at the same time as the online questionnaire. T.Z. and L.T. conducted 27 exploratory semi-structured interviews with several staff members (project managers, project officers, thematic advisers, and department heads). We contacted respondents by e-mail. We conducted the interviews at the respondents' place of work. We selected these people according to their status/function, their experience and seniority within RHA Ile-de-France, their availability, and according to the empirical saturation observed as the interviews progressed. We have reached empirical saturation for qualitative sampling. Empirical saturation refers to the point in the data collection where respondents no longer provide any additional information so that further data collection becomes redundant (Saunders et al. 2018; Hennink and Kaiser 2022). T.Z. also conducted an exploratory group interview with the three documentalists in the monitoring and documentation department. This group interview provided insight into the department's functioning and the challenges faced by the three documentalists. The interviews lasted an average of 45 min.

2.6 | Data Processing and Analysis

2.6.1 | Quantitative Data

The quantitative analysis involved a sample of 60 people who provided information about the different general areas of evidence use within a healthcare organization. This sample was representative of the reference population ($N = 100$), in that the differences between those not included and those included in the quantitative analysis were insignificant (see table in Supporting Information S1: Appendix 2). The variables used and the associated questions in the questionnaire are summarized in Supporting Information S1: Appendix 3. Respondents to the questionnaires provided declarative answers based on their professional position. For example, being a thematic adviser refers to the functions of certain agents as well as their professional positions. We carried out quantitative analyses using Stata® 17 SE software. Individual characteristics, access to evidence, its assessment and adaptation, and ultimately its application (i.e., time spent by staff identifying and analyzing different types of evidence for decision-making) are described in terms of the proportion of responses from the sample to each question asked. The questions used in the analysis are summarized in Supporting Information S1: Appendix 3. In particular, access to evidence is described in terms of skills and collaboration, and evidence use is defined in terms of application to decision-making and institutional support for evidence use. We used the Chi-squared test with a 5% error threshold to determine whether the differences in proportions were significant.

We developed the hypothesis following the semi-structured interviews and the initial descriptive analyses. According to this hypothesis, evidence use in decision-making depends on factors such as the gender of the individual; the position held by the staff; their skills and collaborations for accessing, assessing the relevance of, and adapting evidence; and the institutional support for evidence use. The questions in Supporting Information S1: Appendix 3 were used to measure these dimensions. The structural equation model allows for path analysis to test the hypothesis by aggregating the information contained in the question responses to measure the dimensions and then highlight those that had the greatest influence on evidence use.

In the model, the dependent variable is the use of evidence, which is a latent variable measured using the frequency of use of scientific, contextual or experiential data. We consider five latent explanatory variables: (1) staff skills in accessing evidence (measured using skills for accessing scientific, experiential, and contextual data, as well as time spent accessing these data), (2) institutional support (measured by the availability of resources for accessing evidence, the promotion of evidence use, and clear communication of research priorities), (3) collaborations to access evidence (measured using the frequency of internal and external collaborations), (4) evaluation of evidence (measured using skills and collaborations to evaluate the reliability of evidence), and (5) adaptation of evidence (measured using skills and collaborations to present evidence in a concise way that is adapted to target audiences). Finally, the model is adjusted for individual characteristics (gender and position held) to measure their influence on each latent variable Supporting Information S1: Appendix 4.

2.6.2 | Qualitative Data

We chose thematic analysis as our approach. Thematic analysis consists of identifying and grouping a certain number of representative themes in a corpus, and analyzing the data to realize an overview of the corpus as a whole, identifying complementary or divergent aspects (Paillé and Mucchielli 2021). We processed the data in three stages. In the first stage, the recordings of the interviews were transcribed. To analyze the data, we developed a code tree based on the dimensions of the validated tool (Supporting Information S1: Appendix 5), corresponding to the second stage of data processing. This code tree was used to code the transcribed data using QDA Miner Lite (V2.0.5). The third stage consists of coding the interviews. Coding is defined as a process by which the raw data is systematically transformed and aggregated into units (codes) that allow a precise description of the relevant characteristics of the content (Bardin 2013; Paillé and Mucchielli 2021). T.Z. carried out the coding.

We followed a deductive and inductive content analysis approach (Elo and Kyngäs 2008). This integration of both approaches allowed us to identify empirical themes that provided deeper insights into the context in which evidence was used

within the Agency. By integrating these two approaches, we have sought to draw on the complementary strengths of each approach. The deductive approach ensures that our analysis remains grounded in existing theoretical knowledge (use of theoretical framework; hypotheses or validated tool), allowing us to assess whether the data collected confirms or qualifies previous findings (Elo and Kyngäs 2008). Whereas the inductive approach allows us to let new themes emerge from the raw data, without being limited by a predefined conceptual framework, to capture the complexity and diversity of respondents' perceptions, experiences or behaviors (Elo and Kyngäs 2008).

2.7 | Ethical Approval

Ethical approval for this action research was granted by the Research Ethics Committee of the Université Paris Cité (CER U-Paris Cité), IRB No. 00012022-61.

3 | Results

The quantitative results relate to a sample of 60 people, 70.0% ($N = 42$) of whom were women. The sample consisted of project officers (28%, $N = 17$), service or department heads (25%, $N = 15$), thematic advisers (20%, $N = 12$), project managers (18%, $N = 11$), and other positions (health research engineer, trainee) (8%, $N = 5$) (Supporting Information S1: Appendix 6). The quantitative data were used to assess the distribution of individuals who did or did not use evidence (i.e., scientific, experiential, or contextual knowledge) in their decision-making, according to individual characteristics; level of access to evidence, its assessment and adaptation; and institutional support for evidence use (Supporting Information S1: Appendix 6).

3.1 | Identification and Access to Evidence by Agents

The results of the structural equation models (Figure 1) show that the personal skills of agents in accessing evidence are significantly associated (contribute the most) with the use of evidence by agents in decision-making within the Agency.

Thus, evidence access skills are 89% ($p = 0.009$) correlated with the use of evidence in decision-making (Supporting Information S1: Appendix 5). Variables related to access to evidence, in particular skills in identifying experiential knowledge ($p = 0.007$) and contextual knowledge ($p = 0.002$) as well as the fact of having had internal ($p = 0.035$) and external ($p = 0.004$) collaboration to access this data, are those significantly associated with the use of evidence in decision-making (Supporting Information S1: Appendix 4). These results highlight that agents with better skills in accessing experiential and contextual knowledge are more likely to use it. Furthermore, the descriptive results show that agents report better skills in identifying experiential knowledge (84.1%, $p = 0.007$) and contextual knowledge (84.8%, $p = 0.002$) than scientific knowledge (73.6%, $p = 0.486$). The qualitative results confirm that scientific knowledge is the least used compared to contextual and experiential knowledge by agents in decision-making. However, they think that scientific knowledge can be useful for decision-making. The majority of respondents think that access to contextual and experiential knowledge is easier than access to scientific knowledge:

> *We tend to mobilise experiential data instead... we work in a network with other delegations that are structured in the same way as us and that also implement local initiatives, which they share in a network with other delegations.*
>
> [Department head, female]

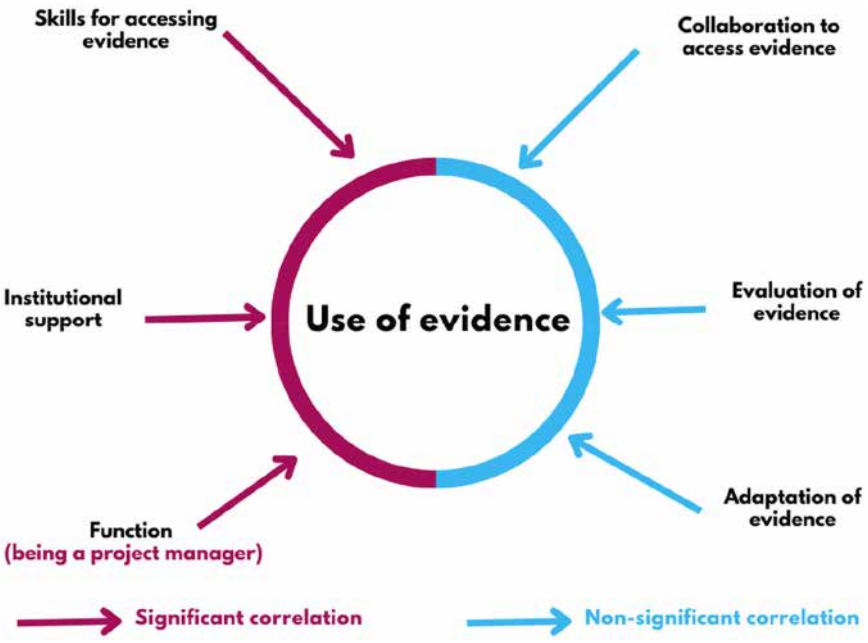

FIGURE 1 | Structural equation model explaining the use of evidence.

Staff often relied on publications from three main sources, whose quality they deemed credible: (1) the Haute Autorité de Santé (HAS, an independent scientific public authority mandated to improve the quality and sustainability of the French healthcare system); (2) the Haut Conseil de la Santé Publique (HCSP, an advisory body that deals with public health issues); and (3) Santé publique France (SPF, the French national public health agency, a public administrative body under the auspices of the Minister for Health that is a center of reference and expertise in public health). These publications were a mainstay for respondents, and scientific knowledge was the least used. However, respondents believed scientific knowledge could be useful to them in decision-making: "Basically, as far as we're concerned, as soon as we start working on a programme or implementing certain actions, we're already looking at the grey literature [HAS, HCSP, SPF, etc.]" explained one project officer (male).

The descriptive results show that 73.6% of the agents stated that they felt competent to seek out scientific knowledge to inform their decision-making. Although the quantitative analysis did not show a statistically significant association between agents' skills in accessing scientific knowledge and the use of evidence ($p = 0.486$), the qualitative interviews showed that the majority of agents stated that they were competent in seeking out scientific knowledge to inform their decision-making. Although the quantitative results indicate that the majority of agents declare themselves competent to seek out scientific knowledge, the qualitative analysis highlights an important nuance: some agents mention a lack of competence in effectively seeking out scientific knowledge.

This partial discrepancy may be explained by a subjective overestimation of *competence* in the closed questionnaires, resulting in a generally positive self-perception, as well as by organizational obstacles to identifying and accessing scientific knowledge. There could be a gap between their perception of their competence to access scientific knowledge and reality. We hypothesize that the fact that they do not have regular access to scientific knowledge reduces their ability to access this knowledge over time:

> *I think perhaps the institution thinks that their thematic referents will by definition mobilise this data (evidence-based data). In a way, that's their role in fact... Maybe my colleagues do. But in any case, for me,...I don't even really know where to find the evidence, in other words I don't even know how to look for the data.*
>
> [Thematic referent, female]

RHA Ile-de-France agents have access to the Cairn portal (an online platform providing access to scientific publications in the humanities and social sciences) and to a few scientific journals, as do all RHA and social ministry departments. The Agency does not have enough subscriptions to scientific journals. The agents found it difficult to access paywalled scientific journals. Faced with this difficulty in accessing paywalled articles, a few respondents reported adopting certain strategies, such as (1) paying for certain articles or subscriptions to specialized journals themselves; (2) using sites for pirating scientific articles (e.g., Sci-Hub); or (3) requesting access to certain paywalled journals from collaborators or acquaintances outside the Agency (e.g., researchers, hospital practitioners, etc.):

> *It's already happened on PubMed where, in fact, you have articles that aren't always directly accessible [free].... I think I used Sci-Hub...I believe I bookmarked it, afterwards...it doesn't always work, but in any case you have articles.... [M]aybe doing that on my work computer, given that it's not very legal, isn't a good idea.*
>
> [Project manager, male]

3.2 | Agents' Skills in Assessing the Reliability and Relevance of Evidence

The descriptive results show that 79.5% of agents stated that they felt competent to assess the reliability and relevance of evidence to inform their decision-making. Although the quantitative analysis did not show a statistically significant association between agents' skills in assessing the reliability and relevance of evidence and the use of evidence ($p = 0.274$), the qualitative interviews showed that the majority of agents stated that they were competent in assessing the reliability and relevance of experiential and contextual knowledge but not scientific knowledge. The qualitative analysis highlights the difficulties agents have in assessing the reliability and relevance of scientific articles in the field of public health. For the majority of respondents, the language barrier (the majority of scientific articles are in English) is an obstacle that adds to the feeling that they lack the skills to judge the quality, relevance, and reliability of scientific articles:

> *I was trained to do that [assess the quality of scientific articles], but it's far too difficult a job, frankly. It's not easy to say that an article has a good methodology, I don't even feel capable of it, and yet I was trained in that.*
>
> [Project officer, female]

> *Already in English, I'm not super mega at ease, we don't practise at all, and I wasn't trained during my studies to read articles critically.*
>
> [Thematic adviser, female]

3.3 | Skills and Collaboration of Agents to Adapt Evidence

The descriptive results show that 78.9% of people who use evidence have the personal skills, time, and organizational resources to present evidence to target audiences in a synthetic and appropriate way. Although the quantitative analysis did not show a statistically significant association between personal skills, time, and organizational resources to present evidence to target audiences in a synthetic and adapted way and the use of evidence ($p = 0.353$), the qualitative interviews show that some agents declare that they are competent to present evidence to target audiences in a synthetic and adapted way (literature

review). However, some respondents stated that it was not their role to carry out literature reviews:

> *I don't associate being up to date on the state of the art... with being able to do documentary research.... I think it's a waste of time to use a doctor to do documentary research. It's not a waste of time to use a doctor to read the documentary research that's been done and keep up-to-date. And synthesise it, know how to synthesise it, know how to regurgitate it, know what's relevant and what's not, and all that, but doing literature monitoring and literature searches is not actually a medical skill.*
>
> [Thematic adviser, male]

The descriptive results show that 80.6% of agents who use evidence say that they work with internal or external experts to help them present the relevant evidence identified in a synthetic and adapted way. The qualitative results show that agents collaborate more with external experts than with internal experts to help them present evidence in a synthetic and adapted manner. The qualitative results show that there is little internal collaboration between RHA Ile-de-France staff and the monitoring and documentation department, which offers a range of resources and documentary services in the Agency's areas of expertise. However, with three workers for around 12,000 staff, that department lacked the human, material, and financial resources it needed to respond to all requests. Most respondents were unaware of the monitoring and documentation department's existence, the documentary resources it has and to which the Agency subscribes (e.g., journals, databases, etc.), and the services it offers. Some respondents reported that the procedure for requesting documents from the monitoring and documentation department required a lot of effort.

Sometimes, staff contacted the monitoring and documentation department to help them access certain journals and databases. The documentalist said they sometimes advised agents on databases. They spoke of their difficulties in carrying out literature reviews for the agents:

> *At one point, we had a partnership with them [the documentalist] where we determined after targeting topics on which they would do a sort of literature review for us.... it was really good, even if it wasn't done very well because they weren't super experts.... in fact, it's super hard to target what you want, because at the beginning you read everything, and then afterwards, well, actually it fell through.*
>
> [Thematic adviser, female]

3.4 | Organizational Support for Staff in Using Evidence in Decision-Making

The results of the structural equation models (Figure 1) show that institutional support and the position held (in this case that of project manager) are significantly associated (contribute the most) to the use of evidence by staff in decision-making within the Agency. Institutional support and being a project manager were respectively correlated at 35% ($p < 0.001$) and 48% ($p = 0.031$) with the use of evidence in decision-making (Supporting Information S1: Appendix 5). The qualitative results confirm that the use of evidence varies according to the profiles and career paths of the agents. In addition, institutional support is perceived by respondents as an essential lever for promoting the use of evidence within the Agency. In their view, there are a number of organizational obstacles to the use of evidence by agents: (1) lack of a culture of evidence use within the Agency; (2) lack of visibility of the missions and resources (databases, journal subscriptions, etc.) offered by the monitoring and documentation department; (3) lack of financial, human, and material resources in that department; (4) staff lack of time to mobilize evidence; and (5) work overload. Some respondents thought the Agency reacted more to emergencies and that not enough time was taken to reflect on the short and medium terms:

> *People are all very overworked or overbooked.... I find it complicated, too, and I realize...there's a real frustration at not having the time... particularly for everything that will be in the data... to go and look, to think, to inquire, and to construct things.*
>
> [Thematic adviser, female]

Some also noted that the high turnover of contractual staff within the agency could be detrimental to evidence use. In their view, this high turnover would not facilitate contractual staff commitment to developing their skills to make better use of evidence:

> *I think that contractual staff on fixed-term contracts are less focused on the long term, and so we may be less committed to even training or developing this type of skill [in them], as they leave after a certain time.*
>
> [Department head, female]

In addition, this high turnover of positions can have a negative impact on organizational memory in terms of experiential knowledge. When staff leave an organization, they take their knowledge and expertise with them, which can result in loss of knowledge and skills for the organization: “When I arrived, I had zero files, so I had to make enquiries of partners at the RHA each time to get information,” explained one project officer (male).

The descriptive results show that 70.3% of officers stated that the agency valued them and encouraged them to consider evidence in their work. Although the quantitative analysis did not show a statistically significant association between the Agency valuing and encouraging officers to use evidence in their work. and the use of evidence ($p = 0.283$), the qualitative interviews show that the majority of officers state that the use of evidence in decision making is a priority for the Agency, in theory. However, for them, in practice, there is no culture within RHA of using evidence in decision-making, nor is there a structure or process to promote it. The qualitative analysis helps to qualify the quantitative results:

I find that in words it [evidence] is valued and in practice it's not. The most important thing is that the contract is signed, it's that... the brief is written, and it's not reading an article or spending an afternoon doing research.

[Project manager, male]

Despite this, most respondents believed using evidence was necessary to support their work. However, some considered that they did not always need to use evidence in their more administrative roles (e.g., financial monitoring of partners). At the start of the CourtISS project, most of the agents were suspicious of the action research. However, once they understood its purpose, they had a positive perception of it. Even so, the majority of respondents expressed doubts about changes that the CourtISS action research project could bring about within the Agency. To be able to use evidence autonomously, some respondents thought they needed training to help them make better use of evidence, especially scientific evidence:

My first reaction when I was told about this project [CourtISS], I confess, was to say to myself, isn't this sort of thing, to some extent, supposed to be our basic job, to mobilise knowledge to make decisions? Which isn't necessarily what we do.

[Department head, female]

4 | Discussion

Our study examines the context, barriers, and needs for knowledge use in a regional public health organization in France, such as an RHA. Our findings show that evidence plays an important role in public health decision-making. In addition, we identified factors that influence the use of evidence within a regional public health organization, such as an RHA staff.

The role of evidence in decision-making aimed at reducing SIH is essential, as it informs policies and interventions designed to reduce these SIH. While evidence exists to support public health decision-making in favor of reducing SIH, its use is not always optimal. There is as yet no consensus on the definition of evidence in public health, particularly in the field of health promotion (Smith et al. 2006; O'Neill 2003; Cambon et al. 2010; Lamboy 2021). The lack of consensus on the definition of evidence can have an impact on public health practice and research, particularly in health promotion. This lack of consensus generates divergences in the hierarchy of levels of evidence deemed valid or relevant (Cambon et al. 2010; Banta 2003). For example, while Evidence-Based Medicine often privileges randomized controlled trials as the strongest form of evidence, health promotion places greater importance on qualitative, contextual, non-comparative methods or expert consensus, which considers the complexity of the social determinants of health. This hierarchy of evidence borrowed from medicine has shown its limits in health promotion (Maunier 2019). There are still debates as to what constitutes quality or adequate evidence for policy and practice (Boaz and Nutley 2019). Our study shows that scientific knowledge is the least used compared to other types of knowledge in public health decision-making. Boaz and Nutley (2019) show that scientific knowledge is rarely sufficient on its own and that it needs to be combined with other types of knowledge. It is, therefore, necessary to continue thinking in terms of plural approaches that recognize the diversity of forms of evidence.

Our results were obtained by collecting and analyzing quantitative and qualitative data separately. To triangulate and validate the data, we compared the similarities and differences between our qualitative and quantitative results (Creswell and Plano Clark 2018). We obtained an overall convergence between the quantitative and qualitative results, although nuances emerged from the qualitative data, which we have presented in a table in Supporting Information S1: Appendix 7. The comparison of the quantitative and qualitative results enabled us to make a nuanced analysis of the skills declared by the agents in terms of access to scientific knowledge to guide their decision-making. Our quantitative results show that skills in accessing evidence are 89% ($p = 0.009$) correlated with the use of evidence in decision-making. In addition, 73.6% of respondents stated that they felt competent to search for scientific data, reflecting an overall positive perception of their ability to use scientific knowledge in their professional practices. The qualitative data revealed that some agents, although expressing a general feeling of competence, actually recognized specific limitations when it came to carrying out in-depth documentary research, assessing the quality of scientific knowledge or translating this knowledge into concrete action.

Our results show that there is a gap between respondents' perceived skills and their actual skills in using evidence. Several studies confirm our results by showing that there is a gap between the perceived skills of respondents to a self-declared questionnaire and their actual skills in the use of evidence assessed objectively (Caspi et al. 2006; Lai and Teng 2011). Perceived competence is the perception people have of their ability to carry out a task and the importance they attach to it (Bandura 1997; Marrs et al. 2022). This concept, derived from Bandura's socio-cognitive theory, plays a decisive role in explaining behavior and intentions to act (Bandura 1997). Deci and Ryan (2000) show that the perception of competence is a need for *social relationships*. The wording of quantitative questions, which focus on perceived competence as measured by a self-assessment questionnaire, can be influenced by cognitive biases, in particular the social desirability bias (Pierce et al. 2023). Social desirability bias refers to the tendency of individuals to respond in such a way as to be perceived favorably by others, rather than reflecting their true opinion or behavior (Pierce et al. 2023). In environments where the use of scientific knowledge is theoretically encouraged institutionally, agents may have tended to overestimate their perceived level of competence, to comply with the agency's expectations. The comparison of quantitative and qualitative data highlights the importance of adopting a differentiated analysis between respondents' perceived competence and their actual ability. Measuring perceived competence alone is not always sufficient to assess professionals' actual ability to seek out and use evidence. It seems essential to go beyond simple declarative measurement by combining mixed approaches to gain a better understanding of the complexity of the factors that influence the use of evidence in decision-making. Furthermore, there is a heterogeneous interpretation of the term *competence* by respondents, and this semantic variability is often underestimated in quantitative studies, which highlights the value of combining

methodological approaches (quantitative and qualitative) to capture the depth and complexity of respondents' perceptions of competence. Qualitative interviews offer a framework that is more conducive to the expression of doubts, personal limitations, or contextual obstacles (lack of time, restricted access to scientific databases) that influence the actual use of evidence.

Every day, administrators, managers, practitioners, street-level workers, funders, and executives in the healthcare system are responsible for defining, developing, financing, and implementing healthcare interventions and public policies (Kothari et al. 2009; Cohen and Aviram 2021). There are very few KT systems designed specifically for decision-makers (Lacouture 2016). Our results showed that agents had to contend with using evidence in decision-making. The various strategies they adopted to access scientific articles, which are not free, clearly showed there was a need to use evidence, especially scientific knowledge. While decision-makers are advised to make decisions based on the best available evidence, there are a number of obstacles to the use of this evidence (World Health Organization 2021; Combs et al. 2022). Our study identified four main obstacles to the use of evidence, especially in the use of scientific knowledge for decision-making: (1) a sense of not having sufficient skill for accessing and assessing the reliability and relevance of scientific knowledge; (2) lack of time; (3) lack of organizational culture of evidence use; and (4) lack of organizational support. These same obstacles have been identified in the literature. The main obstacles to the effective use of evidence in an organization are users' lack of resources (human, material, financial), time, skills, and motivation to access, interpret, and critically assess the validity of research and to relate it to their practices, lack of access to bibliographic resources, and lack of support for the EBP process (Odierna et al. 2013; Loncarevic et al. 2021; Boutcher et al. 2022; Engels et al. 2020).

To improve the use of scientific knowledge within an organization, it is essential to address six key mechanisms of change: (1) awareness of the importance of the role of evidence; (2) consensus-building between researchers and decision-makers on policy-relevant issues and the type of evidence needed; (3) decision-makers' access to scientific knowledge in an appropriate format; (4) interaction between researchers and decision-makers to build trust, relationships and collaborations; (5) an increase in decision-makers' skills to access and use evidence; (6) a change in the decision-making structure increases both the opportunity and motivation to use evidence (Bornbaum et al. 2015; Odierna et al. 2013). Engels et al. (2020) show that to promote the use of evidence by healthcare professionals in France, it is important to integrate this approach into (1) daily practice through reflective analysis, (2) facilitate access to scientific literature, (3) set up journal clubs and (4) train professionals in the approach to using evidence for decision-making. We believe that to deal with the obstacles we observed at the RHA Ile-de-France in terms of the use of knowledge, it would be important to act on several of the six mechanisms for change outlined above. In addition, a number of KT activities that could be implemented within the organization should help to improve the use of evidence within the organization.

Although, in theory, the Agency encourages agents to use evidence for decision-making, the findings of this study show that, in practice, few activities have been organized to support this process. The same conclusion is drawn by Mbachu et al. (2024), who show in their study in Nigeria that despite the fact that decision-makers recognize the importance of evidence in decision-making, there is still a weak culture of evidence within many public health institutions. The use of evidence is not explicitly included in the staff job descriptions (project officer, project manager, department head, etc.). Instead, their job descriptions are more focused on operational responsibilities. To encourage regional health agencies in France to align with a KT approach, they should prioritize the creation of a culture receptive to KT (Golhasany and Harvey 2023). Establishing an evidence-based culture within the RHA will require the implementation of several KT mechanisms. Lacouture (2016) has, for example, identified a number of KT mechanisms used in other countries to encourage decision-makers to use data on evidence-based or promising interventions in the field of prevention and health promotion that could be implemented in France: (1) access to databases on interventions or bases of interventions, (2) access to portals of guides or recommendations, (3) access to interfaces for methodological support and training, (4) access to experience-sharing networks, (5) setting up structures responsible for KT, and finally (6) schemes that may be a mixture of the above.

Furthermore, to promote the use of evidence within an organization, it is essential to develop an *evidence ecosystem* that includes a variety of initiatives to be effective (Golhasany and Harvey 2023; Institut national de santé publique du Québec 2009; Martin-Fernandez et al. 2021; Boaz and Nutley 2019). In Box 1, we outline some activities that can be

BOX 1. | Some activities that can be implemented in an organization to facilitate the use of evidence in decision-making

Some initiatives that can be implemented in these organizations: (1) the development of communities of practice, which bring together groups of people to participate in a collective learning process around an area of common interest, (2) scientists-in-residence, these are scientists who integrate the premises of practitioners to work together on practical problems in their environment, (3) evidence synthesis centers, which are knowledge sharing and exchange centers funded to produce and disseminate high-quality evidence syntheses, (4) knowledge brokers, who are intermediaries between researchers and potential users, (5) *research champions* are individuals who provide leadership to support the use of research in an organization, (6) research networks provide opportunities for knowledge exchange and facilitate research-related interactions between individuals and organizations, (7) research-practice partnerships are long-term collaborations between people from research and practice settings (identifying problems requiring research, conducting studies and applying findings in practical contexts), (8) research training programs for policymakers and practice settings build capacity to do and/or use research (Golhasany and Harvey 2023; Boaz and Nutley 2019).

implemented in an organization to facilitate the use of evidence in decision-making.

Researchers often have gaps in effectively communicating research findings to decision-makers (Mbachu et al. 2024). In addition to improving evidence-use capabilities within public health organizations, it is equally important to improve researchers' skills so that they can better communicate research findings to decision-makers. However, one of the challenges that can arise in terms of improving researchers' skills to better communicate research results to decision-makers is that KT activities are not valued in their career progression. What's more, some researchers may feel that it's not their job to communicate the results of their research to decision-makers. To meet these challenges, knowledge brokering can be a KT strategy that can facilitate the link between researchers and decision-makers. A review of the literature shows that, beyond strengthening skills at the individual level, it is also essential to prioritize skills enhancement at the organizational level by the recruitment of knowledge brokers (Golhasany and Harvey 2023).

4.1 | Limitations of the Study

In this study, we were able to identify several biases. The study was not anchored in a conceptual framework at the outset which may have led to the omission of important dimensions that could have an impact on the use of evidence—such as factors beyond the agents' control, including political influences, media, and legislation. In future studies, we believe it would be beneficial to ground the research from the outset in a conceptual framework in several categories of theoretical approaches, models and conceptual frameworks that exist (process models, evaluation frameworks, determinant frameworks and classical theories) (Nilsen 2015; Graham and Tetroe 2007; Ziam et al. 2024; Redman et al. 2015). For example, the knowledge-to-action framework developed by Graham et al. (2006) is a process model that describes and plans the various stages involved in translating evidence into action.

Also, because the action research project was co-financed by the RHA Ile-de-France, there is a risk of bias in the selective reporting of results—known as selective outcome reporting bias (Sterne et al. 2016). The size of the sample used for the quantitative analyses limited the number of questions we could explore and reduced the power to detect statistically significant effects. However, we did not observe any significant differences in individual characteristics between the target population and the analysis sample (Supporting Information S1: Appendix 2), thus supporting the validity of our findings. Despite the small sample size, our results showed significant effects on the determinants of evidence use.

While this study provides information on the use of evidence in the context of RHA Ile-de-France, our results can also be generalized to other RHA contexts in France. We believe the representativeness of our sample means that our results can be generalized to other regional public health organization contexts, such as RHAs in France. The validated 'Is research working for you?' tool we used may have limitations that affect its effectiveness. Many of these limitations may be related to content and construct validity, validation processes, tool interpretation, and cultural and linguistic validity (Roebianto et al. 2023; Squires et al. 2013). To reduce the limitations of the tool, we adapted it to the context of our study so that it met the needs of the study. The tool has been adapted to our specific context. Looking ahead, a more systematic approach to validating the tool may help enhance its utility and relevance.

5 | Conclusion

To effectively address SIH, it is essential to integrate evidence into decision-making processes. Building an evidence ecosystem within decentralized organizations can lead to better-informed policies that more effectively address SIH and guide resource allocation. Because evidence use is context-dependent, efforts to promote it need to consider the specific political, organizational, and cultural contexts in which decisions are made. By adopting a KT approach that considers the various factors influencing the use of evidence in decentralized organizations, decision-makers can create ecosystems or interfaces that facilitate the integration of evidence into decision-making. Testing initiatives to improve evidence use within these organizations should be seen as an essential learning opportunity, given the paucity of research on the use of evidence in French organizations. Knowledge brokering could have a particularly important impact within decentralized healthcare organizations, such as regional health agencies. Implementing and evaluating knowledge brokering activities in these contexts could provide valuable insights into the factors that determine the success or failure of such interventions in the French setting. Building internal capacity and supporting the integration of scientific knowledge into organizational practices is essential to achieving global health goals.

Acknowledgments

We would like to thank the members of the Regional Health Agency of Ile-de-France who were involved in the action research project. We would like to thank Nils Minssieux, Gwendal Bars, and Dr. Luc Ginot for their contributions to this study. Their advice and constant support were essential to the success of this study, and their expertise and understanding of the context were invaluable to the completion of this study.

Conflicts of Interest

L.T. and T.Z. are partially remunerated by the Regional Health Agency of Ile-de-France. The other co-authors declare no conflicts of interest.

References

Agence nouvelle des solidarités actives. 2017. "What Works Centres britanniques: Quels enseignements pour des politiques fondées sur la preuve en France?" (p. 220). gence nouvelle des solidarités actives. https://www.solidarites-actives.com/sites/default/files/2018-03/Ansa_RapportWWC_2017_VF.pdf.

Agence Régionale de Santé Île-de-France. 2023, mars 6. "Organisation, organigramme, contacts au siège et en délégation départementale." https://www.iledefrance.ars.sante.fr/organisation-et-contacts.

Andersen, N. A., and K. Smith. 2022. "3 Evidence-Based Policy-Making." In *De Gruyter Handbook of Contemporary Welfare States*, edited by B. Greve, 29–44. De Gruyter. https://doi.org/10.1515/9783110721768-003.

Ansah, E. W., S. Maneen, A. Ephraim, J. E. Y. Ocloo, M. N. Barnes, and N. N. Botha. 2024. "Politics–Evidence Conflict in National Health Policy Making in Africa: A Scoping Review." *Health Research Policy and Systems* 22, no. 1: 47. https://doi.org/10.1186/s12961-024-01129-3.

Azungah, T. 2018. "Qualitative Research: Deductive and Inductive Approaches to Data Analysis." *Qualitative Research Journal* 18, no. 4: 383–400. https://doi.org/10.1108/QRJ-D-18-00035.

Bajos, N., A. Spire, L. Silberzan, et al. 2022. "When Lack of Trust in the Government and in Scientists Reinforces Social Inequalities in Vaccination Against COVID-19." *Frontiers in Public Health* 10: 908152. https://doi.org/10.3389/fpubh.2022.908152.

Bandura, A. 1997. *Self-Efficacy: The Exercise of Control*. W.H. Freeman.

Banta, H. D. 2003. "Considerations in Defining Evidence for Public Health." *International Journal of Technology Assessment in Health Care* 19, no. 3: 559–572. https://doi.org/10.1017/S0266462303000515.

Bardin, L. 2013. "Chapitre II. Le codage." In *L'analyse de contenu*, 134–149. Presses Universitaires de France. Cairn.info. https://doi.org/10.3917/puf.bard.2013.01.

Benamouzig, D. 2023. "EVALUATION DU PROJET REGIONAL DE SANTE (PRS) D'ILE-DE-FRANCE 2018-2022." (p. 360) [Rapport final d'évaluation]. Chaire Santé de Sciences Po. https://www.sciencespo.fr/chaire-sante/sites/sciencespo.fr.chaire-sante/files/RAPPORT%20FINAL_EVALUATION%20PRS%202_Juillet-23%206.03%20relecture%20AS%20%26%20Cl%C3%A9ment%20(1).pdf.

Boaz, A., and S. Nutley. 2019. "Using Evidence." In *What Works Now?*, edited by A. Boaz, H. Davies, A. Fraser, and S. Nutley, 251–278. Policy Press. https://doi.org/10.51952/9781447345527.ch012.

Bony Roger Sylvestre, A., V. Ridde, and L. Queuille. 2019. "5. L'analyse d'une recherche-action: Combinaison d'approches dans le domaine de la santé au Burkina Faso." In *Évaluation des interventions de santé mondiale*, edited by V. Ridde and C. Dagenais, IRD ed., 125–153. Éditions science et bien commun. https://doi.org/10.4000/books.irdeditions.33568.

Bornbaum, C. C., K. Kornas, L. Peirson, and L. C. Rosella. 2015. "Exploring the Function and Effectiveness of Knowledge Brokers as Facilitators of Knowledge Translation in Health-Related Settings: A Systematic Review and Thematic Analysis." *Implementation Science* 10, no. 1: 162. https://doi.org/10.1186/s13012-015-0351-9.

Boutcher, F., W. Berta, R. Urquhart, and A. R. Gagliardi. 2022. "The Roles, Activities and Impacts of Middle Managers Who Function as Knowledge Brokers to Improve Care Delivery and Outcomes in Healthcare Organizations: A Critical Interpretive Synthesis." *BMC Health Services Research* 22, no. 1: 11. https://doi.org/10.1186/s12913-021-07387-z.

Cambon, L. 2021. "Transfert de connaissances, données probantes, transférabilité: De la clarification des concepts aux changement des pratiques." *La Santé en action* 456: 23–25.

Cambon, L., V. Ridde, and F. Alla. 2010. "Réflexions et perspectives concernant l'evidence-based health promotion dans le contexte français." *Revue d'Épidémiologie et de Santé Publique* 58, no. 4: 277–283. https://doi.org/10.1016/j.respe.2010.05.001.

Campus France. 2023, mai 30. "France 2030: Dynamiser la recherche et l'innovation en santé." https://www.campusfrance.org/en/actu/france-2030-accelerer-la-recherche-et-l-innovation-en-sante#:~:text=%E2%80%9CBecoming%20the%20first%20innovative%20and,and%20its%20health%20innovation%20initiatives.

Canadian Foundation for Healthcare Improvement. 2014. "Is Research Working for You? A Self-Assessment Tool and Discussion Guide for Health Services Management and Policy Organizations." https://www.nccmt.ca/uploads/media/media/0001/02/e7e5b1a6bca71f303a5cf786089853c0f32d63f8.pdf.

Caspi, O., P. Mcknight, L. Kruse, V. Cunningham, A. J. Figueredo, and L. Sechrest. 2006. "Evidence-Based Medicine: Discrepancy Between Perceived Competence and Actual Performance Among Graduating Medical Students." *Medical Teacher* 28, no. 4: 318–325. https://doi.org/10.1080/01421590600624422.

Chapman, E., T. Pantoja, T. Kuchenmüller, T. Sharma, and R. F. Terry. 2021. "Assessing the Impact of Knowledge Communication and Dissemination Strategies Targeted at Health Policy-Makers and Managers: An Overview of Systematic Reviews." *Health Research Policy and Systems* 19, no. 1: 140. https://doi.org/10.1186/s12961-021-00780-4.

Chapman, K., F. Boschetti, E. Fulton, et al. 2017. "Knowledge That Acts: Evaluating the Outcomes of a Knowledge Brokering Intervention in Western Australia's Ningaloo Region." *Environmental Management* 60, no. 5: 896–907. https://doi.org/10.1007/s00267-017-0917-1.

Clark, E. C., B. Dhaliwal, D. Ciliska, S. E. Neil-Sztramko, M. Steinberg, and M. Dobbins. 2022. "A Pragmatic Evaluation of a Public Health Knowledge Broker Mentoring Education Program: A Convergent Mixed Methods Study." *Implementation Science Communications* 3, no. 1: 18. https://doi.org/10.1186/s43058-022-00267-5.

Cohen, N., and N. F. Aviram. 2021. "Street-Level Bureaucrats and Policy Entrepreneurship: When Implementers Challenge Policy Design." *Public Administration* 99, no. 3: 427–438. https://doi.org/10.1111/padm.12755.

Combs, T., K. L. Nelson, D. Luke, et al. 2022. "Simulating the Role of Knowledge Brokers in Policy Making in State Agencies: An Agent-Based Model." Supplement, *Health Services Research* 57, no. S1: 122–136. https://doi.org/10.1111/1475-6773.13916.

Creswell, J. W., and V. L. Plano Clark. 2018. *Designing and Conducting Mixed Methods Research*, 3rd ed. Sage.

Deci, E. L., and R. M. Ryan. 2000. "The 'What' and 'Why' of Goal Pursuits: Human Needs and the Self-Determination of Behavior." *Psychological Inquiry* 11, no. 4: 227–268. https://doi.org/10.1207/S15327965PLI1104_01.

Dobbins, M., P. Rosenbaum, N. Plews, M. Law, and A. Fysh. 2007. "Information Transfer: What do Decision Makers Want and Need From Researchers?" *Implementation Science* 2, no. 1: 20. https://doi.org/10.1186/1748-5908-2-20.

Elo, S., and H. Kyngäs. 2008. "The Qualitative Content Analysis Process." *Journal of Advanced Nursing* 62, no. 1: 107–115. https://doi.org/10.1111/j.1365-2648.2007.04569.x.

Engels, C., E. Boutin, F. Boussely, et al. 2020. "Use of Evidence-Based Practice Among Healthcare Professionals After the Implementation of a New Competency-Based Curriculum." *Worldviews on Evidence-Based Nursing* 17, no. 6: 427–436. https://doi.org/10.1111/wvn.12474.

Equipe RENARD. 15:07:22 UTC. *Le transfert de connaissances* [Sciences]. https://fr.slideshare.net/equipe_renard/diapos-dagenais-22-01-15.

Floyd, N., K. Peterson, V. Christensen, and J. Anderson. 2019. "'Implementation Is so Difficult': Survey of National Learning Health System Decision-Makers Identifies Need For Implementation Information in Evidence Reviews." Supplement, *Medical Care* 57, no. Suppl 3: S233–S238. https://doi.org/10.1097/MLR.0000000000001192.

Fonds de recherche du Québec—Société et culture. 2011. mai. "Plan d'action en matière de transfert des connaissances 2011–2014." https://frq.gouv.qc.ca/app/uploads/2021/04/plan-action-transfert-connaissances_2011-2014.pdf.

Galluccio, M. 2021. "Evidence-Informed Policymaking." In *Science and Diplomacy*, edited by M. Galluccio, 65–74. Springer International Publishing. https://doi.org/10.1007/978-3-030-60414-1_5.

Gilson, L., Alliance for Health Policy and Systems Research, and World Health Organization. 2013. "Health Policy and System Research: A Methodology Reader: The Abridged Version/Edited by Lucy Gilson." World Health Organization. https://iris.who.int/handle/10665/85536.

Ginot, L., and I. Grémy. 2022. "Les inégalités sociales de santé ont-elles été oubliées durant la crise du Covid?" AOC. https://aoc.media/

opinion/2022/09/18/les-inegalites-sociales-de-sante-ont-elles-ete-oubliees-durant-la-crise-du-covid/#_ftn1.

Gluckman, P. D., A. Bardsley, and M. Kaiser. 2021. "Brokerage at the Science–Policy Interface: From Conceptual Framework to Practical Guidance." *Humanities and Social Sciences Communications* 8, no. 1: 84. Article 1. https://doi.org/10.1057/s41599-021-00756-3.

Golhasany, H., and B. Harvey. 2023. "Capacity Development for Knowledge Mobilization: A Scoping Review of the Concepts and Practices." *Humanities and Social Sciences Communications* 10, no. 1: 235. https://doi.org/10.1057/s41599-023-01733-8.

Graham, I. D., J. Logan, M. B. Harrison, et al. 2006. "Lost in Knowledge Translation: Time for a Map?" *Journal of Continuing Education in the Health Professions* 26, no. 1: 13–24. https://doi.org/10.1002/chp.47.

Graham, I. D., and J. Tetroe. 2007. "Some Theoretical Underpinnings of Knowledge Translation." *Academic Emergency Medicine* 14, no. 11: 936–941. https://doi.org/10.1111/j.1553-2712.2007.tb02369.x.

Hennink, M., and B. N. Kaiser. 2022. "Sample Sizes for Saturation in Qualitative Research: A Systematic Review of Empirical Tests." *Social Science & Medicine (1982)* 292: 114523. https://doi.org/10.1016/j.socscimed.2021.114523.

Institut national de santé publique du Québec. 2009. "Animer un processus de transfert des connaissances: Bilan des connaissances et outil d'animation." Direction de la recherche, formation et développement, Institut national de santé publique Québec. https://www.deslibris.ca/ID/222221.

Ivankova, N., and N. Wingo. 2018. "Applying Mixed Methods in Action Research: Methodological Potentials and Advantages." *American Behavioral Scientist* 62, no. 7: 978–997. https://doi.org/10.1177/0002764218772673.

Kimberlin, C. L., and A. G. Winterstein. 2008. "Validity and Reliability of Measurement Instruments Used in Research." *American Journal of Health-System Pharmacy* 65, no. 23: 2276–2284. https://doi.org/10.2146/ajhp070364.

Koshy, E., V. Koshy, and H. Waterman. 2011. *Action Research in Healthcare*. SAGE Publications Ltd. https://doi.org/10.4135/9781446288696.

Kothari, A., N. Edwards, N. Hamel, and M. Judd. 2009. "Is Research Working for You? Validating a Tool to Examine the Capacity of Health Organizations to Use Research." *Implementation Science* 4, no. 1: 46. https://doi.org/10.1186/1748-5908-4-46.

Lacouture, A. 2016. "Etat de l'art des dispositifs mis en œuvre à l'étranger pour favoriser auprès des décideurs le recours aux données sur des interventions probantes ou prometteuses dans le champ de la prévention et de la promotion de la santé." (p. 58). Ecole des hautes études en santé publique (EHESP). https://recherche.ehesp.fr/ricap/2016/07/21/une-etude-menee-dans-le-cadre-du-collectif-inspire-id/.

Lai, N. M., and C. L. Teng. 2011. "Self-Perceived Competence Correlates Poorly With Objectively Measured Competence in Evidence Based Medicine Among Medical Students." *BMC Medical Education* 11, no. 1: 25. https://doi.org/10.1186/1472-6920-11-25.

Lamboy, B. 2021. "Interventions fondées sur les données probantes en prévention et promotion de la santé: Définitions et enjeux." 456: 6–8.

Langeveld, K., K. Stronks, and J. Harting. 2016. "Use of a Knowledge Broker to Establish Healthy Public Policies in a City District: A Developmental Evaluation." *BMC Public Health* 16, no. 1: 271. https://doi.org/10.1186/s12889-016-2832-4.

Laurent, C., J. Baudry, M. Berriet-Solliec, et al. 2009. "Pourquoi s'intéresser à la notion d' 'Evidence-Based Policy'?" *Revue Tiers Monde* 200, no. 4: 853. https://doi.org/10.3917/rtm.200.0853.

Liverani, M., B. Hawkins, and J. O. Parkhurst. 2013. "Political and Institutional Influences on the Use of Evidence in Public Health Policy. A Systematic Review." *PLoS One* 8, no. 10: e77404. https://doi.org/10.1371/journal.pone.0077404.

Loncarevic, N., P. T. Andersen, A. Leppin, and M. Bertram. 2021. "Policymakers' Research Capacities, Engagement, and Use of Research in Public Health Policymaking." *International Journal of Environmental Research and Public Health* 18, no. 21: 11014. https://doi.org/10.3390/ijerph182111014.

Mangeney, C., N. Bouscaren, M. Telle-Lamberton, A. Sauna, and V. Féron. 2020. "LA SURMORTALITÉ DURANT L'ÉPIDÉMIE DE COVID-19 DANS LES DÉPARTEMENTS FRANCILIENS." (p. 32) [FOCUS SANTÉ EN ÎLE-DE-FRANCE]. Observatoire régional de santé-île-de-France. https://www.ors-idf.org/fileadmin/DataStorageKit/ORS/Etudes/2020/covid_19_ISS/ORS_FOCUS_ISS_covid_vf_2020.pdf.

Marrs, S. A., C. Quesada-Pallarès, K. D. Nicolai, E. A. Severson-Irby, and J. R. Martínez-Fernández. 2022. "Measuring Perceived Research Competence of Junior Researchers." *Frontiers in Psychology* 13: 834843. https://doi.org/10.3389/fpsyg.2022.834843.

Martin-Fernandez, J., O. Aromatario, O. Prigent, M. Porcherie, V. Ridde, and L. Cambon. 2021. "Evaluation of a Knowledge Translation Strategy to Improve Policymaking and Practices in Health Promotion and Disease Prevention Setting in French Regions: TC-REG, a Realist Study." *BMJ Open* 11, no. 9: e045936. https://doi.org/10.1136/bmjopen-2020-045936.

Maunier, S. 2019. "Données probantes: Quel rôle pour la recherche qualitative?" *Recherches Qualitatives* 38, no. 1: 71. https://doi.org/10.7202/1059648ar.

Maxim, L. 2024. *Scientific Expertise and Insights Into Public Policy in France: Final Discussion Paper*. edited by K. Krieger and L. Melchor, Publications Office of the European Union. https://data.europa.eu/doi/10.2760/196603.

Mbachu, C., P. Agwu, F. Obi, and O. Onwujekwe. 2024. "Understanding and Bridging Gaps in the Use of Evidence From Modeling for Evidence-Based Policy Making in Nigeria's Health System." *MDM Policy & Practice* 9, no. 1: 23814683231225658. https://doi.org/10.1177/23814683231225658.

Mohajan, H. K. 2017. "Two Criteria for Good Measurements in Research: Validity and Reliability." *Annals of Spiru Haret University. Economic Series* 17, no. 4: 59–82. https://doi.org/10.26458/1746.

National Collaborating Centre for Methods and Tools. 2022, juillet 20. "Rapid Review: What Is Known About Strategies to Implement Evidence Informed Practice at an Organizational Level?" https://www.nccmt.ca/pdfs/res/eidm-strategies.

Nilsen, P. 2015. "Making Sense of Implementation Theories, Models and Frameworks." *Implementation Science* 10, no. 1: 53. https://doi.org/10.1186/s13012-015-0242-0.

O'neill, M. 2003. "Why Worry About Evidence in Health Promotion?" *Sozial- und Praventivmedizin* 48, no. 5: 317–326. https://doi.org/10.1007/s00038-003-2036-4.

Odierna, D. H., S. R. Forsyth, J. White, and L. A. Bero. 2013. "The Cycle of Bias in Health Research: A Framework and Toolbox for Critical Appraisal Training." *Accountability in Research* 20, no. 2: 127–141. https://doi.org/10.1080/08989621.2013.768931.

Oliver, K., T. Lorenc, and S. Innvær. 2014. "New Directions in Evidence-Based Policy Research: A Critical Analysis of the Literature." *Health Research Policy and Systems* 12, no. 1: 34. https://doi.org/10.1186/1478-4505-12-34.

Orton, L., F. Lloyd-Williams, D. Taylor-Robinson, M. O'Flaherty, and S. Capewell. 2011. "The Use of Research Evidence in Public Health Decision Making Processes: Systematic Review." *PLoS One* 6, no. 7: e21704. https://doi.org/10.1371/journal.pone.0021704.

Paillé, P., and A. Mucchielli. 2021. "Chapitre 12. L'analyse thématique." In *L'analyse qualitative en sciences humaines et sociales*, 5th ed. 269–357. Armand Colin. https://www.cairn.info/l-analyse-qualitative-en-sciences-humaines–9782200624019-p-269.htm.

Piedmont, R. L. 2023. "Social Desirability Bias." In *Encyclopedia of Quality of Life and Well-Being Research*, edited by F. Maggino, 6526. Springer International Publishing. https://doi.org/10.1007/978-3-031-17299-1_2746.

Pierce, C. 2023. "Mixed Methods Action Research: A Creative and Comprehensive Research Approach for Complex Practical Problems." In *Handbook of Mixed Methods Research in Business and Management*, edited by R. Cameron and X. Golenko, 365–380. Edward Elgar Publishing. https://doi.org/10.4337/9781800887954.00033.

Proudfoot, K. 2023. "Inductive/Deductive Hybrid Thematic Analysis in Mixed Methods Research." *Journal of Mixed Methods Research* 17, no. 3: 308–326. https://doi.org/10.1177/15586898221126816.

Reason, P. and Bradbury, H., ed. 2011. *The Sage Handbook of Action Research: Participative Inquiry and Practice*, 2nd ed., reprinted. SAGE.

Redman, S., T. Turner, H. Davies, et al. 2015. "The SPIRIT Action Framework: A Structured Approach to Selecting and Testing Strategies to Increase the Use of Research in Policy." *Social Science & Medicine (1982)* 136–137: 147–155. https://doi.org/10.1016/j.socscimed.2015.05.009.

Ridde, V., G. André, O. Bouchaud, and E. Bonnet. 2024. "COVID-19 Vaccination at a Hospital in Paris: Spatial Analyses and Inverse Equity Hypothesis." *Public Health in Practice* 7: 100459. https://doi.org/10.1016/j.puhip.2023.100459.

Ridde, V., M. Yaogo, Y. Kafando, et al. 2011. "Challenges of Scaling up and of Knowledge Transfer in an Action Research Project in Burkina Faso to Exempt the Worst-Off From Health Care User Fees." *BMC International Health and Human Rights* 11, no. S2: S9. https://doi.org/10.1186/1472-698X-11-S2-S9.

Roebianto, R., A. Savitri, Suciyana, and Mubarokah. 2023. "Content Validity: Definition and Procedure of Content Validation in Psychological Research." *Testing, Psychometrics, Methodology in Applied Psychology* 30, no. 1: 5–18. https://doi.org/10.4473/TPM30.1.1.

Saunders, B., J. Sim, T. Kingstone, et al. 2018. "Saturation in Qualitative Research: Exploring Its Conceptualization and Operationalization." *Quality & Quantity* 52, no. 4: 1893–1907. https://doi.org/10.1007/s11135-017-0574-8.

Smith, B. J., K. C. Tang, and D. Nutbeam. 2006. "WHO Health Promotion Glossary: New Terms." *Health Promotion International* 21, no. 4: 340–345. https://doi.org/10.1093/heapro/dal033.

Squires, A., L. H. Aiken, K. Van Den Heede, et al. 2013. "A Systematic Survey Instrument Translation Process for Multi-Country, Comparative Health Workforce Studies." *International Journal of Nursing Studies* 50, no. 2: 264–273. https://doi.org/10.1016/j.ijnurstu.2012.02.015.

Sterne, J. A., M. A. Hernán, B. C. Reeves, et al. 2016. "Robins-I: A Tool for Assessing Risk of Bias in Non-Randomised Studies of Interventions." *BMJ*: i4919. https://doi.org/10.1136/bmj.i4919.

Mc Sween-Cadieux, E., C. Dagenais, D. T. Somé, and V. Ridde. 2019. "A Health Knowledge Brokering Intervention in a District of Burkina Faso: A Qualitative Retrospective Implementation Analysis." *PLoS One* 14, no. 7: e0220105. https://doi.org/10.1371/journal.pone.0220105.

Traverson, L., and T. Zitti. 2023. "Le courtage de connaissances en faveur de la réduction des inégalités sociales de santé: Le projet CourtISS en Île-de-France (France)." *Revue francophone de recherche sur le transfert et l'utilisation des connaissances* 7, no. 3: 3. https://doi.org/10.18166/tuc.2023.7.3.36.

Traverson, L., T. Zitti, A. Fillol, et al. 2024. "Du courtage de connaissances au sein d'une institution de santé publique française pour réduire les inégalités sociales de santé: Un protocole de recherche-action." *Revue francophone de recherche sur le transfert et l'utilisation des connaissances* 8, no. 1: 1. https://doi.org/10.18166/tuc.2024.8.1.45.

World Health Organization. 2021. *Evidence, Policy, Impact. WHO Guide for Evidence-Informed Decision-Making* (p. 92). World Health Organization. https://apps.who.int/iris/bitstream/handle/10665/350994/9789240039872-eng.pdf.

Yamanie, N., N. Amanda, and Y. Felistia. 2023. "The Impact of Knowledge Brokering in Health Sector and the Challenges: A Review of Literature." *Journal of Public Health Research* 12, no. 2: 22799036231167833. https://doi.org/10.1177/22799036231167833.

Ziam, S., S. Lanoue, E. McSween-Cadieux, et al. 2024. "A Scoping Review of Theories, Models and Frameworks Used or Proposed to Evaluate Knowledge Mobilization Strategies." *Health Research Policy and Systems* 22, no. 1: 8. https://doi.org/10.1186/s12961-023-01090-7.

Supporting Information

Additional supporting information can be found online in the Supporting Information section.