The African Journal of Monitoring and Evaluation (AFriJME)
2024: Vol 2(1), 99-121

eISSN 2958-9436

Equity-focused Monitoring and Evaluation and Performance of School-based Health Projects

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Keywords; Equity, Inequity, equity-focused monitoring and evaluation, Performance, school-based health program, Equity in health systems

Abstract

The purpose of the study was to examine the influence of equity-focused monitoring and evaluation on performance of school-based health projects. The study objectives were to determine to what extend does equity-focused monitoring and evaluation influence performance of school-based health projects, to establish the key constructs that drive equitable implementation of health projects, and to determine which methodological designs are used and how they compare across existing studies. A search criteria protocol was developed and adopted for systematic literature review to identify the most current peer-reviewed journal articles published in English between January 2019 and April 2024 using Google scholar and PubMed database search engines. Search terms used were as follows; Equity, Inequity, equity-focused monitoring and evaluation, performance, school-based health program, Equity in health systems. Data extraction was performed using a pre-defined eligibility criterion and a pre-tested data abstraction form. Online database search yielded 25 studies out of which five met the inclusion criteria. Data were analysed using descriptive analysis. Study results suggest that equity-focused adaptation was widely conceptualized in literature but with limited description of how to operationalize monitoring and evaluation as a tool to advance equity and improve program performance. Of the five articles reviewed (n=5), inclusion of a collaborative design, anti-racism consideration, embedding priority population expertise, cultural safety, and values were identified as key constructs that drive equitable implementation of health projects. Methodological convergence was noted across all the articles (n=5) where purposive sampling method, stakeholders as the target population was adopted while four articles (n=4) also converged on mixed method study design. Divergence was reported in sample size and data analysis methods. We conclude that current studies have not exploited the potential influence of equity-focused monitoring and evaluation on performance of school-based health projects. Key constructs for equitable implementation and methodological designs are well grounded though with limited operationalization. The study recommends that there is a need in future for equity-focused monitoring and evaluation empirical studies to test operationalization of the conceptual and theoretical frameworks currently available in literature. This will help advance equity and performance of school-based health projects.

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1.0 Introduction

1.1 Background

Achieving equity in health is a global public health priority which in recent years has been formalized as part of global agenda in health policy(*World Health Statistics 2023 – Monitoring Health for the SDGs*, 2023). Current efforts to define as well as to measure and quantify equity in health is part of United Nations development agendas with explicit inclusion specifically as one the 17 Sustainable Development Goals (SDGs)(Bergen et al., 2021). At national level, countries such as the United States Healthy People 2030, equity has been embedded in vision, mission statement, and as part of strategic priorities. Equity is a growing dimension in implementation science for various health interventions such as school-based programs(McLoughlin et al., 2022).

In recent times, there have been attempts to define equity in health by institutions and subject matter experts. The World Health Organization (WHO) defines health equity as the "absence of unfair, avoidable, or remediable differences among groups of people irrespective of their social, economic, demographic, or geographic or by other constructs of inequality (e.g., gender, sex, ethnicity, sexual orientation, or disability(*World Health Statistics 2023 – Monitoring Health for the SDGs*, 2023). The WHO Commission on Social Determinants of Health(SDoH) further defines health inequity as "where systematic differences in health are judged to be avoidable by reasonable action" (Barcellona et al., 2023a). Another institution, The Robert Wood Johnson Foundation (RWJF) further defines health equity as "removing obstacles to health such as poverty, discrimination, and their consequences, including powerlessness and lack of access to good jobs with fair pay, quality education and housing, safe environments, and health care so that everyone has a fair and just opportunity to be as healthy as possible (Bergen et al., 2021). Together, these definitions assume that health disparities are not unavoidable, but largely emerge from historical inequalities in socioeconomic conditions and other determinants that underpin health (Nabiyeva et al., 2023).

Equity is a critical component in health care quality delivery and the embedment of equity in programs, policies, and interventions is a growing priority. However, the ideal platform for advancing equity has remained elusive(Barcellona et al., 2023a). Literature review suggest that there is lack of conceptual clarity on how to operationalize equity (Eslava-Schmalbach et al., 2019). An essential component in advancing equity in all programs is through integration of equity-focused monitoring and evaluation to guide develop measurable actions(Gustafson et al., 2024). Equity-focused monitoring and evaluation is a structured approach through which programs, policies, and or interventions can be assessed and analysed to ensure that they promote inclusivity, fairness, and justice across especially among underserved populations (*World Health Statistics 2023 – Monitoring Health for the SDGs*, 2023). Since 2015, implementation of Sustainable Development Goals (SDGs) has become a policy target for many countries to advance equity in all actions (Hollands et al., 2024). The reality, however, is that not all programs and interventions mainstream equity. This has a potential to impact most of the underserved communities making it hard to achieve a meaningful and transformative change. Further, there is the additional challenge of ensuring that evaluation

practices do not reinforce inequities that community coalitions are created to address(Chouinard et al., 2023).

Recent evidence suggests that measuring equity in programs and interventions is a key priority in addressing the systemic sources of inequities. Equitable evaluation means aligning interventions and practices with an equity approach and even more powerfully, using evaluation as a tool for advancing equity (Chouinard et al., 2023). It means considering the following four aspects, all at once: diversity of teams (beyond ethnicity and culture), cultural appropriateness, and validity of monitoring and evaluation methods. It provides assessments of what works and what does not work to reduce inequity, and highlights intended and unintended results for worst-off groups as well as the gaps between best-off, average and worst-off groups (Hollands et al., 2024)

Equity-focused evaluations looks explicitly at the equity dimensions of interventions, going beyond conventional quantitative data to the analysis of behavioural change, complex social processes and attitudes, and collecting information on difficult-to-reach socially marginalized groups (Marzouk et al., 2022). In addition, equity-focused evaluations pay particular attention to process and contextual analysis, while conventional impact evaluation designs use a pre-test/post-test comparison group design, the authors argue that this approach does not study the processes through which interventions are implemented nor the context in which they operate(Costa et al., 2016).

1.2 Statement of the Problem

The concept of equitable delivery of health for all that contributes to everyone's well-being has evolved over time since 1970's and remains significant today in achieving equitable health outcomes (Fee & Gonzalez, 2017). Driven by the imperative "to leave no one behind' as part of the 2030 initiatives, the World Health Organization (WHO) commission on health determinants, the United states Healthy People by 2030, and the United Nations Sustainable Development Goals (SDGs) are some of the initiatives actively involved in setting benchmarks that can be used to track progress towards the goal of achieving health equity for all (Pronk et al., 2021). These initiatives highlight how equity holds promise in promotion of equal opportunity for all ages to be healthy(Jensen et al., 2021). Recognizing this as a priority, it is important to understand and measure equitable implementation of interventions to achieve greater social equality(*World Health Statistics 2023 – Monitoring Health for the SDGs*, 2023). An equitable distribution of health resources has a potential to help communities and countries achieve better health and improve system performance(Eslava-Schmalbach et al., 2019)

Despite the progress and achievements in advancing equity in health, efforts to bridge the equity gaps persist and have been increasingly complicated by measurement challenges such lack of timely, reliable, disaggregated data to inform policies and implementation of interventions(Eslava-Schmalbach et al., 2019). Further, few implemented projects explicitly embed equity lens or adapt equity-focused monitoring and evaluation in tracking outcomes. In view of this discrepancy, there is need for empirical studies to determine if equity-focused monitoring and evaluation can support in data collection and improve the performance of health

programs(Gustafson et al., 2024). If this is not addressed, achieving equity will remain a challenge and this will increase the likelihood that the benefits of health interventions will not be fully realised for all beneficiaries and may lead to worsening inequities and poor performance of the programs(Browne, n.d.). The purpose of this study was to determine to what extend does equity-focused monitoring and evaluation influence the performance of school-based health programs.

1.3 Objectives of the study

1. To determine the association between equity-focused monitoring and evaluation and performance of school-based health projects.
2. To establish the key constructs that drive equitable implementation of health projects.
3. To determine which methodological designs are used and how they compare across existing studies.

1.4 Research Question

1. To what extend does equity-focused monitoring and evaluation influence performance of school-based health projects?
2. What are the key constructs that drive equitable implementation of health projects?
3. Which methodological designs are used and how do they compare across existing studies?

1.5 Significance of the study

The study aims explore the current evidence and highlight knowledge gaps in operationalization of equity-focused monitoring and evaluation frameworks in school-based health projects performance. This will contribute to advancing equity implementation and performance of school-based health programs.

1.6 Study limitations

We included articles published in English and excluded other languages and grey literature. Available evidence published using other languages and grey literature could have strengthened our research findings.

2.0 Literature review

2.1 Foundations of Equity in Health

Equity in health means that optimal health is guaranteed for all, that everyone has a fair and just opportunity to be as healthy as possible. It calls to addressing barriers to health such as poverty and other social determinants of health. In recent times, advancing equity in health has gained visibility in global health policy agenda (*World Health Statistics 2023 – Monitoring Health for the SDGs*, 2023) and the United Nations development explicit inclusion in the agendas (Bergen et al., 2021). Actions have been taken by individual countries like the United states has embedded equity in vision and mission statement, and as part of strategic priorities through the Healthy People 2030 initiatives(Pronk et al., 2021). In Africa, several countries have also taken the initiatives to embed equity in health care delivery (Bergen et al., 2021) as

well as in implementation science for various health interventions such as school-based health programs which are considered essential towards improving children's health and well-being at early age(McLoughlin et al., 2022). To achieve equity in health, an important pre-requisite is data availability on established indicators. Significant gap in data have persisted and remain a great barrier for health systems in order to meaningfully measure equity (Barcellona et al., 2023a). An equity-focused monitoring and evaluation approach has a potential to measure and assess if health programs address justice, fairness, and inclusivity across different societal groups(McLoughlin et al., 2022).

2.2. Conceptual Framework for Equity-focused Implementation

Eslava-Schmalbach et al.(2019) and Gustafson et al.(2024) conceptual frameworks of equity-focused research were adopted to guide in understanding implementation theory, models and frameworks. Embodying these frameworks in health program implementation helps in promotion and advancement of equity for achievement of meaningful change and equitable outcomes (Gustafson et al., 2024). A step-by-step description is provided below. (Fig 2.1). The first step is identification of the health status of the target population of the program. This is an important step which must include the general population health status as well as of the disadvantaged groups. Failure to include health status data at the beginning can skew the results of the intervention or program. The second step is the equity-focused planning phase whose key constructs is identification of relevant research questions with consideration of vulnerable and marginalized (disadvantaged populations) who can be potentially impacted by the health intervention in positive or negative way, quantification of inequalities to be addressed and the plausible equity-focused recommendations to be implemented. The objective for this second step is to reduce current inequities.

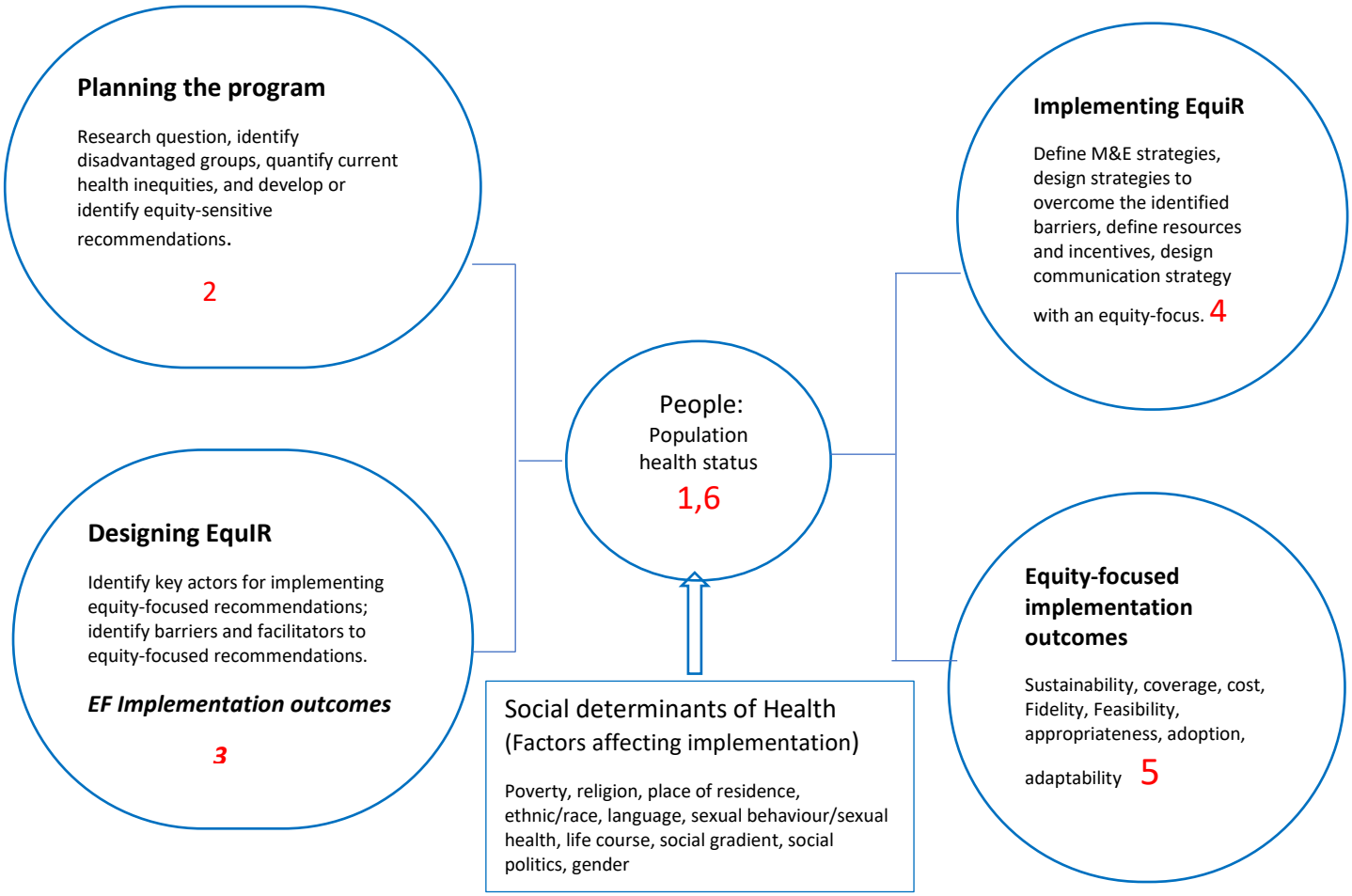

Figure 2.1: Conceptual framework of equity-focused implementation

The third step is the design phase with the following variable namely identification of key players for implementing equity-focused recommendations (e.g., all stakeholders including health professionals, patients, community), and identification of key barriers and facilitators for the implementation of equity-focused recommendations. At this step it is critical to factor in equity-focused implementation outcomes with an aim to identify the most suitable research design to evaluate the impact of implementing the intervention or program based on those outcomes. The fourth step is equity-focused implementation. At this stage designing strategies aimed at overcoming the previously identified barriers, defining resources and incentives, the monitoring and evaluation strategies and equity-focused communication strategies to be used in the next step five. Step five is the equity-focused implementation outcomes phase. At this step we monitor and evaluate. The expectation at this step is that the impact of the intervention or program will be monitored using implementation outcomes with equity lens as guidepost. Some of the equity-focused implementation outcomes mentioned in the literature are acceptability, adoption, appropriateness, feasibility, fidelity implementation cost, coverage, and sustainability(Eslava-Schmalbach et al., 2019). Step six and final step is the inclusion of equity-focused health population status which can be connected to a new starting point of the same program, or any other new program designed to improve health inequities. The emergent

heath population status is the best possible outcome to monitor the implementation of health interventions or programs. From the literature review, operationalization of these concepts is limited, and more empirical studies are needed for evidence generation to advance equity-sensitive program and policy processes aimed at driving positive population health outcomes(Gustafson et al., 2024).

2.3 Equity-focused Monitoring and Evaluation theoretical Framework

The uptake of equity-focussed health interventions has been guided by several theories. Theory of change (ToC) is the most used theory in equity-focused monitoring and evaluation. It provides a framework for understanding evaluative thinking by outlining how interventions or actions are expected to create a desired impact or bring about specific outcomes. The likelihood of equitable implementation success is highly expected if key equity aspects such as values, needs, culture, history, assets and other social determinants of health are explicitly embedded into implementation systems and as a strategic priority(Gustafson et al., 2024)

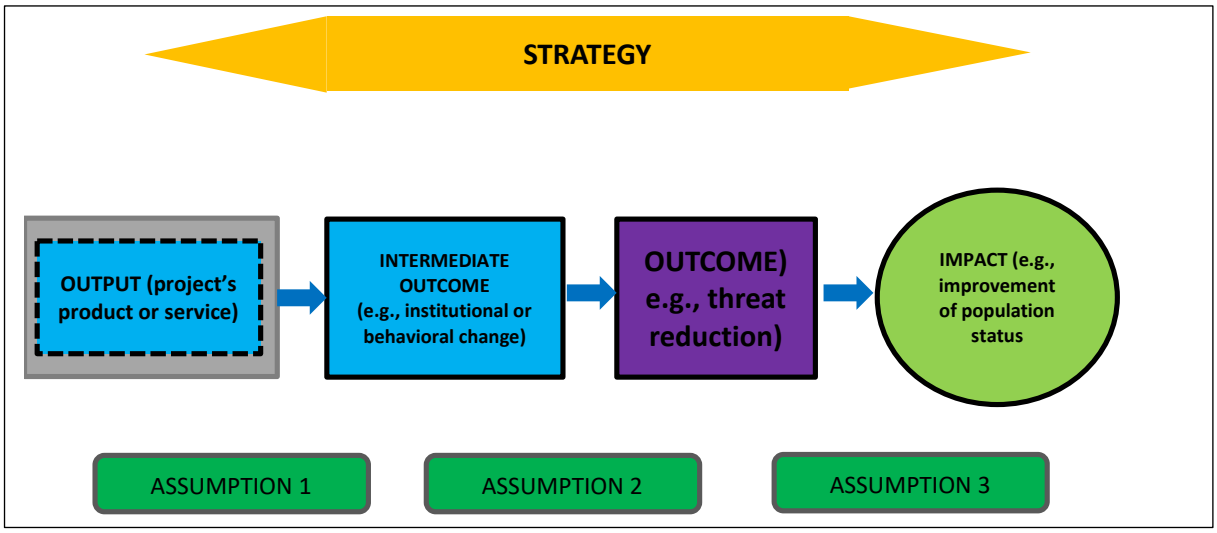

Figure 2.3: Theory of change model in equity-focused monitoring and evaluation.

Theories of change can relate to equity-focused monitoring and evaluation in several ways; One, logic models which outline the sequence of activities, outputs, outcomes, and impacts of an intervention or program. An equity-focused implementation involves critically analysing these logic models to assess whether the intended outcomes align with the actual results observed. It helps in evaluating the logic and coherence of the planned intervention. Two, theories of change often include assumptions about how change will happen. Evaluative thinking can be of use in in examining these assumptions critically(Cole, 2023).

A realist evaluation theory has also provided guidance in equity measurements in health programs. To gain more insights on understanding the context, outcomes, and mechanisms (COM), realist evaluation perspective in data collection provides more depth in defining which constructs to measure(Tyler et al., 2019). The theory of effective project implementation has also been used to guide previous studies(Chouinard et al., 2023). Together, the theory of change, evaluative thinking, realist perspective and theory of effective project implementation guided this study(Jensen et al., 2021)

2.4 Equity-focused monitoring and evaluation

Monitoring and Evaluation (M&E) is a public management and decision-making tool used to foster transparency and effectiveness in project and or program implementation. Monitoring comprises routine data collection, status reporting and forecasting while Evaluation is systematic and timebound, Specific components of an equity-focused monitoring and evaluation framework typically vary depending on the nature of the project. Generally, an equity focused monitoring and evaluation framework consists of the components described as follows. *Analysis through an equity lens*; An integral component of an equity focused monitoring and evaluation framework is the analysis of the factors and considerations of equity including socio-economic status, gender, age, and ethnicity, among other factors and dimensions(Gustafson et al., 2024). *Baseline data:* Projects and policies are required to conduct baseline surveys to establish the initial status of the factors for equity including the socio-economic status and gender among others. This helps to establish the baseline values and targets for measuring the progress of a program(Eslava-Schmalbach et al., 2019). *Equity focused indicators and metrics*; Indicators should be specific indicators with metrics that are able to capture outcomes and impacts that are equity related. Equity focused indicators should reflect different impacts of interventions on various groups. These indicators should be set at initiation period and should be well aligned to the goals of the program or intervention(Barcellona et al., 2023a). *Targets setting*; An equity focused monitoring and evaluation framework ensures setting of realistic and achievable equity targets. These targets should take into account the specific context and challenges faced by the different target groups and with particular interest on the marginalized groups(Al-Salim et al., 2022). *Inclusive data collection and disaggregation;* Organizations should aim at equity focused data collection methods which allow for the disaggregation of information by relevant equity dimensions to identify disparities and trends. In most cases marginalized and most vulnerable target groups may not be reached and therefore fail to get service such as health and education. These target groups are continually affected by inequities in gender, ethnic and socioeconomic differences. In recent years, development partners and funding agents have adopted equity approaches in data collection methods to acquire properly disaggregated data from target groups (Pronk et al., 2021). Collection and analysis of disaggregated data is feasible through an equity focused monitoring and evaluation framework(Barcellona et al., 2023a). *Participatory approaches in monitoring and evaluation*; During project initiation, the involvement of stakeholders is important for the development of the monitoring and evaluation framework. This also includes use of participatory methods with the marginalized communities in the design and implementation of monitoring and evaluation processes. *Feedback mechanisms:* It is important to establish mechanisms for feedback from marginalized groups or those likely to face inequity in service provision. This feedback is useful in assessing the effectiveness and relevance of interventions, provides performance data for managers, and creates incentives for project staff to focus on the beneficiaries. *Qualitative data:* The inclusion of qualitative data to capture the experiences and perceptions of equity among target populations is important in ensuring that the views of marginalized individuals are not left out during monitoring and evaluation. Qualitative data generate rich narrative descriptions and construct case studies for in-depth analysis. *Adaptive management;* Organizations need to implement adaptive management

practices that allow for adjustments based on emerging equity-related insights during the program lifecycle(Cole, 2023).

2.5 Strengths and limitations of equity-focused monitoring and evaluation

2.5.1 Strengths of equity focused monitoring and evaluation

Equity-focused monitoring and evaluation emphasizes that programs, policies, and interventions provide fairness and inclusivity. This approach is important in social development and public policy which aim at reducing disparities and promoting equal opportunities among populations(*World Health Statistics 2023 – Monitoring Health for the SDGs*, 2023). Literature review identified the following strengths: Targeted Interventions; Application of equity-focused approaches in programming allow for targeted interventions to address specific needs of marginalized and vulnerable populations. This in turn enhances the outcomes and impacts of projects and policies on the target population (Tyler et al., 2019). Social justice and inclusivity: The benefits and outcomes of interventions, projects and policies are likely to be fairly distributed to different groups and individuals through the application of equity focused monitoring and evaluation. The use of equity focused M&E is integral in the identification and resolving biases in the provision of services (McLoughlin et al., 2022). Accountability: Emphasis on equity enhances accountability because it highlights disparities among the target groups and expects stakeholders to be responsible for equity issues. Accountability and transparency promote unity and trust among stakeholders and ensures interventions are well implemented and measurable. This also applies to the implementation of monitoring and evaluation practices like data collection for decision making (Gustafson et al., 2024). Enhances decision making; There is informed decision making due to equity-focused monitoring and evaluation because of provision of data on the distributional impact of projects and policies. Collection of such data enhances decision making which in turn prioritizes the target population according to their needs. Decision making also allows for effective resource allocation from the project interventions. Long term sustainable development: Equity-focused M&E contributes to sustainable development by addressing the root causes of inequality through learning. Identification of disparities and taking the relevant action during initiation stage and planning and implementation stages. This yields to achieving long-term and sustainable outcomes. Policy Learning: Equity-focused M&E provides important information about the effectiveness of various strategies for reducing disparities. Policy makers can learn from interventions that have been successful and unsuccessful interventions. This information is used in reviewing and refining policies to better address equity concerns(*World Health Statistics 2023 – Monitoring Health for the SDGs*, 2023)

2.5.2 Limitations of equity-focused monitoring and evaluation

Data availability and quality. The reason for limited availability of disaggregated data is because it may not be collected or reported by the relevant subgroups and therefore making it challenging to assess equity. On the other hand, disaggregated data may be of poor quality, leading to poor analysis and inaccurate assessment of equity(Nabiyeva et al., 2023). Definition and measurements of equity; there has been a lack of consensus on equity indicators in relation

to what needs to be measured and how, and what indicators to use to capture the concept of equity. Operationalization or translating the principles of equity into measurable and actionable indicators has also posed challenges in some instances (Gustafson et al., 2024). Resource constraints for equity focused monitoring and evaluation; resource allocation for collection and analysis of disaggregated data for the different populations may be challenging, particularly in resource-constrained settings. This also results to inadequate reporting for equity focused data. Contextual factors: Equity focused M&E may ignore the influence of context factors which are social, historical, or cultural and which can result in disparities. M&E processes may not sufficiently account for power dynamics leading to unequal distribution of resources and outcomes. Complexity of causality: This refers to the difficulties in establishing the causal relationships between the interventions and equity outcomes. This is even more complex if there are multiple interacting factors, which are likely to have some effect on interventions and outcomes. Sensitive indicators: some indicators may not be sensitive to minor changes in equity. This causes incorrect or under-reporting, and therefore it may be challenging to assess the impact on the target group (Gustafson et al., 2024). Political and social dynamics: Equity focused monitoring and evaluation may face resistance from individuals not willing to address the realised disparities for the target population. In some cases, the community may be reluctant to share and disclose all information. This causes improper implementation of interventions, and poor data collection leading to inaccuracy in reporting(Pronk et al., 2021). Time lagging in results; the period of achieving equity may take a long and the effects may not be easily realized. On the other hand, the short-term monitoring and evaluation may not capture the entire impact of interventions on the different population groups (Tyler et al., 2019).

2.6 Research gaps about equity-focused monitoring and evaluation

Currently there are limitations in measuring equity, and research may be needed to explore improved strategies and methodologies to measure equity (Barcellona et al., 2023a). This will address challenges in data collection, for quality including validity and reliability of equity indicators. Community engagement and participation research could explore the role of community engagement in the design and implementation of equity focused interventions and their effect on monitoring and evaluation. There is a need for adaptive monitoring and evaluation approaches which can improve the response to the changing contexts of programming and evolving the realized equity priorities over time(Gustafson et al., 2024). Further, there is a need for comparative analysis of equity frameworks in different scenarios for equity focused monitoring and evaluation can help identify the best practices, common challenges, and opportunities for improvement for the implementation of equity focused monitoring and evaluation. Research on integrating intersectional focus into equity focused monitoring and evaluation is lacking. The need to acknowledge the interconnected nature of social identities to establish how they result in the different outcomes for different population groups(McLoughlin et al., 2022) Ethical considerations research in equity monitoring is required especially on matters regarding consent and privacy of individuals, as well as the responsible use of sensitive data collected during implementation(Gustafson et al., 2023)

2.7 **The influence of equity-focused monitoring and evaluation on program performance.**

Globally, there is an increasing focus by organizations and governments to mainstream equity in health programs or interventions(Nabiyeva et al., 2023). According to Barcellona et al., (2023a), the identification of indicators to be measured, setting targets for value for the indicators, performing measurements, comparing measured results to the pre-defined standards, and making the necessary change has been a challenge in equity implementation. However, the availability of equity-focused conceptual frameworks offers an opportunity for empirical studies to test hypothesized relationship between equity-focused monitoring and evaluation and performance of school-based health programs(Gustafson et al., 2023). Previous studies have demonstrated the influence of monitoring and evaluation on program performance(Hubert & Mulyungi, 2018).

3.0 Methodology

3.1 Search protocol

A literature search protocol was developed with the following elements in consideration, search strategy, selection procedures of the journal articles, data extraction, and analysis plan. The protocol was developed with strict adherence to the research questions and in view of the current methods for conducting literature review (Isaac Abuya, 2024; Gustafson et al., 2023). The search protocol steps were as follows; selecting research question, performing a bibliographic database, choosing search terms, applying practical screening criteria, applying methodological screening criteria, performing reliable and valid review using a standardized data abstraction form, and synthesizing the results in a descriptive way. A systematic search was performed to identify published journal articles between January 2019 and April 2024 (Gustafson et al., 2023).

3.2 Eligibility criteria

For this study, the following inclusion and exclusion criteria were developed prior to the literature search activity.

Table 3.2: Inclusion and Exclusion Criteria

Inclusion criteria	Exclusion criteria
• Published in English language	• Not published in English language
• Published between January 2019 to current, 2024	• Publish prior to January 2019.
• Describes equity-focused monitoring and evaluation, school-based health interventions performance, health equity, inequity.	• Opinions, letters, commentaries, systematic review/scoping review articles.

• Primary/empirical "studies" conducted in schools/healthcare settings.	• Studies in non-healthcare settings/non-schools.

3.3 Data Search

On 20April2024, literature review and data search were conducted using electronic online databases Google Scholar and PubMed. We used the above-mentioned databases because they were well-established, multi-disciplinary research platforms holding a wide variety of peer-reviewed journals. Search terms used were as follows; Equity, Inequity, Equity-focused Monitoring and Evaluation, school-based health interventions, Performance, health inequities, Equity in health systems. We restricted our search to the above terms to increase the likelihood of extracting articles relevant to our research questions (Isaac Abuya, 2024). The search yielded 25 studies out of which 5 met the inclusion criteria. Data were extracted from studies meeting a pre-established inclusion criterion as per our search protocol and summarized on a pre-tested data extraction form in table format (Table 4.1).

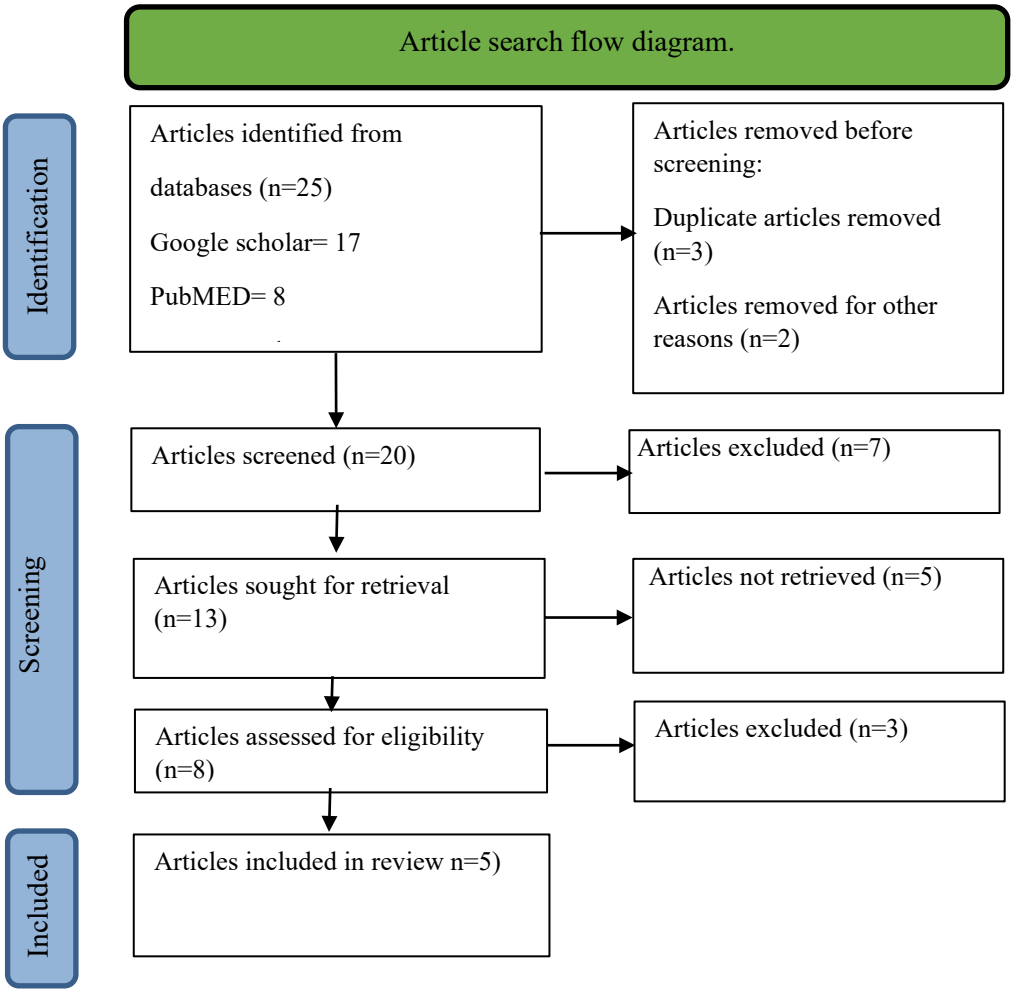

Figure 3.3: Search selection flow diagram

The five articles included for review were as follows; Gustafson et al.,2024; McLoughlin et al.,2022; Bergen et al.,2021; Tyler et al.,2019; and Hatton et al.,2024b. Data were extracted in duplicate using the pre-tested data abstraction forms.

4.0 Summary of Findings

The purpose of the study was to determine to what extend does equity-focused monitoring and evaluation influence the performance of school-based health programs. The following five articles were reviewed as per the journal article review protocol.

Gustafson, Lambert, Bartholomew, Ratima, Kremer, and Crengle (2024) investigated early adaption of an equity-focused implementation process framework with a focus on ethnic health inequities in the Aotearoa New Zealand context. The purpose of the study was to develop an equity-focused implementation framework, appropriate for the Aotearoa New Zealand context with an aim to support the planning and delivery of equitable implementation pathways for health interventions, with the intention of achieving equitable outcomes for Māori, as well as people originating from the Pacific Islands. Mixed method study design was used with target population of select stakeholders and a sample size of 25 purposively selected. A semi structured questionnaire was used for data collection and thematic approach used to analyse data. The study findings were as follows: five main constructs that drive equitable implementation were collaborative design, anti-racism consideration, priority population expertise, cultural safety, and values based. Conceptual factors were social, economic, commercial, and political determinants of health that impact on interventions implementation and health equity. Implementation pathway was mapped with four main steps identified namely planning stage, designing, monitoring, and outcomes and evaluation. The study recommends that the health equity framework should be used in partnership with current existing equity tools and methods to offer flexibility of integrating tools and approaches that stakeholders are familiar with. The study gaps identified are that the sample size was too small hence limiting generalizability of the study findings. As this was a conceptual study, we propose to address these gaps by validating this framework through empirical studies in another setup using a larger sample size.

McLoughlin, Walsh-Bailey, Singleton, and Turner (2022) assessed the implementation of school health policies through a health equity lens using a measures development study protocol in the United States. The purpose of the study was to develop equity-focused measures in collaboration with practitioners, researchers, and other key implementation partners that can facilitate evaluation of policy implementation determinants (i.e., barriers and facilitators), processes, and outcomes. The study used mixed method study design with multiple stakeholders as the target population. The stakeholders were as follows; students, parents/guardians, school principals, teachers, and food service staff and directors. A sample size of 10 from each stakeholder group was selected using non-random purposive method. Interview guides, qualitative and quantitative surveys were used as data collection tools within which equity lens were embedded. Descriptive and explanatory data analysis methods were used. The study findings were not published since the project was still ongoing by the time this

article was published. However, within the study we were able to identify a summary of factors which influence equity implementation and a summary of current frameworks used to inform policies on equity in school-based health interventions. The study recommends the use of multi-stakeholder engagement as target audience which offers an in-depth insight on individual needs, an approach other researchers can emulate. One of the study gaps is that empirical evidence is not available which we suggest addressing by conducting a real-world study using the constructs identified.

Bergen, Ruckert, Abebe, Asfaw, Kiros, Mamo, and Labonté (2021) undertook a study to characterize 'health equity' as a national health sector priority for maternal, new-born, and child health in Ethiopia. The purpose of the study was to describe 'health inequity'. Mixed method study design was used with senior professional workers (stakeholders) in health-related departments selected as target population. A sample size of 25 stakeholders were selected using purposive sampling method. Key informant interviews and desktop review were used as data collection methods. Data analysis was done using thematic and content analysis of interview transcripts and policy documents. Study findings suggest that health equity in the current context is largely characterized as ongoing, technical problem, mainly operationalized through ongoing expansion of health programs in rural setups. Further, health equity has often been understood as like health inequalities or health disparities. The current representation of health equity has a potential to drive the expansion of health service coverage even though with less influence on political power influence. The study recommends further research to delve deeper into the silent aspects deeply rooted in the current representation of health equity, and how they can be embedded into health systems addressing equity. One of the study gaps is that the current beneficiaries of the maternal, new-born, and child health were not involved in the study hence a complete characterization of beneficiary needs not fully exploited. We suggest addressing this gap in future studies through involvement all stakeholders including private sector which was not involved in this study.

Tyler, Pauly, Wang, Patterson, Bourgeault, and Manson (2019**)** undertook a study to examine evidence use in equity-focused health impact assessment using a realist evaluation. The study purpose was to conduct a realist analysis and identification of context-mechanism-outcome patterns and demi-regularities to map evidence use in equity focused health impact. Mixed method research design was used and selected hospitals stakeholders as target population. A sample size of 12 hospitals out of which 15 participants were conveniently selected. Data collection was done through document review, semi-structured interviews, online surveys, and observation. Data analysis was done using a realist analysis and identification of context-mechanism-outcome patterns and demi-regularities. The study findings were as follows; knowledge brokering at the local site can facilitate evidence familiarity and manageability and increase user confidence in using evidence; Evidence sources aligned with user needs increases acceptance and use of the information; adapting the knowledge to match user characteristics can encourage evidence use because there is increased understanding of the knowledge and consonance with the content; correspondence between knowledge produced and the problem to be solved can facilitate evidence use because the users will perceive the knowledge as applicable; knowledge brokering during the knowledge production process can help build relationships with users, establish trust and familiarity in the producer, and facilitate evidence

use and knowledge brokering at the reception site can facilitate evidence use because users have timely access to knowledge, reducing the perception of barriers. The study recommends that current findings can be used to inform development, refinement of several ongoing knowledge translation interventions. Knowledge brokers may come in to mitigate these responses, though with limited success. One of the study gaps is that the current study lacked rigor failing to provide a robust correlation between knowledge translation and evidence utilization. Future research studies with robust methodology can be undertaken to show the connection or lack of it between knowledge translation and evidence use.

Hatton, Kale, Pollack Porter, and Mui (2024) undertook a study to examine intersectoral Community Health Improvement Planning (CHIP) opportunities to advance the social determinants of health and health equity. The purpose of the study was to inventory the social determinants of health included in 13 CHIPs and examine facilitators and challenges faced by local health departments and partners when trying to include the social determinants of health. The study used a case study comparative evaluation study design with the following stakeholders as target population (Key leaders, staff at partnering hospitals, non-profits, and public agencies). A sample size of twelve CHIP institutions was selected for the study. Convenience and snow bow sampling methods were used to select the 12 CHIP institutions. Data was collected using key informant interviews and analysed using descriptive content analysis and key informant interviews to understand perceptions of the community health improvement project. The study findings showed an average score of 49/100 for inclusion of social determinants of health and 35/100 on overall equity orientation in community health improvement projects. These reflects a relative attention to equity and inclusive planning processes in the plans. Interviews highlighted the challenges in engaging partners, making clear connections between CHIPs and social determinants of health. Lack of capacity or public and partner support was suggestive of exclusion of social determinants of health. The study recommends an improvement to planning processes which includes data infrastructure, dedicated resources for planning staff and community engagement incentives. Centring equity throughout the health project planning process is highly recommended. A key gap identified in this study is that it failed to address literacy, economic, social, and community contexts.

Table 4.1 Summary of study findings

	Article 1 (Gustafson et al., 2024)	**Article 2** (McLoughlin et al., 2022)	**Article 3** (Bergen et al., 2021)	**Article 4** (Tyler et al., 2019)	**Article 5** (Hatton et al., 2024b)
Study purpose/problem	Adapting equity-focused implementation	Equity implementation gaps (Barriers and facilitators). Filling gaps in measure development.	Characterization of the 'problem' of health inequity	Evidence use in equity-focused health impact assessment through realist evaluation.	Inclusion of social determinants of health to address Health disparities
Research design	Mixed method	Mixed method	Mixed method	Mixed method	Case study
Target population	Stakeholders (Researchers and investigators)	Stakeholders (Multiple audience_ students,	Stakeholders (from diverse health-related organizations)	Stakeholders	Stakeholders (Key leaders, staff at partnering

		parents/guardians, school principals, teachers, and food service staff and directors.)			hospitals, non-profits, and public agencies)
Sample size	25	10 for each group of stake holders.	25	5 hospitals, 15 participants	12 institutions
Sampling methods	Purposive	Purposive	Purposive	Purposive	Purposive
Data collection method	Semi-structured questionnaire	Interview guides and surveys (Qualitative, semi-structured interview guides and quantitative surveys) with equity lens	Key informant interviews and desktop review of six policy documents.	Document review, semi-structured interviews, online surveys, observation	Key informant interviews
Data analysis method	Thematic approach	Descriptive and explanatory analysis	Thematic and content analysis of the interview transcripts and policy documents	Realist evaluation methodology (realist analysis and identification of context-mechanism-outcome patterns and demi-regularities.	Descriptive content analysis and key informant interviews to understand perceptions of the CHIP development process.
Study Findings	*The core constructs* are the five key elements that drive equitable implementation and inform each step along the implementation pathway: collaborative design, anti-racism, Māori and priority population expertise, cultural safety and values based. *The contextual factors* are the social, economic, commercial and political determinants of health that impact on intervention implementation and health equity. *The implementation pathway* includes	No section for findings. We identified the factors and previous frameworks used in previous studies.	Health inequity in this context is characterized as an ongoing, technocratic problem, primarily operationalized through the continual expansion of health interventions into rural areas. These representations of health equity depoliticize the problem, turning attention towards improvements in quantifiable health measures and data systems. Discussions of health equity are often synonymous with those about health inequalities or disparities (systematic differences in	Proposition 1: Knowledge brokering at the local site can facilitate evidence familiarity and manageability and increase user confidence in using evidence. Proposition 2: Evidence sources aligned with user needs increases acceptance and use of the information. Proposition 3: Adapting the knowledge to match user characteristics can encourage evidence use because there is increased understanding of the	Average score of 49/100 for the inclusion of the social determinants of health. Regarding their overall equity orientation, CHIPs received an average score of 35/100, reflecting a relative lack of attention to equity and inclusive planning processes in the plans. Interviews revealed that challenges engaging partners, making clear connections

	four main steps: Implementation Planning, Designing the Implementation Pathway, Implementation Monitoring, and Outcomes and Evaluation.		health across population groups) rather than the acceptability, or unacceptability of measurable health differences under different circumstances.	knowledge and consonance with the content Proposition 4: Correspondence between knowledge produced and the problem to be solved can facilitate evidence use because the users will perceive the knowledge as applicable. Proposition 5: Knowledge brokering during the knowledge production process can help build relationships with users, establish trust and familiarity in the producer, and facilitate evidence use Proposition 6: Knowledge brokering at the reception site can facilitate evidence use because users have timely access to knowledge, reducing the perception of barriers	between CHIPs and social determinants, and a lack of capacity or public and partner support often led to the exclusion of the social determinants of health.
Recommendations	Integration tools and approaches that stakeholders are already familiar with is key to achieving health equity.	Identification of relevant constructs and engaging target audiences in developing and refining measures often is critical. This provides steps that other researchers and measure developers can emulate.	Building on the findings of this study, further research is needed to unpack the silences inherent in the current representation of health equity.	Findings can inform ongoing development and refinement of various knowledge translation interventions knowledge brokers could be used to mitigate these responses.	Improving data infrastructure, provide resources for dedicated planning staff and community engagement incentive. Also, centre equity throughout

					the planning process.
Study gaps	As this is a conceptual study, the framework has not been tested and empirical evidence validating its benefits is not yet published.	Empirical evidence of study outputs is not yet available. This study may have limited generalizability beyond the study participant groups.	Beneficiaries not included in study. Study missed an opportunity to capture perceptions/lived experiences/unmet needs.	Study lacked rigor hence was unable to make concrete connections between Knowledge translation and evidence use.	Study missed to address economic stability, the social and community context, and education access and quality.
Propose to address these gaps in future study	Operationalisation of this framework in intervention implementation will be important to determine its effectiveness and usefulness in both research and service settings.	Conduct the study in a different resource setting to address contextual evidence gap.	Expand target population to include all stakeholders including the direct and indirect beneficiaries.	Conduct a study on barriers and facilitators of knowledge translation.	Conduct a study to address contextual factors such as economic stability, the social and community, and education access and quality

5.0 Discussions

The promise of equity in all policies and for all ages has gained traction over the past two decades with the World Health Organization(WHO) taking the lead in setting targets and goals for all the countries to adapt and prioritize (*World Health Statistics 2023 – Monitoring Health for the SDGs*, 2023). Measures of equity have also been developed though with limited empirical studies to show the effectiveness in real-world settings(Gustafson et al., 2024).

For research question 1: *To what extend does equity-focused monitoring and evaluation influence the performance of school-based health programs?* there were limited empirical evidence among the five articles reviewed. Our search inclusion criteria could also have limited our results since only journal articles published in English were reviewed. However, a similar study has also highlighted the current empirical gap (Gustafson et al.,2024) and the need for more real-world studies to test the influence of equity-focused monitoring and evaluation on performance of health projects. As per the research question 2: *What are the key constructs that drive equitable implementation of health projects?* a study by Gustafson et al. (2024) identified five main constructs that drive equitable implementation of health projects. These were inclusion of a collaborative design, anti-racism consideration, embedding priority population expertise, cultural safety, and values-based consideration. Baseline population health status and social determinants of health have previously been cited to have impact on equity implementation. Further, implementation pathway was mapped with four main steps identified namely planning stage, designing, monitoring, and outcomes and evaluation (McLoughlin et al.,2022). For research question 3: *Which methodological designs are used and how do they compare across existing studies?* we performed a convergent and divergent analysis across the five articles. On research design, there was a convergence in use of mixed methods (Gustafson et al.,2024; McLoughlin et al.,2022; Bergen et al.,2021; Tyler et al.,2019)

while Hatton et al.(2024b) used a case study design. The mixed method and case study designs have been previously used and found to be adequate in generating strong evidence on project implementation (Al-Salim, W., Darwish, A. S. K., & Farrell, P., 2022). Similar convergence on study methodologies were noted on selection of target population, data collection methods, and in sampling where purposive method was largely adopted (Gustafson et al.,2024; McLoughlin et al.,2022; Bergen et al.,2021; Tyler et al.,2019; and Hatton et al.,2024b). Two articles also converged on data analysis where thematic method was used (Gustafson et al., 2024; Bergen et al.,2021) while articles by McLoughlin et al. (2022) and Hatton et al.(2024b) converged on descriptive and content analysis. Tyler et al. (2021) had a divergent approach by adopting a realist evaluation method. Divergence also was noted in study sample size, and recommendations (Gustafson et al.,2024; McLoughlin et al.,2022; Bergen et al.,2021; Tyler et al.,2019; and Hatton et al.,2024b).

Overall, the articles review highlighted some core equity implementation domains such as: engagement of all stakeholders in the community, emphasis of equity in implementation processes and outcomes, evaluating equity in implementation processes and outcomes, embedding equity in health systems, capacity building, and addressing social determinants of health. The lack of dedicated leadership and allocation of resources, harmonizing implementation theories, frameworks, models, measures and metrics were mentioned as challenges in equity implementation science(Barcellona et al., 2023b). The definition of equity remains ambiguous with several researchers mixing terms such as health disparities, health inequity, health inequalities in their studies. Without a clear definition, this can potentially complicate future research in addressing equity for new researchers. One of the key strengths of the articles reviewed (Gustafson et al.,2024; McLoughlin et al.,2022; Bergen et al.,2021; Tyler et al.,2019) was the use of mixed research design in evaluation which provides a comprehensive understanding of research question and increase in validity and reliability of evidence synthesis. An article by Hatton et al.(2024b) used a case study design which also provides an in-depth understanding of program effectiveness(Merino et al., 2023). The use multiple stakeholders as target population also adds strength in evidence synthesis since equity cuts across in program implementation. However, these study findings should be interpreted in the context of several limitations including sampling methods. The inclusion and exclusion criteria, sample size calculation method was not explicitly described. Low sample size was reported, and this has implications on effect size. The use of convenience (purposive) sample introduces selection bias meaning some target population missed the chance to be selected as opposed to random or probability sampling which gives a equal chance for all people to be selected(Linden et al., 2024). There was insufficient attention to quantitative data which would have added some strength to the evidence generation (Sivaramakrishnan et al., 2023).

Conclusion

The study findings suggest that current studies have not exploited the potential influence of equity-focused monitoring and evaluation on performance of school-based health projects. Key constructs for equitable implementation and methodological designs are well grounded in the literature.

Recommendations

There is an urgent need in future to conduct an empirical study to determine the influence of equity-focused monitoring and evaluation on performance of school-based health projects. This will provide the much-needed real-world evidence to test the current equity-focused theories, models, and frameworks.

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