The role of health administration technicians in public health policy implementation

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Abstract---**Background:** Effective public health policy implementation is crucial for improving population health outcomes; however, existing research in dissemination and implementation (D&I) science has largely overlooked the role of health administration technicians in this process. Despite the impact of policies on health, studies examining the execution of such policies are limited. **Aim:** This review seeks to identify and evaluate quantitative measures used to assess health policy implementation outcomes and determinants, filling a significant gap in the current literature. **Methods:** A systematic review was conducted following PRISMA guidelines, utilizing various academic databases to gather empirical studies that evaluated public health policy implementation from 1995 to 2019. The review analyzed 70 measures of implementation outcomes and determinants, focusing on their psychometric and pragmatic quality. **Results:** The analysis revealed that fidelity/compliance and acceptability were the most frequently assessed implementation outcomes, while readiness for implementation was the most common determinant. Only a small number of measures assessed cost implications, indicating a potential area for further research. **Conclusion:** Findings underscore the need for robust quantitative measures to accurately assess health policy implementation. The systematic review contributes to understanding how health administration technicians can effectively support policy execution, enhancing overall public health outcomes. Future research

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should focus on developing standardized tools to assess implementation in diverse contexts.

Keywords---health administration technicians, public health policy, implementation outcomes, quantitative measures, systematic review.

Introduction

There is a dearth of policy studies within dissemination and implementation (D&I) science that seek to inform implementation strategies and assess execution efforts, despite the fact that policies have a substantial impact on population health [1, 2, 3, 5, 6, 7]. Fewer studies have looked into the procedures and results of implementation than those that analyze the health consequences brought about by policies. Merely 12 (8.2%) of the 146 D&I studies funded by the National Institutes of Health (NIH) through D&I funding announcements from 2007 to 2014 were policy-related studies that assessed the content of policies, the processes involved in their development, or the health outcomes linked to them. These studies accounted for 10.5% of all NIH D&I funding [8]. Only five (41.6%) of these 12 studies evaluated implementation, while eight (66.7%) concentrated on health outcomes [8]. High-quality quantitative measures are necessary in order to distinguish policy implementation outcomes from other social outcomes, such as health benefits, and to investigate the various implications of determinants and outcomes associated to policy implementation [9]. The application of evidence-based interventions in clinical and community settings has been the subject of systematic reviews in recent years [10,11,12,13], but none that we are aware of have assessed the caliber of quantitative measures pertaining to the causes and consequences of policy implementation.

Since at least the 1970s, political science and social science have been at the forefront of study on policy implementation, which has contributed significantly to the development of the area of D&I research [1, 14]. In the past, policy research and theoretical frameworks have mostly focused on policy formulation or policy document content analysis [15]. To illustrate how elements of the sociopolitical environment, proposed policy features, and policy actors (e.g., organizations, sectors, individuals) contribute to policy change, for example, Kingdon's Multiple Streams Framework and its derivatives have been widely used in political science and broader social sciences [16,17, 18]. Policy frameworks can also help with implementation planning and assessment in D&I research. The Policy Implementation Process Framework by Sabatier and Mazmanian is one of the first frameworks to be widely accepted in policy implementation research [21] and, later, in health promotion [22], despite the fact that the terminology for policy stages has been established since the 1950s [19, 20]. However, current implementation frameworks are frequently underutilized when it comes to providing direction for implementation tactics or elucidating the reasons for a policy's success in one setting but failure in another [23]. The potential advantages of health policies might not be realized without a strong focus on implementation, and understanding of policy implementation could stagnate, impeding the evolution of collective knowledge [24]. The present review should be interpreted with consideration for the distinctions in viewpoints and

nomenclature between D&I and political science policy research. For instance, policy scholars usually refer to policy outputs, but Proctor et al. prefer the phrase implementation outcomes [14, 20, 25]. Policy implementation results are health outcomes in the targeted population, as understood by non-D&I policy researchers [20]. While policy academics talk about compliance [20], D&I scientists use the term fidelity [26]. Furthermore, non-D&I policy research refers to policy fields [24], which are networks of agencies carrying out policies and programs, whereas D&I science uses the terms outside setting, outer context, or external context to indicate influences outside the implementing organization [26,27, 28].

Finding accurate and trustworthy quantitative measurements of the processes involved in implementing health policy is vital. In policy implementation research, these metrics are crucial for moving beyond the simple categorization of notions to the comprehension of causal links [29]. In order to attain the desired health benefits, policy implementers must also determine which implementation characteristics are essential for improving policy adoption, compliance, and sustainability given the limitations of limited resources [30]. In order to achieve these goals, measures that are both pragmatic and psychometrically sound are required [10, 11, 31, 32], allowing for the investigation of complex factors and the production of accurate and valid results. This systematic review of health policy implementation measures sought to fill this vacuum in the literature by (1) identifying quantitative measures used to assess determinants within inner and outer settings and health policy implementation outcomes (IOF outcomes, often known as policy outputs in policy research); (2) characterizing and evaluating the pragmatic quality of policy implementation measures; (3) characterizing and assessing the psychometric properties of identified instruments; and (4) elucidating the gaps in health policy implementation measurement.

Methods

For D&I research measures, the study team used the systematic review methodology described by Lewis and colleagues, with great assistance from the coauthors of the Lewis team at every turn [10, 11]. As stated in the checklist, the review followed PRISMA reporting requirements. The measures found in this review are available on a publicly accessible website at (https://www.health-policy-measures.org/). We define policy and policy execution as follows for the purposes of this review: Legislation passed at the federal, state, provincial, or local levels is included in public policy, as are rules enforced by federal, state, or local government agencies or elected officials' boards (such as state boards of education in the USA) [4, 20]. The term "public policy implementation" describes how groups and coalitions of organizations, whether public or private, carry out a mandate from the government [20]. Two well-known D&I frameworks and a third, more contemporary framework that links policy and D&I research serve as the review's compass. Proctor et al. distinguish eight implementation outcomes (as opposed to health outcomes) in the Implementation Outcomes Framework (IOF): acceptability, adoption, appropriateness, cost, feasibility, fidelity, penetration, and sustainability [25]. The factors that influence implementation are described in the Consolidated Framework for Implementation Research (CFIR) by Damschroder et al. [33]. These factors include intervention characteristics, the external and

internal environments of organizations, individual characteristics within organizations, and process. Finally, Bullock's Framework for Policy Implementation Determinants offers a well-rounded viewpoint that emphasizes both external and internal setting components, such as the networks and interactions between policy actors, the political will to carry them out, and the visibility of these actors [34]. We have selected implementation determinants and outcomes based on these dimensions.

Searches We used ProQuest to look for PAIS, Worldwide Political, and ERIC; we also searched EBSCO for MEDLINE, PsycInfo, and CINAHL Plus. We did not examine the grey literature during the 12-month study period due to staffing shortages and time restrictions. Multiple terms from four key categories—health, public policy, implementation, and measurement—were used in our search. Reviews of policy implementation frameworks [34, 35], additional policy frameworks [21, 22], the labels and definitions associated with the eight implementation outcomes identified by Proctor et al. [25], in addition to CFIR construct labels and definitions [9, 33], and additional D&I research and terminology sources [28, 36, 37, 38] were considered in the development of search terms and strings. A library scientist provided further synonyms and search phrases, and the entire study team engaged in three rounds of input on the draft terms. We assessed the percentage of 18 benchmark articles that were successfully found for each test search, with 80% being the predefined acceptable precision threshold.

Criteria for Inclusion and Exclusion

The implementation actions carried out by entities mandated to act by governmental units or law were the only focus of this evaluation. As a result, this evaluation did not cover metrics that evaluated how legislation or governmental rules affected target groups' behavior or how changes in their health condition affected them. The inclusion criteria included: (1) empirical studies looking at how public policies related to physical or behavioral health were implemented after they had already been passed; (2) quantitative self-report or archival measurement methodologies used; (3) publication in peer-reviewed journals between January 1995 and April 2019; (4) publication in English; (5) studies looking at how public policies were implemented from any continent or international governing body; and (6) at least two transferable quantitative self-report or archival items that evaluated implementation determinants [33, 34] and/or IOF implementation outcomes [25]. Finding transferable measures that work in different situations and policies was the aim. A transferable item is one that may be used to different policies or situations with either no wording changes or just a change to the referent (such as the policy title or issue, like tobacco or malaria) [11]. Since web-based quantitative surveys first appeared in 1995, that year was used as the beginning point [39]. More general constructs, like implementation readiness, had several subcategories. The search parameters included the following exclusions: (1) non-empirical health policy journal articles (e.g., conceptual articles, editorials); (2) narrative and systematic reviews; (3) studies using only qualitative assessments of health policy implementation; (4) empirical studies reported in theses and books; (5) health policy studies measuring health outcomes (i.e., changes in health behavior or status within

target populations); (6) analyses of bills, stakeholder perceptions gathered to inform policy development, and policy content analyses lacking implementation assessments; (7) studies examining changes in private businesses not influenced by public policy; and (8) research from authoritarian regimes. Because there are large differences in policy settings and implementation characteristics, we electronically designed the searches to exclude policy implementation studies from non-democratic countries.

Procedures for Screening

Citations were electronically de-duplicated and imported into EndNote version 7.8. After two group pilot screening sessions, we carried out dual independent screening of titles and abstracts to elucidate inclusion and exclusion criteria as well as screening protocols. Covidence systematic review software [40] was used by abstract screeners to categorize publications as meeting inclusion criteria (yes or no). If one screener concluded that an article matched the inclusion requirements, it was advanced to full-text review. In Covidence [40], full-text screening was also carried out through two separate assessments, with weekly meetings to resolve disagreements about inclusion/exclusion. Additionally, one of the predetermined grounds for exclusion was noted by the screeners.

Method for Extracting Data

Measure metadata (such as the name of the measure, the total number of items, and the number of transferable items) and study specifics (such as the policy topic, the country, and the setting) were among the elements that were extracted. Other elements included information on the measure's development and testing, implementation outcomes and determinants that were evaluated, pragmatic characteristics, and psychometric properties. Authors were contacted by email as needed to get comprehensive measure and development details. The two coauthors (MP, CWB) agreed on the elements of extraction. A primary extractor completed the first entries and coding for each included measure. Over the course of the 12-month study, we were unable to examine every empirical application of the measure due to staff and time constraints. A second extractor checked the entries and noted any inconsistencies so that they could be discussed at consensus sessions. Within a single study, several metrics were extracted separately.

Evaluation of Measures' Quality

We used the Lewis et al. Psychometric and Pragmatic Evidence Rating Scales (PAPERS) [10, 11, 41, 42] to assess the quality of the measurements. Five pragmatic features of instruments that impact their usability are evaluated by PAPERS: item count (number of items), readability level (simplicity of language), cost (availability), training burden (degree of data collection training required), and analysis burden (ease of interpretation of scoring and results). While the psychometric rating scales were constructed in conjunction with D&I researchers [10, 11, 43], the pragmatic domains and rating scales were developed with input from stakeholders and D&I researchers [11, 41, 42]. Nine properties are included in the psychometric rating scale: internal consistency, norms, responsiveness,

predictive and concurrent criterion validity, convergent, discriminant, and known-groups construct validity, and structural validity. The provided evidence for each dimension is scored from bad (−1), none/not reported (0), minimal/emerging (1), adequate (2), good (3), and excellent (4) in both the pragmatic and psychometric scales. Higher scores demonstrate greater evidence of psychometric attributes (e.g., sufficient to exceptional reliability and validity) and more favorable pragmatic characteristics (e.g., fewer questions, availability, supply of scoring instructions and interpretations).

Presentation and Synthesis of Data

Measure transferability, empirical usage study settings, policy topics, and PAPERS rating are summarized in this section. Using quartile percentages as a guide, two coauthors (MP, CWB) consensus-coded measures into three categories of item transferability: mostly transferable (≥ 75% of items deemed transferable), partially transferable (25–74% of items deemed transferable), and setting-specific (< 25% of items deemed transferable). Items were deemed transferable if applying them to the implementation of other policies or in different contexts required just a modification in the referent (such as the policy title or topic) and no rewording. Five categories were used by abstractors to group study settings: hospitals or outpatient clinics; mental or behavioral health facilities; healthcare quality, cost, or access; schools; and multiple. In addition, abstractors documented subtopics like nutrition, physical exercise, and tobacco use and grouped policy themes into categories such as infectious or chronic diseases, mental or behavioral health, healthcare cost, access, or quality, and other. The five attributes' pragmatic ratings were added up, resulting in a total score that ranged from − 5 to 20, with higher scores denoting easier instrument use. The psychometric property total scores were computed in a similar manner for each of the nine properties. Higher values indicate evidence of numerous validity types, with possible scores ranging from -9 to 36.

Implementation Outcomes

Of the 70 measures evaluated, the most frequently examined implementation outcomes were fidelity/compliance with the policy implementation in accordance with government mandates (26%), acceptability of the policy among implementers (24%), perceived appropriateness of the policy (17%), and feasibility of implementation (17%). Fidelity/compliance was occasionally evaluated by querying implementers regarding the extent to which they altered a mandated practice [45]. In certain instances, comprehensive checklists were employed to assess adherence to the various mandated policy components, such as school nutrition policies [83]. Acceptability was gauged by soliciting staff or healthcare providers in implementing agencies about their level of agreement with specific statements concerning the policy mandate, using Likert scales for scoring. Merely eight (11%) of the included measures utilized multiple transferable items for assessing adoption, and an equal number (11%) evaluated penetration. During the full-text screening, 26 measures of implementation costs were identified (10 in included studies and 14 in excluded studies; data not presented). The temporal scope of costs varied from 12 months to 21 years, with most measures evaluated at multiple time intervals. Ten of the 26 measures addressed direct

implementation expenses. Nine studies reported findings from cost modeling. The implementation cost survey created by Vogler et al. was comprehensive [53], requesting implementing organizations to identify policy impacts on medication pricing, profit margins, reimbursement rates, and insurance co-pays.

Determinants of Implementation

Among the 70 included measures, the most commonly assessed determinants of implementation were readiness for implementation (61% assessed at least one component of readiness) and the overall organizational culture and climate (39%), followed by the specific policy implementation climate within the respective organizations (23%), relationships and networks among actors (17%), political commitment to policy implementation (11%), and visibility of the policy's role and its actors (10%). Each component of readiness for implementation was frequently assessed, including communication of the policy (31%, 22 of 70 measures), policy awareness and knowledge (26%), resources for policy implementation (non-training resources 27%, training 20%), and leadership commitment to the policy (19%). Only two studies examined organizational structure as a determinant of health policy implementation. Lavinghouze and colleagues evaluated organizational stability, defined by the frequency of re-organization, using a set of 9-point Likert items across multiple implementation determinants designed for state-level public health practitioners. They also assessed whether public health departments functioned as independent agencies or were integrated within agencies addressing additional services, such as social services [69]. Schneider and colleagues investigated coalition structure as an implementation determinant, which included items regarding the number of organizations and individuals on the coalition roster and the frequency of coalition meeting attendance [72].

Quality of Identified Measures

Higher scores are preferable, indicating that the measures are more user-friendly. Overall, the measures were readily accessible in the public domain (median score = 4), concise with a median of 11–50 items (median score = 3), and demonstrated good readability, with a median reading level between 8th and 12th grade (median score = 3). However, guidance on scoring and interpreting item scores was inadequate, yielding a median score of 1, indicating that the measures lacked recommendations for interpreting score ranges, definitive cutoff scores, and instructions for managing missing data. Generally, information concerning training requirements or the availability of self-training manuals for utilizing the measures was not reported in the included studies or measure development articles (median score = 0, not reported). Total pragmatic rating scores among the 38 measures with at least 25% transferable items ranged from 7 to 17, with a median total score of 12 out of a possible total score of 20. Median scores for each pragmatic characteristic were consistent across all measures, similar to the 38 mostly or partially transferable measures, with a median total score of 11 across all measures. Few psychometric properties were documented, and the study team noted a lack of reports on pilot testing and measure refinement as well. Among the 38 measures with at least 25% transferable items, the psychometric properties from the PAPERS rating scale total scores varied from −1 to 17, with a

median total score of 5 out of a potential total score of 36. Higher scores denote the reporting of more types of validity and reliability with high quality. The 32 measures with calculable norms achieved a median norms PAPERS score of 3 (good), indicating an appropriate sample size and distribution. The nine measures reporting internal consistency generally exhibited Cronbach's alphas ranging from adequate (0.70 to 0.79) to excellent (≥ 0.90), with a median of 0.78 (PAPERS score of 2, adequate), suggesting sufficient internal consistency. The five measures reporting structural validity attained a median PAPERS score of 2, adequate (range 1 to 3, from poor to good), indicating sufficient sample size and reasonable goodness of fit for factor analysis. Among the 38 measures, no reports were available for responsiveness, convergent validity, discriminant validity, known-groups construct validity, or predictive or concurrent criterion validity.

Conclusion

The findings of this systematic review highlight the critical role of health administration technicians in the successful implementation of public health policies. By identifying and evaluating quantitative measures that assess implementation outcomes and determinants, the study sheds light on the necessary attributes that facilitate effective policy execution. Notably, the emphasis on fidelity and acceptability as prominent implementation outcomes suggests that understanding the extent to which policies are adhered to and perceived positively by implementers is essential. These insights provide a foundation for developing targeted strategies that enhance compliance with public health mandates. Moreover, the significant assessment of readiness for implementation underscores the importance of organizational culture, climate, and resource availability in influencing successful policy execution. The review also reveals a concerning gap in the assessment of implementation costs, suggesting that future research should prioritize the evaluation of financial implications associated with policy execution. By understanding the cost-effectiveness of implementation strategies, health administrators can make informed decisions that optimize resource allocation while achieving desired health outcomes. Furthermore, the systematic review's evaluation of the psychometric and pragmatic quality of the identified measures emphasizes the need for robust and standardized tools. The development of such tools can facilitate cross-contextual comparisons and improve the validity of implementation assessments. Consequently, this will contribute to a deeper understanding of the causal links between implementation determinants and health outcomes. In conclusion, enhancing the role of health administration technicians in public health policy implementation necessitates a concerted effort to advance measurement methodologies, address gaps in current literature, and foster a culture of collaboration among stakeholders. By leveraging the insights gained from this review, policymakers and practitioners can develop more effective implementation strategies that ultimately lead to improved health outcomes for populations.

References

1. Purtle J, Dodson EA, Brownson RC. Policy dissemination research. In: Brownson RC, Colditz GA, Proctor EK, editors. Dissemination and

Implementation Research in Health: Translating Science to Practice, Second Edition. New York: Oxford University Press; 2018.

2. Brownson RC, Baker EA, Deshpande AD, Gillespie KN. Evidence-based public health. Third ed. New York, NY: Oxford University Press; 2018.

3. Preparedness, E., & Prevention, V. The Community Preventive Services Task Force.

4. Eyler AA, Chriqui JF, Moreland-Russell S, Brownson RC, editors. Prevention, policy, and public health, first edition. New York, NY: Oxford University Press; 2016.

5. Andre FE, Booy R, Bock HL, Clemens J, Datta SK, John TJ, et al. Vaccination greatly reduces disease, disability, death, and inequity worldwide. Geneva, Switzerland: World Health Organization; 2008 February 2008. Contract No.: 07-040089.

6. Cheng JJ, Schuster-Wallace CJ, Watt S, Newbold BK, Mente A. An ecological quantification of the relationships between water, sanitation and infant, child, and maternal mortality. Environ Health. 2012;11:4.

7. Levy DT, Li Y, Yuan Z. Impact of nations meeting the MPOWER targets between 2014 and 2016: an update. Tob Control. 2019.

8. Purtle J, Peters R, Brownson RC. A review of policy dissemination and implementation research funded by the National Institutes of Health, 2007-2014. Implement Sci. 2016;11:1.

9. Lewis CC, Proctor EK, Brownson RC. Measurement issues in dissemination and implementation research. In: Brownson RC, Ga C, Proctor EK, editors. Disssemination and Implementation Research in Health: Translating Science to Practice, Second Edition. New York: Oxford University Press; 2018.

10. Lewis CC, Fischer S, Weiner BJ, Stanick C, Kim M, Martinez RG. Outcomes for implementation science: an enhanced systematic review of instruments using evidence-based rating criteria. Implement Sci. 2015;10:155.

11. Lewis CC, Mettert KD, Dorsey CN, Martinez RG, Weiner BJ, Nolen E, et al. An updated protocol for a systematic review of implementation-related measures. Syst Rev. 2018;7(1):66.

12. Chaudoir SR, Dugan AG, Barr CH. Measuring factors affecting implementation of health innovations: a systematic review of structural, organizational, provider, patient, and innovation level measures. Implement Sci. 2013;8:22.

13. Rabin BA, Lewis CC, Norton WE, Neta G, Chambers D, Tobin JN, et al. Measurement resources for dissemination and implementation research in health. Implement Sci. 2016;11:42.

14. Nilsen P, Stahl C, Roback K, Cairney P. Never the twain shall meet?--a comparison of implementation science and policy implementation research. Implement Sci. 2013;8:63.

15. Sabatier PA, editor. Theories of the Policy Process. New York, NY: Routledge; 2019.

16. Kingdon J. Agendas, alternatives, and public policies, second edition. Second ed. New York: Longman; 1995.

17. Jones MD, Peterson HL, Pierce JJ, Herweg N, Bernal A, Lamberta Raney H, et al. A river runs through it: a multiple streams meta-review. Policy Stud J. 2016;44(1):13–36.

18. Zahariadis, N. (2019). The multiple streams framework: Structure, limitations, prospects. In *Theories of the policy process, second edition* (pp. 65-92). Routledge.
19. Howlett M, Mukherjee I, Woo JJ. From tools to toolkits in policy design studies: the new design orientation towards policy formulation research. Policy Polit. 2015;43(2):291–311.
20. Natesan SD, Marathe RR. Literature review of public policy implementation. Int J Public Policy. 2015;11(4):219–38.
21. Sabatier PA, Mazmanian. Implementation of public policy: a framework of analysis. Policy Studies Journal. 1980 (January).
22. Sabatier PA. Theories of the Policy Process. Westview; 2007.
23. Tomm-Bonde L, Schreiber RS, Allan DE, MacDonald M, Pauly B, Hancock T, et al. Fading vision: knowledge translation in the implementation of a public health policy intervention. Implement Sci. 2013;8:59.
24. Roll S, Moulton S, Sandfort J. A comparative analysis of two streams of implementation research. Journal of Public and Nonprofit Affairs. 2017;3(1):3–22.
25. Proctor E, Silmere H, Raghavan R, Hovmand P, Aarons G, Bunger A, et al. Outcomes for implementation research: conceptual distinctions, measurement challenges, and research agenda. Admin Pol Ment Health. 2011;38(2):65–76.
26. Brownson RC, Colditz GA, Proctor EK, editors. Dissemination and implementation research in health: translating science to practice, second edition. New York: Oxford University Press; 2018.
27. Tabak RG, Khoong EC, Chambers DA, Brownson RC. Bridging research and practice: models for dissemination and implementation research. Am J Prev Med. 2012;43(3):337–50.
28. Rabin BA, Brownson RC, Haire-Joshu D, Kreuter MW, Weaver NL. A glossary for dissemination and implementation research in health. J Public Health Manag Pract. 2008;14(2):117–23.
29. Lewis CC, Klasnja P, Powell BJ, Lyon AR, Tuzzio L, Jones S, et al. From classification to causality: advancing understanding of mechanisms of change in implementation science. Front Public Health. 2018;6:136.
30. Boyd MR, Powell BJ, Endicott D, Lewis CC. A method for tracking implementation strategies: an exemplar implementing measurement-based care in community behavioral health clinics. Behav Ther. 2018;49(4):525–37.
31. Glasgow RE. What does it mean to be pragmatic? Pragmatic methods, measures, and models to facilitate research translation. Health Educ Behav. 2013;40(3):257–65.
32. Glasgow RE, Riley WT. Pragmatic measures: what they are and why we need them. Am J Prev Med. 2013;45(2):237–43.
33. Damschroder LJ, Aron DC, Keith RE, Kirsh SR, Alexander JA, Lowery JC. Fostering implementation of health services research findings into practice: a consolidated framework for advancing implementation science. Implement Sci. 2009;4:50.
34. Bullock HL. Understanding the implementation of evidence-informed policies and practices from a policy perspective: a critical interpretive synthesis in: How do systems achieve their goals? the role of implementation in mental health systems improvement [Dissertation]. Hamilton, Ontario: McMaster University; 2019.

35. Watson DP, Adams EL, Shue S, Coates H, McGuire A, Chesher J, et al. Defining the external implementation context: an integrative systematic literature review. BMC Health Serv Res. 2018;18(1):209.

36. McKibbon KA, Lokker C, Wilczynski NL, Ciliska D, Dobbins M, Davis DA, et al. A cross-sectional study of the number and frequency of terms used to refer to knowledge translation in a body of health literature in 2006: a Tower of Babel? Implement Sci. 2010;5:16.

37. Terwee CB, Jansma EP, Riphagen II, de Vet HC. Development of a methodological PubMed search filter for finding studies on measurement properties of measurement instruments. Qual Life Res. 2009;18(8):1115–23.

38. Egan M, Maclean A, Sweeting H, Hunt K. Comparing the effectiveness of using generic and specific search terms in electronic databases to identify health outcomes for a systematic review: a prospective comparative study of literature search method. BMJ Open. 2012;2:3.

39. Dillman DA, Smyth JD, Christian LM. Internet, mail, and mixed-mode surveys: the tailored design method. Hoboken, NJ: John Wiley & Sons; 2009.

40. Covidence systematic review software. Melbourne, Australia: Veritas Health Innovation. https://www.covidence.org.

41. Powell BJ, Stanick CF, Halko HM, Dorsey CN, Weiner BJ, Barwick MA, et al. Toward criteria for pragmatic measurement in implementation research and practice: a stakeholder-driven approach using concept mapping. Implement Sci. 2017;12(1):118.

42. Stanick CF, Halko HM, Nolen EA, Powell BJ, Dorsey CN, Mettert KD, et al. Pragmatic measures for implementation research: development of the Psychometric and Pragmatic Evidence Rating Scale (PAPERS). Transl Behav Med. 2019.

43. Henrikson NB, Blasi PR, Dorsey CN, Mettert KD, Nguyen MB, Walsh-Bailey C, et al. Psychometric and pragmatic properties of social risk screening tools: a systematic review. Am J Prev Med. 2019;57(6S1):S13–24.

44. Stirman SW, Miller CJ, Toder K, Calloway A. Development of a framework and coding system for modifications and adaptations of evidence-based interventions. Implement Sci. 2013;8:65.

45. Lau AS, Brookman-Frazee L. The 4KEEPS study: identifying predictors of sustainment of multiple practices fiscally mandated in children's mental health services. Implement Sci. 2016;11:1–8.

46. Ekvall G. Organizational climate for creativity and innovation. European J Work Organizational Psychology. 1996;5(1):105–23.

47. Lövgren G, Eriksson S, Sandman PO. Effects of an implemented care policy on patient and personnel experiences of care. Scand J Caring Sci. 2002;16(1):3–11.

48. Dwyer DJ, Ganster DC. The effects of job demands and control on employee attendance and satisfaction. J Organ Behav. 1991;12:595–608.

49. Condon-Paoloni D, Yeatman HR, Grigonis-Deane E. Health-related claims on food labels in Australia: understanding environmental health officers' roles and implications for policy. Public Health Nutr. 2015;18(1):81–8.

50. Patterson MG, West MA, Shackleton VJ, Dawson JF, Lawthom R, Maitlis S, et al. Validating the organizational climate measure: links to managerial practices, productivity and innovation. J Organ Behav. 2005;26:279–408.

51. Glisson C, Green P, Williams NJ. Assessing the Organizational Social Context (OSC) of child welfare systems: implications for research and practice. Child Abuse Negl. 2012;36(9):621–32.
52. Beidas RS, Aarons G, Barg F, Evans A, Hadley T, Hoagwood K, et al. Policy to implementation: evidence-based practice in community mental health--study protocol. Implement Sci. 2013;8(1):38.
53. Eisenberger R, Cummings J, Armeli S, Lynch P. Perceived organizational support, discretionary treatment, and job satisfaction. J Appl Psychol. 1997;82:812–20.
54. Eby L, George K, Brown BL. Going tobacco-free: predictors of clinician reactions and outcomes of the NY state office of alcoholism and substance abuse services tobacco-free regulation. J Subst Abus Treat. 2013;44(3):280–7.
55. Vogler S, Zimmermann N, de Joncheere K. Policy interventions related to medicines: survey of measures taken in European countries during 2010-2015. Health Policy. 2016;120(12):1363–77.
56. Wanberg CRB, Banas JT. Predictors and outcomes of openness to change in a reorganizing workplace. J Applied Psychology. 2000;85:132–42.
57. Hardy LJ, Wertheim P, Bohan K, Quezada JC, Henley E. A model for evaluating the activities of a coalition-based policy action group: the case of Hermosa Vida. Health Promot Pract. 2013;14(4):514–23.
58. Gavriilidis G, Östergren P-O. Evaluating a traditional medicine policy in South Africa: phase 1 development of a policy assessment tool. Glob Health Action. 2012;5:17271.
59. Hongoro C, Rutebemberwa E, Twalo T, Mwendera C, Douglas M, Mukuru M, et al. Analysis of selected policies towards universal health coverage in Uganda: the policy implementation barometer protocol. Archives Public Health. 2018;76:12.
60. Roeseler A, Solomon M, Beatty C, Sipler AM. The tobacco control network's policy readiness and stage of change assessment: what the results suggest for moving tobacco control efforts forward at the state and territorial levels. J Public Health Manag Pract. 2016;22(1):9–19.
61. Brämberg EB, Klinga C, Jensen I, Busch H, Bergström G, Brommels M, et al. Implementation of evidence-based rehabilitation for non-specific back pain and common mental health problems: a process evaluation of a nationwide initiative. BMC Health Serv Res. 2015;15(1):79.
62. Rütten A, Lüschen G, von Lengerke T, Abel T, Kannas L, Rodríguez Diaz JA, et al. Determinants of health policy impact: comparative results of a European policymaker study. Sozial-Und Praventivmedizin. 2003;48(6):379–91.
63. Smith SN, Lai Z, Almirall D, Goodrich DE, Abraham KM, Nord KM, et al. Implementing effective policy in a national mental health reengagement program for veterans. J Nerv Ment Dis. 2017;205(2):161–70.
64. Carasso BS, Lagarde M, Cheelo C, Chansa C, Palmer N. Health worker perspectives on user fee removal in Zambia. Hum Resour Health. 2012;10:40.
65. Goldsmith REH, C.F. Measuring consumer innovativeness. J Acad Mark Sci. 1991;19(3):209–21.
66. Webster CA, Caputi P, Perreault M, Doan R, Doutis P, Weaver RG. Elementary classroom teachers' adoption of physical activity promotion in the context of a statewide policy: an innovation diffusion and socio-ecologic perspective. J Teach Phys Educ. 2013;32(4):419–40.

67. Aarons GA, Glisson C, Hoagwood K, Kelleher K, Landsverk J, Cafri G. Psychometric properties and U.S. National norms of the Evidence-Based Practice Attitude Scale (EBPAS). Psychol Assess. 2010;22(2):356–65.
68. Gill KJ, Campbell E, Gauthier G, Xenocostas S, Charney D, Macaulay AC. From policy to practice: implementing frontline community health services for substance dependence--study protocol. Implement Sci. 2014;9:108.
69. Lavinghouze SR, Price AW, Parsons B. The environmental assessment instrument: harnessing the environment for programmatic success. Health Promot Pract. 2009;10(2):176–85.
70. Bull FC, Milton K, Kahlmeier S. National policy on physical activity: the development of a policy audit tool. J Phys Act Health. 2014;11(2):233–40.
71. Bull F, Milton K, Kahlmeier S, Arlotti A, Juričan AB, Belander O, et al. Turning the tide: national policy approaches to increasing physical activity in seven European countries. British J Sports Med. 2015;49(11):749–56.
72. Schneider EC, Smith ML, Ory MG, Altpeter M, Beattie BL, Scheirer MA, et al. State fall prevention coalitions as systems change agents: an emphasis on policy. Health Promot Pract. 2016;17(2):244–53.
73. Helfrich CD, Savitz LA, Swiger KD, Weiner BJ. Adoption and implementation of mandated diabetes registries by community health centers. Am J Prev Med. 2007;33(1,Suppl):S50-S65.
74. Donchin M, Shemesh AA, Horowitz P, Daoud N. Implementation of the Healthy Cities' principles and strategies: an evaluation of the Israel Healthy Cities network. Health Promot Int. 2006;21(4):266–73.
75. Were MC, Emenyonu N, Achieng M, Shen C, Ssali J, Masaba JP, et al. Evaluating a scalable model for implementing electronic health records in resource-limited settings. J Am Med Inform Assoc. 2010;17(3):237–44.
76. Konduri N, Sawyer K, Nizova N. User experience analysis of e-TB Manager, a nationwide electronic tuberculosis recording and reporting system in Ukraine. ERJ Open Research. 2017;3:2.
77. McDonnell E, Probart C. School wellness policies: employee participation in the development process and perceptions of the policies. J Child Nutr Manag. 2008;32:1.
78. Mersini E, Hyska J, Burazeri G. Evaluation of national food and nutrition policy in Albania. Zdravstveno Varstvo. 2017;56(2):115–23.
79. Cavagnero E, Daelmans B, Gupta N, Scherpbier R, Shankar A. Assessment of the health system and policy environment as a critical complement to tracking intervention coverage for maternal, newborn, and child health. Lancet. 2008;371 North American Edition(9620):1284-93.
80. Lehman WE, Greener JM, Simpson DD. Assessing organizational readiness for change. J Subst Abus Treat. 2002;22(4):197–209.
81. Pankratz M, Hallfors D, Cho H. Measuring perceptions of innovation adoption: the diffusion of a federal drug prevention policy. Health Educ Res. 2002;17(3):315–26.
82. Cook JM, Thompson R, Schnurr PP. Perceived characteristics of intervention scale: development and psychometric properties. Assessment. 2015;22(6):704–14.
83. Probart C, McDonnell ET, Jomaa L, Fekete V. Lessons from Pennsylvania's mixed response to federal school wellness law. Health Aff. 2010;29(3):447–53.

84. Probart C, McDonnell E, Weirich JE, Schilling L, Fekete V. Statewide assessment of local wellness policies in Pennsylvania public school districts. J Am Diet Assoc. 2008;108(9):1497–502.

85. Rakic S, Novakovic B, Stevic S, Niskanovic J. Introduction of safety and quality standards for private health care providers: a case-study from the Republic of Srpska, Bosnia and Herzegovina. Int J Equity Health. 2018;17(1):92.

86. Rozema AD, Mathijssen JJP, Jansen MWJ, van Oers JAM. Sustainability of outdoor school ground smoking bans at secondary schools: a mixed-method study. Eur J Pub Health. 2018;28(1):43–9.

87. Barbero C, Moreland-Russell S, Bach LE, Cyr J. An evaluation of public school district tobacco policies in St. Louis County, Missouri. J Sch Health. 2013;83(8):525–32.

88. Williams KM, Kirsh S, Aron D, Au D, Helfrich C, Lambert-Kerzner A, et al. Evaluation of the Veterans Health Administration's specialty care transformational initiatives to promote patient-centered delivery of specialty care: a mixed-methods approach. Telemed J E-Health. 2017;23(7):577–89.

89. Spencer E, Walshe K. National quality improvement policies and strategies in European healthcare systems. Quality Safety Health Care. 2009;18(Suppl 1):i22–i7.

90. Assunta M, Dorotheo EU. SEATCA Tobacco Industry Interference Index: a tool for measuring implementation of WHO Framework Convention on Tobacco Control Article 5.3. Tob Control. 2016;25(3):313–8.

91. Tummers L. Policy alienation of public professionals: the construct and its measurement. Public Adm Rev. 2012;72(4):516–25.

92. Tummers L, Bekkers V. Policy implementation, street-level bureaucracy, and the importance of discretion. Public Manag Rev. 2014;16(4):527–47.

93. Raghavan R, Bright CL, Shadoin AL. Toward a policy ecology of implementation of evidence-based practices in public mental health settings. Implement Sci. 2008;3:26.

94. Peters D, Harting J, van Oers H, Schuit J, de Vries N, Stronks K. Manifestations of integrated public health policy in Dutch municipalities. Health Promot Int. 2016;31(2):290–302.

95. Tosun J, Lang A. Policy integration: mapping the different concepts. Policy Studies. 2017;38(6):553–70.

96. Tubbing L, Harting J, Stronks K. Unravelling the concept of integrated public health policy: concept mapping with Dutch experts from science, policy, and practice. Health Policy. 2015;119(6):749–59.

97. Donkin A, Goldblatt P, Allen J, Nathanson V, Marmot M. Global action on the social determinants of health. BMJ Glob Health. 2017;3(Suppl 1):e000603-e.

98. Baum F, Friel S. Politics, policies and processes: a multidisciplinary and multimethods research programme on policies on the social determinants of health inequity in Australia. BMJ Open. 2017;7(12):e017772-e.

99. Delany T, Lawless A, Baum F, Popay J, Jones L, McDermott D, et al. Health in All Policies in South Australia: what has supported early implementation? Health Promot Int. 2016;31(4):888–98.

100. Valaitis R, MacDonald M, Kothari A, O'Mara L, Regan S, Garcia J, et al. Moving towards a new vision: implementation of a public health policy intervention. BMC Public Health. 2016;16:412.

101. Bennett LM, Gadlin H, Marchand, C. Collaboration team science: a field guide. Bethesda, MD: National Cancer Institute, National Institutes of Health; 2018. Contract No.: NIH Publication No. 18-7660.
102. Mazumdar M, Messinger S, Finkelstein DM, Goldberg JD, Lindsell CJ, Morton SC, et al. Evaluating academic scientists collaborating in team-based research: a proposed framework. Acad Med. 2015;90(10):1302–8.
103. Brownson RC, Fielding JE, Green LW. Building capacity for evidence-based public health: reconciling the pulls of practice and the push of research. Annu Rev Public Health. 2018;39:27–53.
104. Brownson RC, Colditz GA, Proctor EK. Future issues in dissemination and implementation research. In: Brownson RC, Colditz GA, Proctor EK, editors. Dissemination and Implementation Research in Health: Translating Science to Practice. Second Edition ed. New York: Oxford University Press; 2018.
105. Thomson K, Hillier-Brown F, Todd A, McNamara C, Huijts T, Bambra C. The effects of public health policies on health inequalities in high-income countries: an umbrella review. BMC Public Health. 2018;18(1):869.

دور فني إدارة الصحة في تنفيذ سياسات الصحة العامة

الملخص:

الخلفية :إن تنفيذ سياسات الصحة العامة بشكل فعال أمر حاسم لتحسين نتائج صحة السكان؛ ومع ذلك، فإن الأبحاث الحالية في علم نشر وتنفيذ السياسات (D&I) قد أغفلت إلى حد كبير دور فني إدارة الصحة في هذه العملية. على الرغم من تأثير السياسات على الصحة، فإن الدراسات التي تبحث في تنفيذ مثل هذه السياسات محدودة.

الهدف :تهدف هذه المراجعة إلى تحديد وتقييم المقاييس الكمية المستخدمة لتقييم نتائج وتنفيذ سياسات الصحة، مما يسد فجوة كبيرة في الأدبيات الحالية.

الطرق :تم إجراء مراجعة منهجية وفقًا لإرشادات PRISMA ، باستخدام قواعد بيانات أكاديمية متنوعة لجمع دراسات تجريبية قامت بتقييم تنفيذ سياسات الصحة العامة من عام 1995 إلى عام 2019. قامت المراجعة بتحليل 70 مقياسًا لنتائج التنفيذ والعوامل المحددة، مع التركيز على جودتها النفسية والعملية.

النتائج :كشفت التحليلات أن الالتزام/الامتثال وقبول التنفيذ كانت أكثر نتائج التنفيذ التي تم تقييمها بشكل متكرر، بينما كانت الاستعداد للتنفيذ هي أكثر العوامل المحددة شيوعًا. فقط عدد قليل من المقاييس قيمت تداعيات التكلفة، مما يشير إلى منطقة محتملة لمزيد من البحث.

الاستنتاج :تؤكد النتائج على الحاجة إلى مقاييس كمية قوية لتقييم تنفيذ سياسات الصحة بدقة. تسهم المراجعة المنهجية في فهم كيفية دعم فني إدارة الصحة لتنفيذ السياسات بشكل فعال، مما يعزز نتائج الصحة العامة بشكل عام. يجب أن تركز الأبحاث المستقبلية على تطوير أدوات معيارية لتقييم التنفيذ في سياقات متنوعة.

الكلمات المفتاحية :فني إدارة الصحة، سياسة الصحة العامة، نتائج التنفيذ، مقاييس كمية، مراجعة منهجية