Strategies to Increase Endorsement of Evaluation Use: Insights from South Africa

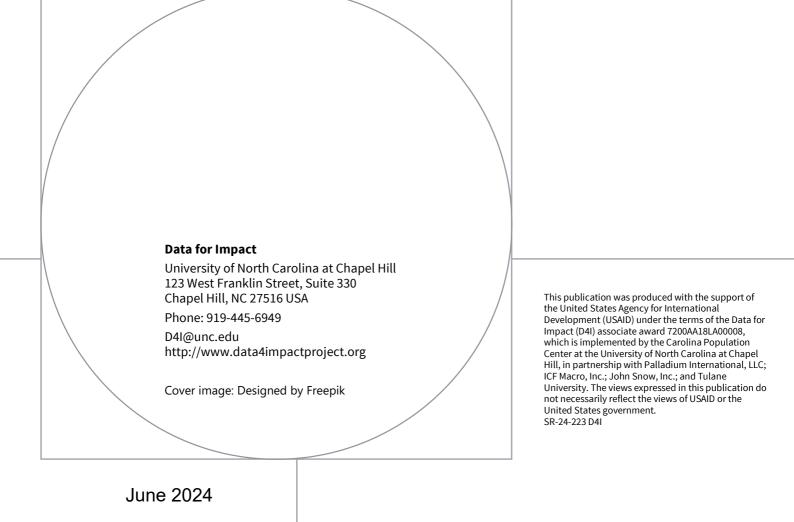


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# Strategies to Increase Endorsement of Evaluation Use: Insights from South Africa

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# Contents

Positionality Statements4
Abbreviations5
Executive Summary6
Background6
Study Design and Methodology6
Results7
Recommendations8
Background9
Conceptual Framework and Theory of Change9
Research Questions10
Method11
Materials and Procedure11
Design12
Sample12
Power and Sample Size Calculations13
Analysis Strategy13
Results
Experiment 1
Experiment 2
Discussion and Recommendations22
Messaging to Strengthen Willingness to Endorse Evidence Use
Experience's Impact on Willingness to Endorse Evidence Use
Limitations
Conclusion
References

# **Figures**

Figure 1. Theory of change	10
Figure 2. Participants' responses to the question of willingness to endorse the use of qualitative evidence in health programming decision making (denoted on the y-axis as "response") per me ("Control," "Independence," "Local Evaluator," and "Subject Matter Expertise")	essage
Figure 3. Participants' responses to the question of willingness to endorse the use of qualitative evidence in health programming decision making (denoted on the y-axis as "response") per me ("Control," "Independence," "Local Evaluator," and "Subject Matter Expertise")	essage
Figure 4. Distribution of responses regarding the last time participants engaged with research, Experiment 1 (left) and Experiment 2 (right)	

# **Tables**

Table 1. Vignette used in Experiment 211
Table 2. Model fit measures and model comparisons for Experiment 1
Table 3. Model 2 Parameter Estimates (Coefficients). The outcome variable ("willingness to endorse the use of qualitative evidence in health programming decision making") is denoted as "response."15
Table 4. Model fit measures and model comparisons for Experiment 2
Table 5. Model 2 parameter estimates (coefficients). The outcome variable ("willingness to endorse the use of qualitative evidence in health programming decision making") is denoted as "response."19
Table 6. Experiment 2, Group 1 Parameter Estimates (Coefficients). The outcome variable ("willingness to endorse the use of qualitative evidence in health programming decision making") is denoted as "response."
Table 7. Experiment 2, Group 2 Parameter Estimates (Coefficients). The outcome variable ("Willingness to endorse the use of evidence") is denoted as "response."

# **Positionality Statements**

**Agata Slota:** I acknowledge that, as a white Polish-American-British woman who has not lived in South Africa and has not worked directly in the public health sector, my life experience is different from that of participants in this research, and my contextual knowledge is limited to secondary sources. This may have impacted how I interpreted the data generated by the study.

**Afroditi Tsourgianni:** As an educated white woman conducting academic research in the United Kingdom, I recognize that my life experiences and academic background may have influenced the design of the experiment and shaped my interpretation of its findings.

**Lucinda Jones:** I am aware, that as a white British woman living in the United Kingdom and working in global health, my experiences will differ greatly from those of the South African health professionals who participated in this study. My background and education might have impacted my interpretation of the data and how I contextualized it.

# Abbreviations

D4I	Data for Impact
DV	dependent variable
IV	independent variable
Q	question

USAID United States Agency for International Development

# **Executive Summary**

# Background

The United States Agency for International Development's (USAID's) Evaluation Policy emphasizes using evaluations for learning and accountability purposes to inform their policy and investment decisions. However, multiple challenges to the use of evaluation findings from USAID global health programs have been identified, both in the literature and through Data for Impact's (D4I's) primary research. Some of these challenges can potentially be mitigated by presenting information about evaluations and evaluators in specific ways.

This study used an experimental design to empirically answer five research questions (Q) regarding the impact of different messages on evidence use. The questions ask whether mentioning the following in the description of the evaluation impacts the willingness to endorse the use of evidence from qualitative evaluations for decision making:

- **Q1:** Appropriateness of qualitative methods for the line of inquiry
- **Q2:** Triangulation of data sources and/or methods
- Q3: Subject matter expertise of the evaluators
- **Q4:** Independence of the evaluators
- **Q5:** That the evaluators are from the same location as the activity they are evaluating

### **Study Design and Methodology**

The study entailed two separate experiments with two participant panels. The first experiment addressed the first two research questions, and the second addressed the last three research questions. Data was collected between April 1, 2024, and May 17, 2024.

For each experiment, respondents were invited to fill out a questionnaire online through the Qualtrics platform. They were presented with scenarios with various messages about a hypothetical evaluation or evaluators and a decision maker who was presented with new evaluation evidence relevant to their work. After reading the vignette, respondents answered to what extent they believed the decision maker should use the findings from the evaluation to decide which approach to health programming to use next year. In addition, respondents were asked questions about their experience with research, their level of risk aversion in work situations, and socio-demographic questions.

The participant panels were purchased from Qualtrics, which screened the participants based on the following criteria: resident of South Africa; working for government or public sector; working in public health; ages 25–65; and highly proficient or fluent in English.

Both experiments employed a within-subjects design. We determined the sample size *a priori* with the goal of obtaining 0.80 power to detect a medium effect size at the standard 0.05 alpha error probability. In Experiment 1, we recruited 51 participants, comprised of 53% females and 47% males. In Experiment 2, we recruited 54 participants, 50% female and 50% male. In both experiments, we used regression models to examine the impact of different messages on the respondents' willingness to endorse evidence in decision-making, controlling for factors such as socio-demographics and risk profiles.

### Results

Overall, 70% of participants across the two studies endorsed the use of evidence; 75% of participants in Experiment 1 and 67% in Experiment 2.

## **Experiment 1 Results**

Manipulating messages regarding the appropriateness of qualitative methods and the triangulation of data sources and/or methods did not significantly impact participants' willingness to endorse using evidence from qualitative evaluations in decision making. As such, we do not have evidence to support using these types of short messages about qualitative methodologies to describe evaluations as a potential first step towards increasing evidence use.

However, participants who had more recently engaged with research (including evaluations) were more likely to support the use of qualitative evidence. Further, the majority (80%) of participants reported having a positive or highly positive experience with research. Taken together, these findings suggest that positive experience with research increases willingness to endorse evidence use. However, as the study was not testing for causality between these two variables and willingness to endorse evaluation findings, this must be considered an exploratory finding.

## **Experiment 2 Results**

Manipulating messages regarding the evaluators' subject matter expertise, independence, and/or locality did not significantly impact participants' willingness to endorse using evidence from qualitative evaluations in decision making. As such, we do not have evidence to support using these types of short messages about evaluators to describe evaluations as a potential first step towards increasing evidence use.

However, the exploratory data showed that for participants who engaged with research more than a year ago, their level of professional experience was correlated with their willingness to endorse evidence use. The less professional experience people had, the more likely they were to promote the use of evidence. On the other hand, for participants who had engaged with research more recently, how often they used research evidence was positively correlated with their willingness to endorse evidence use. However, this last correlation may simply reflect that the type of person who endorses evidence use also uses evidence more often.





#### Recommendations

Test the impact of a combination of text messages and images regarding evaluation methods and evaluators. These may be more effective than text-only messages.

Test more personal and relatable messaging, which invokes people's experiences of engaging with research, including through storytelling. Stories can highlight the factors tested in the experiment, such as triangulation and the evaluators' subject-matter expertise.

Build on the study's results through further research regarding: (1) the relationship between the timing of one's engagement with evidence, frequency of experience, and willingness to endorse evidence use; and (2) the impact of messages about evaluation methods and evaluators on evidence *use* (as opposed to willingness to endorse evidence use).

Find more ways to engage intended evidence users in research and evaluation processes, focusing on creating positive experiences. This can be done at different steps in the process—from research question development to the verification of findings.

Create positive experiences with research through how findings are disseminated. This includes things such as reducing cognitive overload by producing research summaries, using data visualizations, and tailoring products to make them more relevant to different groups.

Reinforce evidence users' positive memories of engaging with research and/or evaluations. The positive memories do not necessarily have to be about the evaluation being disseminated now; the aim is to create a general positive emotion about research and evaluation.

Make sure to involve more senior or experienced members in evidence-use interventions, especially for groups that may not frequently engage with research or evaluations in their day-to-day work.

# Background

Literature and D4I's primary <u>research</u> have identified multiple barriers to the use of evidence, including the use of evaluation findings from USAID's global health programs. For instance, decision makers' biases may lead them to believe that findings are not of sufficient quality, reliable, or relevant to their work, reducing their likelihood of using them (e.g., Masaki et al., 2016; Slota et al., 2022). The views of evaluators also impact whether research is considered credible and of quality. For instance, the perceived neutrality and subject-matter expertise of researchers play crucial roles in how findings are received (Cohen and Crabree, 2008).

Evidence based on qualitative research often faces additional skepticism, with some decision makers prioritizing quantitative evidence over qualitative because they view it as more credible and objective (Smith and Joyce, 2012). This bias can hinder evidence-based decision making and the acceptance of qualitative findings (Shafaghat et al., 2021). However, various factors impact perceptions of qualitative research and whether it is used. For example, many argue that the credibility of qualitative research depends on its methodological rigor and on the appropriateness of qualitative methodologies for the research question (Smith and Joyce, 2012), and that using techniques such as triangulation can enhance the trustworthiness of qualitative studies (Noble and Heale, 2019).

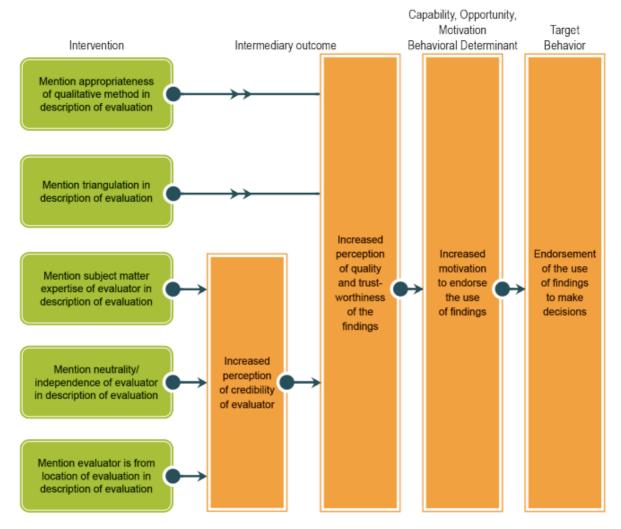
Precisely because so many factors impact the perception of research, modifying the presentation and framing of information regarding research, including evaluations, may be an effective tactic for increasing evidence use. This study sought to explore whether messages can change people's perceptions of evaluation findings in a way that increases their willingness to endorse the use of evidence for decision making. The study used an experimental design to examine messages addressing the challenges of: (1) qualitative evidence being viewed as less trustworthy or of a lower quality than quantitative research, and (2) perceptions of evaluators impacting perceptions of the credibility and quality of evaluation evidence.

The study was conducted in South Africa, with the primary audience being USAID and the secondary audience being implementing partners. The aim was to help those producing or disseminating global health evaluation evidence describe evaluations in a way that supports evidence use.

### **Conceptual Framework and Theory of Change**

The study was grounded in the Capability, Opportunity, and Motivation-Behavior (COM-B) model of behavior change, which suggests that capability, opportunity, and motivation are all factors that impact behavior (Mitchie et al., 2014). Figure 1 demonstrates the study's theory of change.

#### Figure 1. Theory of change



### **Research Questions**

The study's first four research questions were selected based on findings from this activity's initial study (literature review and primary research), which pointed to opportunities for testing how different messaging may impact evidence use. The questions relate to common barriers or enablers to evidence use that also allow for experimental message testing. The fifth research question was selected due to limited evidence regarding the impact of messaging, highlighting that evaluations were conducted by local evaluators, who can strengthen the quality of evidence through their contextual knowledge (Kaufman et al., 2022).

- **Q1:** Does mentioning appropriateness of qualitative methods for the line of inquiry impact willingness to endorse the use of evidence from qualitative evaluations for decision making, as compared to not mentioning appropriateness?
- **Q2:** Does mentioning triangulation of data sources and/or methods impact willingness to endorse the use of evidence from qualitative evaluations for decision making, as compared to not mentioning triangulation?
- **Q3:** Does mentioning subject matter expertise of the evaluator impact willingness to endorse the use of evidence from qualitative evaluations for decision making, as compared to not mentioning subject matter expertise?

- **Q4:** Does mentioning neutrality/independence of the evaluator impact willingness to endorse the use of evidence from qualitative evaluations for decision making, as compared to not mentioning neutrality/independence expertise?
- **Q5:** Does mentioning that the evaluator is from the same location as the activity they are evaluating impact willingness to endorse the use of evidence from qualitative evaluations for decision making, as compared to not mentioning the evaluator being from the same location?

# Method

### **Materials and Procedure**

The study entailed two separate experiments with two participant panels to reduce the participant burden. The first experiment addressed the first two research questions, and the second addressed the last three research questions. The two experiments were carried out consecutively, three weeks apart. Data for Experiment 1 was collected between April 1, 2024, and April 17, 2024. Data for Experiment 2 was collected between May 10, 2024, and May 17, 2024.

For each experiment, respondents were invited to fill out a questionnaire online through the Qualtrics platform. They were presented with vignettes with various messages about a hypothetical evaluation or evaluators and a decision maker who was presented with new evidence regarding the work they were engaging in. After reading the vignette, respondents indicated to what extent they believed the decision maker should use the findings from the evaluation to decide which approach to health programming to use next year.

In each vignette, decision makers were represented using random letters of the alphabet. This was done deliberately to minimize biases (Tversky & Kahneman, 1974), as mentioning the decision maker's name could highlight characteristics such as ethnicity or gender and potentially influence participants' opinions. An example of a vignette used in the experiments is provided for demonstration purposes in Table 1. The messaging manipulation in this vignette refers to the independence of the external evaluator team.

#### Table 1. Vignette used in Experiment 2

"As a public health professional, W works for a district health office. W concentrates their work on HIV care in cities and oversees the implementation of a program that uses Approach A to HIV care. **W needs to decide whether to continue with Approach A or switch to another approach—Approach B**—for the next program year.

As research for this decision, W reads an **external qualitative evaluation** of a program that used two approaches to HIV care—Approach A (which W currently delivers) and Approach B. The evaluation was conducted two years ago in the same district but for a different urban HIV program. This program had the same target outcomes and population as the program W currently oversees.

The evaluation was carried out by an **independent external evaluation team**. The evaluation was funded by an organization not affiliated with the HIV program being evaluated nor with W's work. The evaluators had **full autonomy** in carrying out investigations and reporting findings without any external influence."

In addition, respondents were asked about when they last worked on or engaged with a research activity or evaluation, as well as with qualitative research or evaluation, their level of satisfaction with the experiences, and how often they use research evidence to make decisions at work, as their experience with using evidence may impact how they respond to the vignette-based questions. As the decision to change an approach based on new evidence is also dependent on a person's level of risk aversion, participants were also asked to report on how risk averse they are in work situations. Finally, they were also asked about the following demographic characteristics: gender, level of education, occupation or type of job role, level of professional seniority, and age (as this may be related to data literacy or experience with evaluation initiatives).

To ensure data quality in each experiment, we integrated two attention checks. Participants failing both checks were automatically excluded and disqualified from the study, thereby not included in our final collected data. Furthermore, each experiment's questionnaire included manipulation checks to assess whether participants rated each message manipulation (e.g., the specific aspect introduced by each message) as statistically significantly higher on the specific aspect compared to the control message's score on the same aspect.

These aspects introduced per message manipulation were as follows: appropriateness of qualitative methods (introduced in Message 1, corresponding to Q1), triangulation of data sources and/or methods (introduced in Message 2, corresponding to Q2), subject matter expertise of the evaluators (introduced in Message 3, corresponding to Q3), independence of evaluators (introduced in Message 4 corresponding to Q4), or the fact that the evaluators were from the location where the evaluation was carried out (introduced in Message 5, corresponding to Q5). The exact materials and data for both experiments are available in the Open Science Framework at <a href="https://osf.io/qkvbt">https://osf.io/qkvbt</a>.

### Design

Both experiments employed a within-subjects design. Specifically, Experiment 1 used a within-subjects design with three messages (control message, triangulation message, and appropriateness message), resulting in three conditions that each participant went through in random order. Experiment 2 used a within-subjects design with four messages (control message, independence of evaluator message, subject matter expertise message, local evaluator message), resulting in four conditions that each participant went through in random order. In both experiments, the same dependent variable (DV) was measured: the extent to which participants believed the evaluation findings should influence the decision regarding the health programming approach for the following year, as presented in each vignette. This DV was operationalized with the statement: "The decision maker [denoted by a random letter of the alphabet] should take into account the conclusions and recommendations from the external qualitative evaluation when deciding whether to continue with Approach A." Participants indicated their level of agreement with this statement using a 7-point Likert scale, ranging from "Strongly Agree" to "Strongly Disagree."

#### Sample

The participant panels were purchased from Qualtrics, which screened the participants based on the following criteria: resident of South Africa; working for government or public sector; working in public health; aged 25-65; highly proficient or fluent in English. There was a gender quota set at a minimum of 50% women, with the other 50% being for men, non-binary people, and those wishing to self-describe (we expected the last two categories to be under 1% of the total sample combined).

### **Power and Sample Size Calculations**

For both studies, we determined the sample size *a priori* with the goal of obtaining 0.80 power to detect a medium effect size of f<sup>2</sup>= 0.25 at the standard 0.05 alpha error probability. Power analysis was conducted using the R statistical software (<u>https://www.r-project.org/</u>) package "pwd" function "pwr. f2.test", which is appropriate for generalized linear models. That gave us a minimum sample size of 43 participants for Experiment 1 and 48 participants for Experiment 2. In Experiment 1, we recruited 51 participants, comprising 53% women and 47% men. In Experiment 2, we recruited 54 participants, comprising 50% women and 50% men.

#### **Analysis Strategy**

In both Experiment 1 and Experiment 2, we used a regression model to predict the impact of the different messages, which served as our independent variables (IVs), on participants' willingness to endorse the use of qualitative evidence in health programming decision making. From now on, for simplicity, we will refer to the willingness to endorse the use of qualitative evidence in health programming decision making, our DV, as the outcome variable.

Experiment 1 aimed to test Research Questions 1 and 2. The regression model used in this experiment had an IV with three levels: one for each of the two different messages (appropriateness, triangulation) and the control message, which was used as the reference group for comparison.

In Experiment 2, we tested the remaining research questions (3, 4, and 5). This involved a regression model with an IV that had four levels: one for each of the three different messages (independence of the evaluator, subject matter expertise, local evaluator) and the control message. The control message served as the reference group for comparing each of the three different messages.

Since our outcome variable was ordinal (measured using a 7-point Likert scale from "Strongly Disagree" to "Strongly Agree") in both Experiment 1 and Experiment 2, we used an ordinal logistic regression to assess the impact of the different messages. We then used the Test of Parallel Lines to determine whether the assumptions of the ordinal logistic regression were met and to confirm that this method was appropriate for modeling our data. We also employed a goodness-of-fit test, more specifically, the McFadden value of R-Squared (R<sup>2</sup><sub>McF</sub>), to determine whether the model in each experiment adequately described the data. Additionally, we tested *a priori* to verify that there was no violation of the assumption of no multicollinearity for any additional predictor variables we added to each model in each experiment. Finally, further ordinal logistic regression models were used to check the responses to the manipulation check questions included in each experiment.

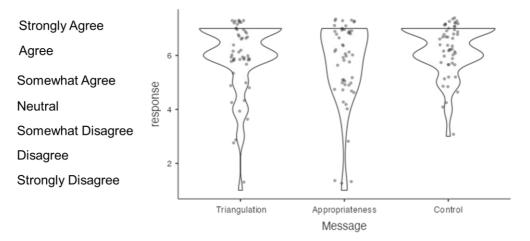
Data were analyzed using R statistical software (<u>https://www.r-project.org/</u>) and the "Jamovi" user interface (<u>https://www.jamovi.org/</u>).

# Results

### **Experiment 1**

In Experiment 1, we examined two types of messages: one highlighting the appropriateness of qualitative methods for the line of inquiry (Q1), and another emphasizing the triangulation of data sources and methods (Q2). In both cases, the two types of messages were compared to a control message that did not mention these aspects. The visual distribution of data for the outcome variable (willingness to endorse the use of qualitative evidence in health programming decision making) for each message is represented below (Figure 2).

Figure 2. Participants' responses to the question of willingness to endorse the use of qualitative evidence in health programming decision making (denoted on the y-axis as "response") per message ("Control," "Independence," "Local Evaluator," and "Subject Matter Expertise")



Analysis of the data gathered from the manipulation check questions (one for appropriateness and one for triangulation) showed that the two manipulation messages were rated statistically significantly higher in the level of perceived appropriateness of qualitative methods (p <0.05) and triangulation of data sources and methods (p <0.05), respectively, and relative to the control message. This suggests that the manipulations in place were successful. Consequently, we can be confident that our experimental design guaranteed that, in our sample, any difference observed in individuals' willingness to support the use of evidence in decision making between the control and each one of the two messages tested (appropriateness, triangulation) can be causally linked to the messaging used, accounting for other factors like demographics or risk profile.

Next, we used an ordinal logistic regression to assess whether the different messages influenced participants' willingness to endorse qualitative evidence in decision making. Table 2 shows the regression models we assessed by including different predictors:

- In Model 1, we included only our main predictor variable "message" (with three levels: control, appropriateness, and triangulation) which we dummy coded using two dummy variables: "Dummy1" for comparing the appropriateness message to the control message and "Dummy2" for comparing the triangulation message to the control message. That model was not statistically significant (*p*= 0.268).
- We continued by adding four additional predictors ("Last time engaged with research," "How often people used evaluation or research evidence," "Overall experience with engaging with research," and "Risk Profile") to Model 1, creating Model 2.<sup>1</sup> Model 2 was statistically significant (*p* < 0.05) and introduced a 3.5% improvement in the prediction of the outcome variable in comparison to the null model.
- In Model 3, we added additional socio-demographic predictors (gender, level of education, occupation/type of role, and age) to control for these and to see whether their inclusion would improve the model. Model 3 was found to be statistically significant (p < 0.05). However, as shown in the "Model Comparison" section of Table 2, the change from Model 2 to Model 3 was not statistically significant (p= 0.095). As such, we concluded on using Model 2.

<sup>&</sup>lt;sup>1</sup> We selected these four specific additional predictors after verifying that they did not violate the no multicollinearity assumption Conversely, we decided not to include the predictors "Last time engaged with *qualitative* research" and "Overall experience with engaging with *qualitative* research" as they were highly correlated with the already included predictors "Last time engaged with research" and "Overall experience with engaging with research" (r = 0.6 and r = 0.7 respectively).

						Over	all Moo	lel Test
Model	Deviance	AIC	R <sup>2</sup> McF	R <sup>2</sup> cs	R <sup>2</sup> <sub>N</sub>	χ²	df	р
1	415	429	0.00631	0.00287	0.00784	2.63	2	0.268
2	403	425	0.03504	0.01581	0.04326	14.63	6	0.023
3	395	425	0.05395	0.02424	0.06633	22.52	10	0.013

#### Table 2. Model fit measures and model comparisons for Experiment 1

Model Fit Measures

Model Co	mpar	isons			
Со	mpar	ison			
Model		Model	χ²	df	р
1	-	2	11.99	4	0.017
2	-	3	7.90	4	0.095

We then used Model 2 to draw conclusions about the effectiveness of the different messages tested (Table 3). The regression coefficient of "Dummy1," corresponding to the appropriateness message, was not statistically significant (p = 0.078). Similarly, the regression coefficient of "Dummy2," corresponding to the triangulation message, was not statistically significant (p = 0.536). These results suggest that messages highlighting the appropriateness of qualitative methods or the triangulation of data sources and methods did not significantly impact the odds that participants would be more willing to endorse using evidence from qualitative evaluations in decision making.

Table 3. Model 2 Parameter Estimates (Coefficients). The outcome variable ("willingness to endorse the use of qualitative evidence in health programming decision making") is denoted as "response." "Dummy1," corresponds to the appropriateness message. "Dummy2," corresponds to the triangulation message.

		95% Confide	nce Interval				
Predictor	Estimate	Lower	Upper	SE	Z	р	Odds ratio
Dummy1:							
1 – 0	-0.658	-1.3960	0.0705	0.3732	-1.763	0.078	0.518
Dummy2:							
1 – 0	-0.230	-0.9602	0.4972	0.3709	-0.619	0.536	0.795
Last time engaged with research	0.269	0.0751	0.4679	0.1000	2.695	0.007	1.309
How often used evaluation or research evidence	-0.297	-0.5859	-0.0173	0.1445	-2.053	0.040	0.743
Overall experience of engaging with research	0.152	-0.2965	0.6061	0.2296	0.662	0.508	1.164
Risk profile	0.236	-0.0283	0.5035	0.1353	1.742	0.081	1.266

Model Coefficients - response

When participant data was split by gender, no significant differences were found between men and women.

Furthermore, although not part of our initial research questions, it is noteworthy that the regression coefficient of "Last time engaged with research" was statistically significant (p<0.05). While we cannot claim causality between these variables, **the exploratory finding suggests a positive relationship between the "last time engaged with research" and the "willingness to endorse the use of qualitative evidence in health programming decision making." In other words, the more recently participants engaged with research, the more likely they were to support the use of qualitative evidence for decision making.** To note, our definition of "engaging with research" was broad and could mean anything from reading an evaluation to leading a research project.<sup>2</sup>

We did not ask respondents about the quality of their most recent experience with research. However, we did ask about their "overall experience with research." Given the availability heuristic—people's tendency to make decisions based on "top of mind" information, because it is recent, frequent or salient—responses to this question can be used as an indication of the quality of their most recent experience. In Experiment 1, 80.4% of respondents reported having either a "Positive" or "Highly positive" overall experience with research. **This suggests that the more recently participants had** *positive* experiences of engaging with research, the more likely they were to support the use of evidence for decision making (as we have no reason to believe participants' recent experiences were negative).<sup>3</sup>

In summary, manipulating messages regarding the appropriateness of qualitative methods and the triangulation of data sources and/or methods did not significantly increase participants' willingness to endorse using evidence from qualitative evaluations in decision making. However, participants who had more recently engaged with research were more likely to support the use of qualitative evidence. The majority of respondents had positive experiences with research, suggesting it is more recent positive experiences with research that may positively impact willingness to endorse the use of evidence. The above results remained consistent after controlling for individuals' risk profiles (on a scale from highly risk-averse to highly risk-tolerant) and socio-demographic variables (gender, level of education, occupation/type of role, and age).

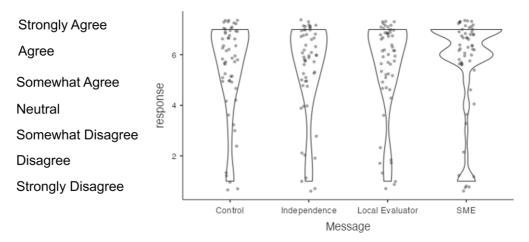
#### **Experiment 2**

In Experiment 2, we examined three types of messages: one highlighting the subject matter expertise of the evaluators (Q3), another highlighting the independence of the evaluators (Q4), and another emphasizing that the evaluators are from the same location as the activity they are evaluating (Q5). In all cases, the three types of messages were compared to a control message that did not mention these aspects. The visual distribution of data for the outcome variable (willingness to endorse the use of qualitative evidence in health programming decision making) for each message is represented below (Figure 3).

<sup>&</sup>lt;sup>2</sup> In the questionnaire, we defined engaging with research as follows: "By 'engaged with research' we mean doing activities such as reading an evaluation report/ brief, supporting a research team to collect data, attending a research webinar or dissemination meeting, commissioning a program to be evaluated, etc."

<sup>&</sup>lt;sup>3</sup> Again, this is not evidence of causation, only of correlation.

Figure 3. Participants' responses to the question of willingness to endorse the use of qualitative evidence in health programming decision making (denoted on the y-axis as "response") per message ("Control," "Independence," "Local Evaluator," and "Subject Matter Expertise").



Similar to Experiment 1, we examined the effectiveness of the manipulations (the different messages used) and identified that two of the three manipulations—the subject matter expertise message and the independence message—were successful, as they were rated significantly higher in perceived subject matter expertise of the evaluators (p < 0.05) and independence of the evaluators (p < 0.05), respectively, compared to the control message. This suggests that our experimental design was successful in ensuring that, in our sample, any observed difference in individuals' willingness to endorse the use of qualitative evidence—between the control group and the subject matter expertise message group or between the control group and the independence of evaluators message group—can be directly attributed to the messaging utilized.

However, despite all three messages passing the manipulation checks in the two pilot runs of the study prior to its final launch, the message about local evaluators did not pass the manipulation check. It was not perceived any differently from the control message in our sample. This suggests that in our subsequent analysis, we cannot establish any causal connections regarding how the local evaluator's message might influence people's willingness to support the use of evidence in decision making.

Next, we used an ordinal logistic regression to assess whether the different messages influenced participants' willingness to endorse qualitative evidence in decision making. Table 4 shows the regression models we assessed by including different predictors:

- In Model 1, we included only our main predictor variable "message" (with four levels: control, independence, local evaluators, and subject matter expertise), which we dummy coded using three dummy variables: "Dummy1" for comparing the independence of the evaluators message to the control message, "Dummy2" for comparing the local evaluators message to the control message, and "Dummy3" for comparing the subject matter expertise message to the control message. That model was not statistically significant (*p*= 0.782).
- We continued by adding three additional predictors ("last time engaged with research," "overall experience with engaging with research," and "how often people used evaluation or research evidence") to Model 1, creating Model 2.<sup>4</sup> Model 2 was statistically significant (*p* < 0.05)</li>

<sup>&</sup>lt;sup>4</sup> We selected these three specific additional predictors as these predictors gave us an overall model that was statistically significantly different from the null model (at a p<0.05) and after verifying that they did not violate the "no multicollinearity" assumption Conversely, we decided not to include the predictors "Last time engaged with *qualitative* research" and "Overall experience with

and introduced a 2.3% improvement in the prediction of the outcome variable in comparison to the null model.

In Model 3, we added additional socio-demographic predictors (gender, level of education, occupation/type of role, and age) to control for these and to see whether their inclusion would improve the model. Model 3 was found to be marginally statistically significant (*p* = 0.051). However, as shown in the "Model Comparison" section of Table 4, the change from Model 2 to Model 3 was not statistically significant (*p*= 0.302). As such, we opted to use Model 2.

#### Table 4. Model fit measures and model comparisons for Experiment 2

Model Fit Measures

					Overa	ll Mod	el Test
Model	Deviance	AIC	R <sup>2</sup> <sub>McF</sub>	R <sup>2</sup> <sub>N</sub>	χ²	df	р
1	630	648	0.00171	0.00211	1.08	3	0.782
2	619	643	0.01998	0.02462	12.62	6	0.049
3	613	647	0.02943	0.03618	18.58	11	0.069

Model Comparisons

Comparison			_			
Mod	el	Model	χ²	df	р	
1	-	2	11.54	3	0.009	
2	-	3	5.97	5	0.310	

We then used Model 2 to draw conclusions about the effectiveness of the different messages tested (Table 5). The regression coefficient of "Dummy1," corresponding to the independent evaluator message, was not statistically significant (p = 0.937). Similarly, the regression coefficient of "Dummy2," corresponding to the local evaluator message, was not statistically significant (p = 0.869) and the regression coefficient of "Dummy3," corresponding to the subject matter expertise message, was not statistically significantly (p = 0.412). These results indicate that emphasizing the evaluators' subject matter expertise, independence, or shared location did not significantly impact the odds that participants would be more willing to endorse using evidence from qualitative evaluations in decision making.

engaging with *qualitative* research" as they were highly correlated with the already included predictors "Last time engaged with research" and "Overall experience with engaging with research" (r = 0.8 and r = 0.5 respectively). Also, we did not include the predictor "Risk Profile" after seeing that its addition to the model did not statistically improve the overall model.

Table 5. Model 2 parameter estimates (coefficients). The outcome variable ("willingness to endorse the use of qualitative evidence in health programming decision making") is denoted as "response." "Dummy1" corresponds to the independent evaluator message. "Dummy2" corresponds to the local evaluator message. "Dummy3" corresponds to the subject matter expertise message.

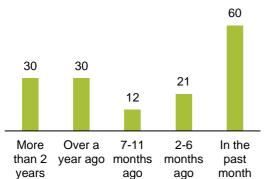
Predictor	Estimate	SE	Ζ	р	Odds ratio
Dummy1:					
1 – 0	-0.0279	0.3542	-0.0787	0.937	0.972
Dummy2:					
1 – 0	0.0592	0.3586	0.1650	0.869	1.061
Dummy3:					
1 – 0	0.2992	0.3646	0.8208	0.412	1.349
How often used evaluation or research evidence	0.1669	0.1269	1.3148	0.189	1.182
Last time engaged with research	-0.3291	0.0998	-3.2988	< .001	0.720
Overall experience of engaging with research	0.1316	0.2081	0.6322	0.527	1.141

Model Coefficients - response

When participant data was split by gender, no significant differences were found between men and women.

It is noteworthy that the regression coefficient for "last time engaged with research" was statistically significant (p<0.001), but unlike the findings from Experiment 1, it has a negative sign. This suggested that the more recently participants engaged with research, the less likely they were to support the use of evidence.

To understand the difference between Experiment 1 and 2 findings, we looked more closely at the distribution of responses to the question on the last time participants engaged with research for the two samples. The distribution for Experiment 2 was much more diverse than that of the Experiment 1 sample, as shown in Figure 4 below. In Experiment 1, it was the majority of respondents who had recent experience with research who drove the trend of more recent experience with research being correlated with greater willingness to endorse evidence use. On the contrary, in Experiment 2, the distribution was different, where 28% of participants had experience with research over a year ago, the same percentage (28%) as those whose most recent experience was in the last 2–6 months.





28

Figure 4. Distribution of responses regarding the last time participants engaged with research, for

20

Because the sample in Experiment 2 was much less homogeneous than the sample in Experiment 2, with regards to the question on when participants engaged with research, we split Experiment 2 participants into two groups to see if there were differences in the statistical analysis results:

- Group 1 containing only those that last engaged with research at a more distant time (over a year ago or over 2 years ago.
- Group 2 containing only those that last engaged with research more recently (2–6 months ago or in the last month).

When we looked at Group 1 (those who engaged with research more than a year ago), the variable "last time engaged with research" was no longer statistically significant (p=0.893) (Table 6).<sup>5</sup> However, the level of professional experience was statistically significant (p=0.006). This suggested a negative relationship between greater professional experience and a willingness to promote the use of evidence. In other words, **this exploratory data suggested that, amongst those who had engaged with research more than a year ago, the** *less* **professional experience they had, the more likely they were to use evidence.** However, this is only a correlation, and more research would be needed to confirm causation.

Table 6. Experiment 2, Group 1 Parameter Estimates (Coefficients). The outcome variable ("willingness to endorse the use of qualitative evidence in health programming decision making") is denoted as "response."

Predictor	Estimate	SE	Z	р
Dummy1:				
1 – 0	-0.3691	0.621	-0.595	0.552
Dummy2:				
1 – 0	-0.4082	0.609	-0.671	0.502
Dummy3:				
1 – 0	0.4374	0.621	0.705	0.481
Last time engaged with research	-0.0806	0.599	-0.134	0.893
Overall experience of engaging with research	0.1599	0.392	0.407	0.684
How often used evaluation or research evidence	-0.3462	0.319	-1.086	0.278
Risk profile	0.6727	0.373	1.802	0.072
Education	-0.8056	0.488	-1.650	0.099
Professional experience	-0.8718	0.316	-2.756	0.006
Occupation	-0.2414	0.315	-0.766	0.444
age	0.2301	0.380	0.605	0.545
gender	0.2627	0.628	0.419	0.676

Model Coefficients - response

<sup>&</sup>lt;sup>5</sup> We assessed different regression models with different predictors to identify the model that was the best fit for the data, balancing predictive power with parsimony.

When we looked at Group 2 (those who engaged within the past six months), again the variable "last time engaged with research" was no longer statistically significant (p=0.638) (Table 7)<sup>6</sup>. However, the variable on how often participants use evaluation or research evidence<sup>7</sup> was statistically significant (p<0.001). This suggests that, among those who had more recent experiences with research (within the past 6 months), the more often they used evidence, the more likely they were to endorse evidence use. Again, this is a correlation, and it is possible that the relationship reflects that those more willing to endorse the use of evidence use evidence more frequently.

Table 7. Experiment 2, Group 2 Parameter Estimates (Coefficients). The outcome variable ("Willingness")
to endorse the use of evidence") is denoted as "response."

Predictor	Estimate	SE	Z	р
Dummy1:				
1 – 0	0.286	0.495	0.578	0.563
Dummy2:				
1 – 0	0.445	0.502	0.887	0.375
Dummy3:				
1 – 0	0.281	0.518	0.543	0.587
Overall experience of engaging with research	0.861	0.408	2.108	0.035
Last time engaged with research	0.158	0.400	0.396	0.692
How often used evaluation or research evidence	0.930	0.258	3.600	< .001
Gender	0.132	0.438	0.302	0.763
Age	0.258	0.370	0.696	0.486
Education	-0.336	0.278	-1.208	0.227
Occupation	-0.212	0.181	-1.174	0.240

Model Coefficients - response

In summary, the message manipulations examined in Experiment 2 did not significantly increase participants' willingness to endorse using evidence from qualitative evaluations in decision making. However, exploratory data suggest that among participants who had engaged with research more than a year ago, the less professional experience they had, the more likely they were to use evidence. Among those who had engaged with research more recently, and specifically within the past six months, the more often they used evidence, the more likely they were to endorse evidence use. These results remained consistent even after controlling for demographic variables such as gender, level of education, occupation/type of role, and age.

<sup>&</sup>lt;sup>6</sup> We assessed different regression models with different predictors to identify the model that was the best fit for the data, balancing predictive power with parsimony.

<sup>&</sup>lt;sup>7</sup> This variable was coded as: 1: Never, 2: Rarely, 3: Sometimes, 4: Often, 5: All the time

# **Discussion and Recommendations**

## Messaging to Strengthen Willingness to Endorse Evidence Use

The fact that in both experiments the manipulation checks (other than on local evaluators) were passed demonstrated that participants did perceive the scenarios differently due to the various messages. Despite this, the messages did not have a statistically significant impact on their willingness to endorse the use of evaluation findings for decision making.

This does not mean that the factors tested in the messages do not impact how evaluations are perceived or whether they impact evaluation use. As the literature and our primary research suggest, these are all important factors in driving perceptions of research more generally and of evaluations specifically (e.g., Smith and Joyce, 2012; Slota et al., 2022). It also does not mean that the communication about an evaluation does not impact whether it is used. Indeed, previous research points to the role of messaging as well as dissemination methods and channels in promoting evidence use (Amaro et al., 2005; McBride et al., 2008; La Vincente et al., 2013).

However, this study suggests that amending a short paragraph text of a short summary of an evaluation by highlighting information regarding the methodology (Experiment 1) or the evaluators (Experiment 2) may not be a strong intervention. It is possible, nevertheless, that combining text with images could have a greater effect than text alone (Lazard and Atkinson, 2014).

Further, the messages described hypothetical scenarios where participants were asked to take the perspective of a decision maker. This may have increased the psychological distance between the participant and the message, making it less relatable and relevant. Given the indication from the experiment on the role of real experience in impacting attitudes toward evidence use, using messages that are more personal and relatable—that invoke people's experiences with research, for example, through storytelling—may be more effective. Stories, or narratives, create emotional connections between the storytellers and the audience (e.g., Kromka and Goodboy, 2019) and can lead to attitude change as well as impact behavioral intentions (e.g., Bullock et al., 2021).

**Recommendation**: Test the impact of a combination of text messages and images regarding evaluation methods and evaluators. It is possible that combining text with images could have a greater effect than text alone.

**Recommendation**: Test more personal and relatable messaging, which invokes people's experiences of engaging with research, including through storytelling. This can involve having real people share true stories about the challenges they faced and how evidence from evaluations made a difference and helped them in their decision making. These stories can highlight the factors tested in the experiment, such as triangulation and evaluators' subject matter expertise. Storytelling could make the messages more relatable and, as such, more impactful.

### Experience's Impact on Willingness to Endorse Evidence Use

As explained in the Results section, some of our findings are exploratory, and we cannot draw definite causal links without conducting additional studies specifically aimed at exploring these initial observations. Still, these results are worth discussing as they not only point to potential areas of further research but also to some preliminary recommendations, in particular as they align with other literature on evidence use.

Findings of Experiment 1 suggest that positive experiences with research matter for endorsing the use of evidence, and the more recent these experiences are, the better. As noted above, the definition of "engaging with research" that was used in the experiment was broad, ranging from accessing finalized

findings that have already been disseminated, for example, by reading an evaluation report, to more active engagement, such as being involved in data collection. Understanding exactly what kind of engagement drives attitudes would require further research. Nevertheless, this initial finding aligns with the literature on both the importance of dissemination formats—which would impact the more passive engagement, such as reading a report—and the literature on researcher-decision maker interactions to strengthen evidence use. While this report cannot go into details of how to create positive experiences with research, a few points are mentioned here.

A person may have a positive experience when engaging with disseminated research because they perceive the quality of the research to be high and/or because they perceive the quality of dissemination to be high. For instance, they may consider the research to be credible because of its robust methodology, or they may enjoy how a presentation was delivered. As it goes without saying that researchers should aim to create high-quality work, the study's more interesting suggestion is that dissemination does matter for evidence use as far as it impacts people's experiences with research, as previous papers have pointed out (e.g., Langer et al., 2016).

Creating positive experiences through the dissemination products can be done in different ways. Reducing information overload, for instance, by summarizing findings into more digestible overviews and creating products synthesizing evidence, is one way to make engaging with findings more pleasurable (Cairney and Kwiatkowski 2017). Using data visualizations and infographics to make findings easier to understand should also improve the user experience (Otten et al., 2015; Lazard and Atkinson, 2015), as should making written products easier to read, for example, by using plain language (e.g., Kerwer et al., 2021) and being cognizant of formatting that aids legibility. In addition, products that are tailored to audience needs and interests increase the likelihood of people paying attention to and absorbing information (Newman, 2014; Barnard et al., 2007). Increasing relevance, whether in this way or others, improves the user experience (e.g., Innvær et al., 2002).

In terms of creating a positive experience with research through more active engagement of decisionmakers, the literature on researcher-decision maker interactions and collaboration provides some ideas. For one, policy makers often greatly value being able to speak to and collaborate with expert evidence producers (Wood, 2024), and making people feel like valued contributors to the research process is likely to improve their satisfaction with the end-products of research (Grindell et al., 2022). It is also useful to consider what kinds of interactions are effective at increasing evidence use, as both the process and the outcome are likely to create more positive associations for participants when such interactions lead to greater evidence use. Positive outcomes, such as evidence use and better policy decisions, are likely to stem from these positive experiences, as outputs are more likely to be accepted and acted upon (Grindell et al., 2022), reflecting a cycle where good processes enhance the overall impact and acceptance of research findings.

Indeed, D4I's primary research on evidence use highlighted that a lack of evaluator-user engagement was considered a barrier to the use of findings. Conversely, when an evaluation embedded evaluators with the project being evaluated, evidence use was high (Slota et al., 2022). Even less intensive interactions, for example, decision makers feeding back on a draft report, can lead to higher user motivation to use the findings (e.g., Kothari et al., 2005). However, not all interactions and collaborations are effective. As Langer et al. (2016) found, interactions need to be well planned, structured, and have clearly defined objectives to be successful. Building trust between researchers and evidence users is also crucial (Marshall et al., 2017). In addition, it is vital to make it clear from the start of such interactions how transparency and evaluator independence will be maintained

(Cvitanovic et al., 2021). Exchanges where critique is possible should be managed with care to affirm individuals' values and social identities, to reduce defensiveness, and promote more constructive (and, by implication, positive) discussions (Wenzel et al., 2020). For the same reason, it is useful to create a shared identity for decision makers and researchers (Thurmer et al., 2018). The value of co-production of evidence is also highlighted by the role of knowledge brokers in bridging research and practice, involving stakeholders at all research stages, and ensuring collaboration through shared goals and responsibilities, as supported by principles from Lemos and Morehouse (2005) and Hegger et al. (2012).

Making positive memories of engaging with research and evaluations more salient may also increase people's willingness to promote evidence use. This can work due to the availability heuristic—people's tendency to think that whatever is easiest to recall should provide the best context for future predictions. People rely on information that is recent, frequent, or stands out to make decisions, so reinforcing certain memories can impact behavior (e.g., Frederiks et al., 2015).

Findings from Experiment 2 suggest that the timing of someone's last engagement with research is also related to their attitudes towards evidence use (their willingness to endorse evidence). This relationship may be worth exploring further through more directly focused research, as it hints at the need for different evidence-use interventions (including interventions aimed at strengthening an evidence use culture) for those who have engaged with research recently and those who have not. For example, interventions would likely be different for people whose roles do not involve using or producing research on a day-to-day basis (for example, nurses) than for those whose roles involve engaging with research much more regularly (for example, monitoring and evaluation specialists).

More specifically, Experiment 2 suggests that among those with recent experience engaging with research, the frequency of engagement plays a role in willingness to endorse evidence use. However, as there is no evidence of causality here, this may simply point to the fact that those who tend to endorse the use of evidence also use it more frequently.

On the other hand, among those without recent experience engaging with research, Experiment 2 findings suggest that individuals at higher professional levels may be less likely to endorse evidence use as compared to more junior staff. This aligns with the literature on evidence uptake that shows that in some domains, experts rely less on evidence and more on their intuition when making decisions (e.g., Salas et al., 2010).

**Recommendation:** Build on the study's results through further research and message testing. To get a fuller picture regarding the relationship between the timing of one's last engagement with evidence, frequency of experience, and willingness to endorse evidence use, more focused research should be carried out. Further, it would be useful to test the impact of the messages regarding methods and evaluators on evidence *use* (as opposed to willingness to endorse evidence use).

**Recommendation:** Find more ways to engage intended evidence users in research and evaluation processes, focusing on creating positive experiences. This can be done at different steps in the process—from research question development through to the verification of findings. This can entail organizing structured interactions with clear objectives, building trust between evidence users and producers, and creating shared goals between the groups.

**Recommendation:** Create positive experiences through how findings are disseminated. In addition to focusing on producing quality research and findings, invest in dissemination. This includes reducing cognitive overload by producing research summaries and syntheses, ensuring reports are easy to read, using data visualizations, and tailoring products to make them more relevant to different groups.

**Recommendation:** Reinforce the intended evidence users' positive memories of engaging with research and/or evaluations. The positive memories do not necessarily have to be about the evaluation being disseminated now; the aim is to create a general positive emotion with regard to research and evaluation. For example, this may entail bringing up in a team meeting how some specific evaluation or research findings have been useful for the team in the past.

**Recommendation:** Make sure to involve more senior or experienced members in evidence use interventions, especially for groups that may not frequently engage with research or evaluations in their day-to-day work. In the least, it is important to not focus only on more junior staff when trying to promote evidence use. This is relevant not just for interventions to disseminate particular findings but also for interventions aimed at strengthening an evidence-use culture or norm.

### Limitations

As discussed, some of our findings are exploratory. They should be understood with the caveat that, while the patterns in the data suggest certain relationships, we cannot draw definite causal links without conducting additional studies specifically aimed at exploring these initial observations.

The experiment did not measure the use of findings. People's attitudes toward evidence use, such as their willingness to endorse use, are not the same as actions, and attitudes do not necessarily translate into actions (Ajzen and Fishbein, 1980). As such, this is a limitation of the research—we cannot say for certain whether the various messages would impact a person's own engagement or use of evidence.

Relatedly, the experiment measured self-reported attitudes. Social desirability bias may have therefore played a role in how respondents answered the question regarding their willingness to endorse evidence.

Participants may also have been affected by the acquiescence bias, where people tend to agree with statements regardless of content. This could have increased the likelihood of participants responding positively on the "agree/disagree" scales, making it harder to detect differences.

Finally, the experiments were run with specific samples in one country, limiting our ability to extrapolate the findings to groups with different characteristics and in other locations.

# Conclusion

In summary, this study adds to the evidence base on what works to shift attitudes towards evidence use in public health while highlighting areas for further research. It suggests that messaging that invokes people's experiences of engaging with evaluations could be effective. Additionally, it highlights creating positive experiences of engaging with research as a promising means to improve attitudes on evidence use, particularly for qualitative studies.

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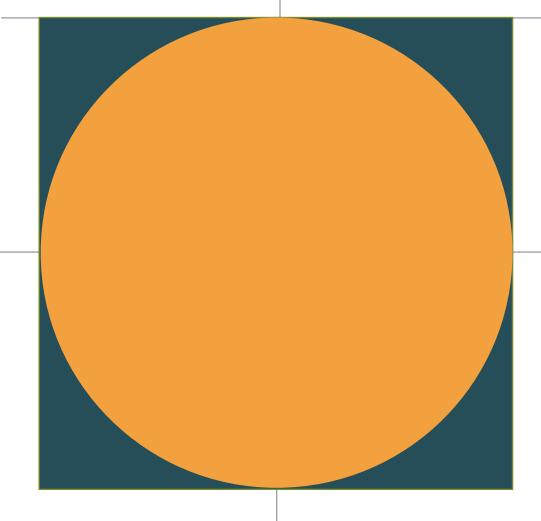
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