EVALUATION AND LESSONS LEARNED FROM PUBLIC HEALTH SOCIAL MARKETING CAMPAIGNS:

INFORMING A STANDARDIZED EVALUATION FRAMEWORK FOR FUTURE PUBLIC HEALTH EMERGENCIES

Kristina Lee Him HBPH, MSc Candidate
Supervisor: Dr. Jordan Tustin
School of Occupational and Public Health

Toronto
Metropolitan
University

Public Health Social Marketing Campaign

- A public health social marketing campaign integrates marketing principles with public health goals to promote healthy behaviours, improve health outcomes and prevent **disease**[1]

Vaccines are safe

Vaccines add a layer of protection against COVID-19

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Importance of Public Health Social Marketing Campaigns

Promote Healthy Behaviour Changes[2,3]

Improve Population Health[2,3]

Build Community Trust[4]

Timely Dissemination of Critical information[2,3]

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Literature Review

Public Health Communication	Disseminate **accurate, timely and accessible evidence-based health information** to improve population health[2,3]
	Building community **trust and empowering communities**[2,3]
	Essential during **public health emergencies**[5]
COVID-19 Social Marketing Campaigns: Global Response	**Global implementation** of digital campaigns, including the World Health Organization (WHO), due to the social distancing guidelines[6]
	Provide COVID-19 **updates, combat misinformation** and share **protective measures**[7]

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Literature Review

Ontario's Response to COVID-19	**Unprepared,** the Provincial Emergency Response Plan was **outdated** and failed to integrate **digital platforms**, highlighting gaps in emergency preparedness[8]
	Only integrated **4 of the 36** lessons learned from the 2017 audit[8]
	This led to a **critical need for updated frameworks** for public health emergencies[8,9]
Existing Frameworks	The Federal Government of Canada's **Advertising Campaign Evaluation Tool** (ACET) is mandated for campaigns with budgets **exceeding $1M**[10]
	The **RE-AIM Framework** offers a structured approach but has limitations[11]

Research Gaps

No Standardized Framework

Inconsistent Evaluation Practices

Underutilization of Digital Tools

Lack of Preparedness during Health Emergencies

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Research Question

What are the current practices for evaluating public health social marketing campaigns in health emergencies, and how can these inform a standardized evaluation framework to enhance campaign effectiveness and preparedness for future crises?

Study 1: Scoping Review on Current Practices in The Evaluation of Public Health Social Marketing Campaigns

Objective: Identify and synthesize current global evaluation methods to inform recommendations for a standardized framework to strengthen public health evaluation standards

Study 1: Methods

Study Design
- PRISMA-ScR guidelines and Arksey & O'Malley's thematic analysis framework[12,13]

Systematic Search
- Databases: PubMed, Scopus, Web of Science, and PsycINFO
- Eligibility Criteria:
  1. Peer-reviewed, published in English between January 2014 and March 2024
  2. Evaluated public health social marketing campaigns developed by government organizations
  3. Campaigns promoted healthy behaviours, improved health or prevent disease

Study Selection
- Zotero (for citations) and Covidence (for systematic screening)
- **Screening:** Two independent reviewers (KLH & AW)
  - Title and abstract screening and full-text review
  - Disagreements were resolved through consensus
  - **Inter-rater Reliability:** Evaluated using Cohen's Kappa

Study 1: Methods

Data Extraction
- **Tool:** Microsoft Excel
- Extract Key characteristics:
  - Campaign details (e.g., design, target population, delivery methods, campaign metrics, Evaluation methods and frameworks)
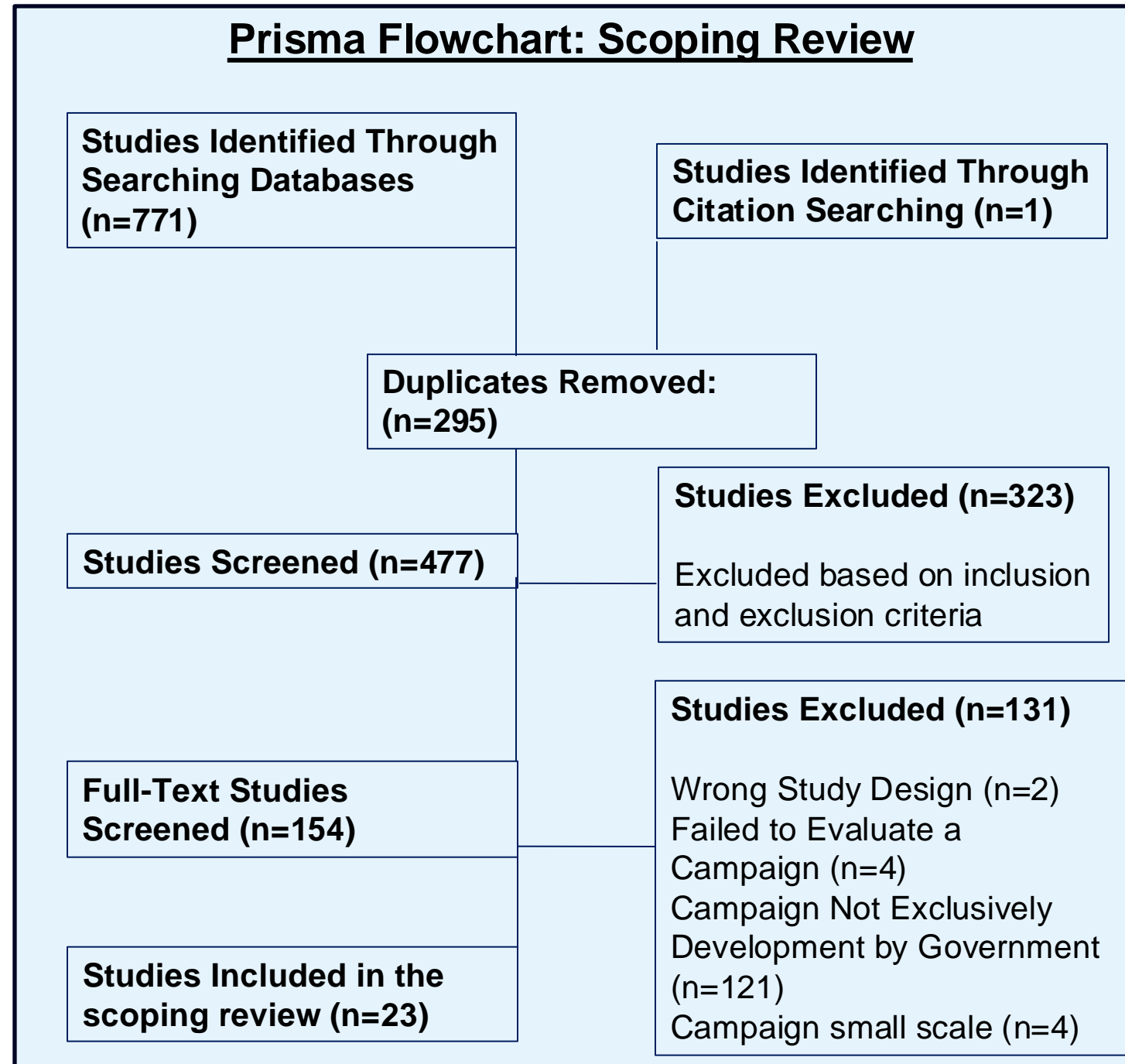
Thematic Analysis:
- Understanding the evaluation landscape
- Data coding and grouping into categories
  - Identifying and synthesizing themes to inform a standardized evaluation framework

Study 1: Results

Study Selection
- Total studies identified: 772
  - 771 from databases
  - 1 from reference searching

- **Screening results:**
  - 477 screened → 154 full-text reviews → 23 included

- **Cohen's Kappa:**
  - Initial screening: 0.752
  - Data extraction: 0.742

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Prisma Flowchart: Scoping Review

Studies Identified Through Searching Databases (n=771)

Studies Identified Through Citation Searching (n=1)

Duplicates Removed: (n=295)

Studies Screened (n=477)

Studies Excluded (n=323)

Excluded based on inclusion and exclusion criteria

Full-Text Studies Screened (n=154)

Studies Excluded (n=131)

Wrong Study Design (n=2)
Failed to Evaluate a Campaign (n=4)
Campaign Not Exclusively Development by Government (n=121)
Campaign small scale (n=4)

Studies Included in the scoping review (n=23)

Study 1: Results

Four Themes were Identified in Evaluation Practices:

Refining Campaign Design Through Pre-Implementation Evaluation (Formative Evaluations):	• **34.8%** (n=8) • Common tools: Online surveys (n=5) • Focus groups (n=4)
Monitoring and Adapting Campaign Implementation (Process Evaluations):	• **95.7%** (n=22) • Common tools: Digital metrics (n=12) Online surveys (n=8)
Measuring Impact and Outcomes (Outcome Evaluations):	• **78.3%** (n=18) • Common tools: Online surveys (n=12) and Digital metrics (n=6)
Evaluation Frameworks:	• Only **4%** (1 study) used a framework. • Example: RE-AIM Framework in the LAIV Influenza Vaccination Program

Only 7 campaigns implemented all three evaluation methods (formative, process and outcome)

Discussion

Formative, Process and Outcome Evaluations	**Formative, process, and outcome evaluations** are critical for assessing campaign effectiveness Together, they ensure campaigns are refined, well-implemented, and impactful
Evaluation Tools	**Online Surveys**: Cost-effective, rapidly deployable, and ideal during emergencies[14] **Digital Metrics**: Real-time data collection and engagement tracking via social media[15]
Lack of Standardized Evaluation Framework	Current evaluation practices **lack consistency** **Time and resource-intensive** approaches hinder timely evaluations during emergencies[11]
Informing a Standardized Evaluation Framework	Integrate formative, process, and outcome evaluations Leverage online surveys and digital metrics for rapid, cost-effective insights

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Limitations

Data Source

English Language Bias

Study Selection Bias

Recommendations and Future Directions

- There is a **critical need for a standardized evaluation framework** that includes formative, process, and outcome evaluations and leveraging evaluation tools of digital metrics and online surveys

- Organizations need to perform more **effective, consistent and adaptive** evaluations on public health social marketing campaigns

- Future research should also focus on expanding and refining current practices by reviewing **grey literature**

- Expand research to identify the practical advantages and disadvantages of current methods in evaluating **long-term and short-term** public health social marketing campaigns

Study 2: Content Analysis: Evaluation Gaps and Insights in Ontario's COVID-19 Public Health Social Marketing Campaigns: Toward a Standardized Evaluation Framework

Objective: Analyze Ontario's COVID-19 public health social marketing campaigns by examining evaluation practices and identifying gaps and inconsistencies
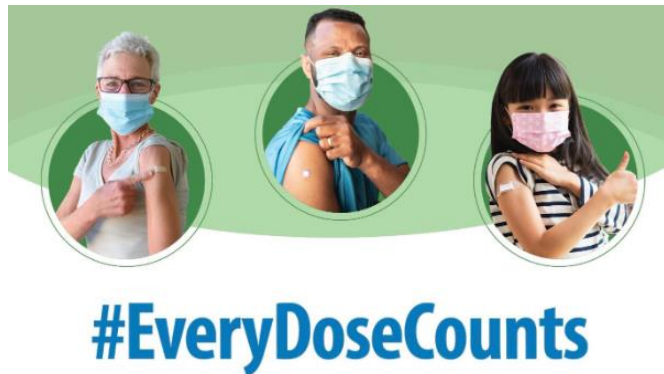
Study 2: Methods

Study Design
- Focused on **13 "hotspot" PHUs** with the **highest hospitalizations and deaths** (defined by the Ministry of Health)[16]
- One campaign per PHU was selected

Data Collection
- **PHU Websites**: Search terms like "COVID-19 Vaccine Campaign"," "Mass Immunization Strategy"
- **General Web Searches**: Identified resources: posters, press releases, and promotional materials
- **Social Media Platforms**: Facebook, X (Twitter), Instagram, and YouTube
- **Local Government Websites**: Searched for reports and campaign details

Inclusion Criteria
- Developed and launched by one of the 13 hotspots **Ontario PHUs**
- Promote **vaccine uptake**, address **vaccine hesitancy**, or **reduce barriers to vaccination**
- **Publicly available** information reported online in **English**
- Launched between **January 2020 and December 2023**

Study 2: Methods

Coding Framework
- Developed to align with study objectives and capture patterns/trends
- Organized into **four main themes**:
  - **Campaign Characteristics**
  - **Delivery Methods**
  - **Evaluation Identified, Methods and Tools**
  - **Transparency of Publicly Available Data**

Data Analysis
- Data was analyzed and categorized using **Microsoft Excel**
- Descriptive and categorical coding approach based on the four themes:
  - Descriptive analysis
  - Binary coding
  - Thematic categorization

Study 2: Results

Campaign Characteristics	• Most campaigns targeted the entire population • One PHU (Peel Public Health) targeted individuals unable to attend daytime clinics • **Key Messages:** Encouraged vaccine uptake across all campaigns
Delivery Methods	• **Digital Media Platforms:** 12 campaigns (92.3%) • **Traditional Media:** 7 campaigns (53.8%). • **Community Outreach:** 3 campaigns (23.7%)

Study 2: Results

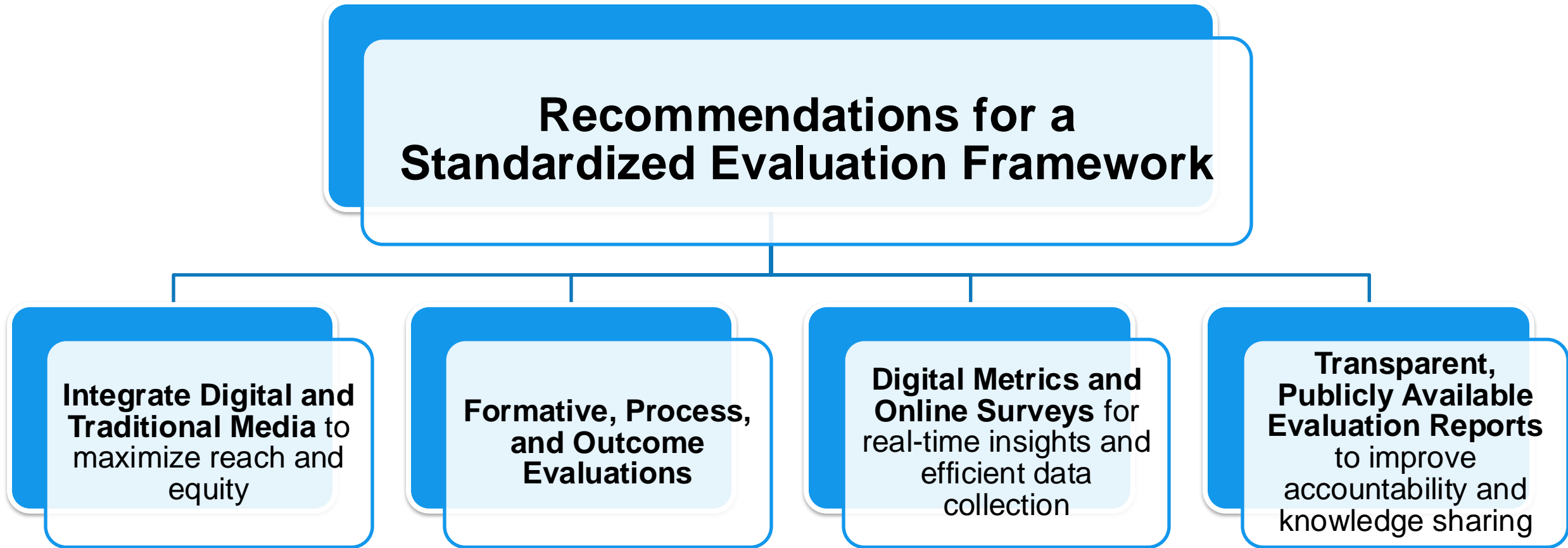|	

Measuring Impact and Outcomes (Outcome Evaluations):	• **Evaluations Conducted: 5 campaigns (38.5%)**
	    • Formative evaluations: 0 campaigns
	    • Process Evaluations: 1 campaign
	    • Outcome Evaluations: 5 campaigns
	• **Evaluation Tools:**
	    • Number of doses administered: 5 campaigns
	    • Digital metrics: 3 campaigns
	    • Online surveys: 1 campaign

Evaluation Frameworks:	• **Evaluation Information Available Online: 7 campaigns (53.8%)**
	    • Fully accessible: 5 campaigns
	    • Partially accessible: 2 campaigns
	• **Sources of Evaluation Information:**
	    • Communication Updates: 2 campaigns
	    • Reports: 5 campaigns

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Study 2: Discussion

Delivery Methods	• **Social media platforms** were heavily utilized due to their broad reach and ability to engage diverse audiences, including vulnerable communities • **Traditional media and community outreach** supported populations without internet access but faced structural inefficiencies during emergencies[17]
Evaluations Identified, Methods, and Tools	• HPPA all PHUs are **mandated to perform evaluations**[18] • No **formative** and limited **process evaluations** • **Outcome evaluations** were most common, relying on tools like **number of doses administered**, **digital metrics**, and **online surveys** • Evaluation methods were **inconsistent and lacked comprehensive frameworks**
Transparency of Publicly Available Reported Data	• HHPA all PHUs **mandated to provide publicly accessible data** about all the implemented programs[18] • Only **one PHU** published a comprehensive evaluation report online • Reports were often fragmented and lacked actionable insights

Study 2: Discussion

Recommendations for a Standardized Evaluation Framework

- **Integrate Digital and Traditional Media** to maximize reach and equity

- **Formative, Process, and Outcome Evaluations**

- **Digital Metrics and Online Surveys** for real-time insights and efficient data collection

- **Transparent, Publicly Available Evaluation Reports** to improve accountability and knowledge sharing

Limitations

Reporting Bias

Contextual Bias

Generalizability

Recommendations and Future Direction

- Evaluations are critical to assessing **campaign effectiveness**, especially in reaching vulnerable communities

- A standardized framework would **strengthen** campaign design, execution, and assessment, ensuring better preparedness for future public health emergencies

- Future Research should consult stakeholders such as **key informants** from public health agencies

- Developing a standardized evaluation that includes **geographical and cultural contexts**

Implications on Public Health Practice

- Strengthening Public Practices
- Enhance Campaigns Effectiveness
- Promoting Accountability and Transparency
- Leverage Cost Effective Evaluation Tools
- Informing Policy and Resource Allocation

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Contact information: kleehim@torontomu.ca