

Design and Evaluation of a Branded Narrative Story-based Intervention to Promote HPV Vaccination in Rwanda

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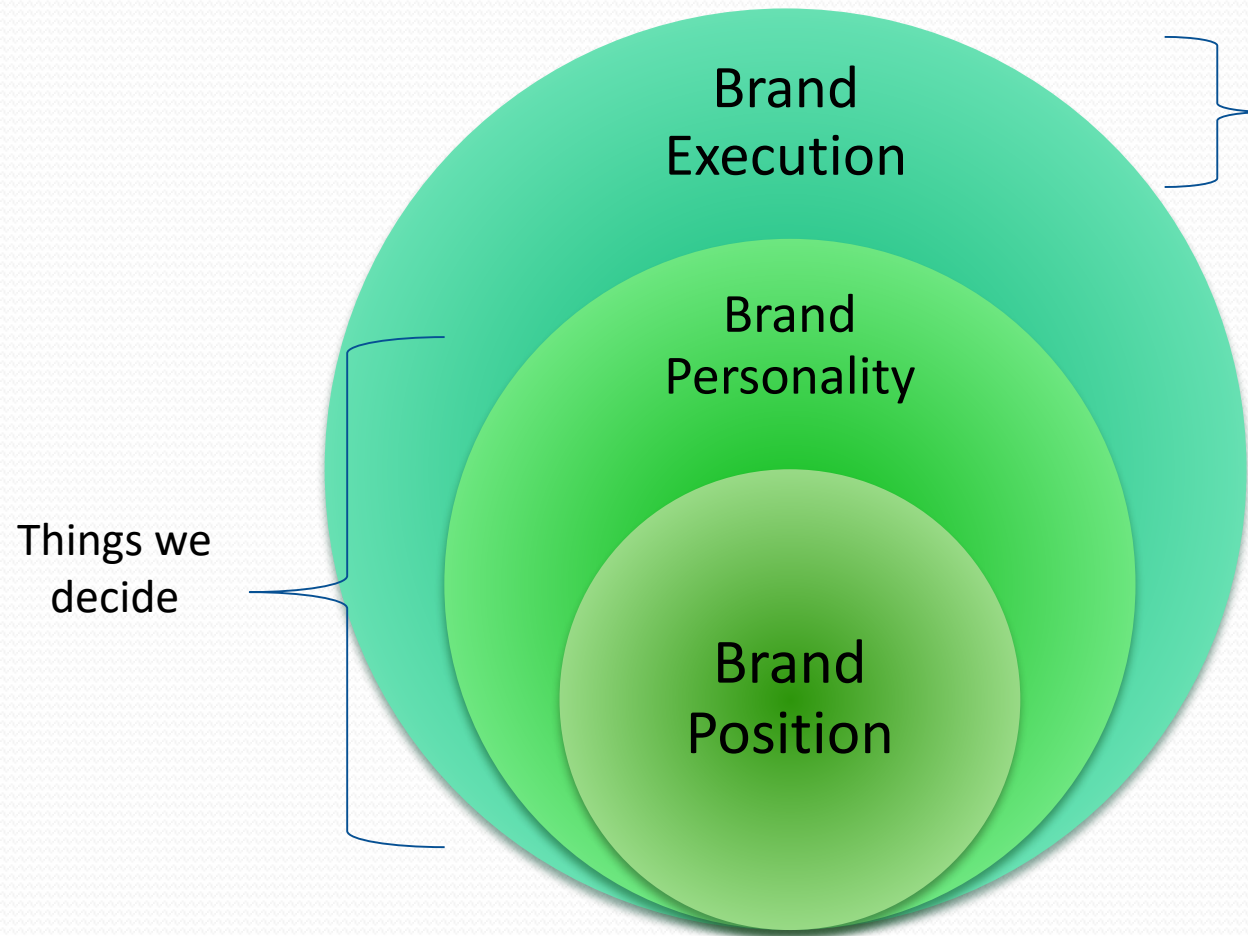
Outline

- Challenge of promoting HPV vaccination in low and middle income (LMIC) countries
- Health Branding as a Strategy for Behavior Change
- Girl Effect branded media platform called Ni Nyampinga (NN) in Rwanda
- Efficacy study of NN branding to promote HPV vaccination uptake

Evidence on HPV Vaccination Promotion

- Evidence of potential barriers to HPV vaccination promotion (eg, myths, such as promiscuity and infertility)
- Most studies on reducing barriers in rich countries (unpublished review)
- In LMIC, HPV vaccine recommendation from provider may alleviate parental concerns and influence intent to vaccinate child (Nowak et al., 2015; Paul et al., 2014; Vielot, et al., 2017)
- Wamai et al. (2012) evaluated a campaign in Cameroon.
 - “As part of the campaign strategy...health workers visited...communities, sharing information about HPV and cervical cancer...”
- Limited evidence on vaccine promotion suggests need for new efforts

Anatomy of a Brand...



Things they experience

- “A brand is a set of associations linked to a name, mark, or symbol associated with a product or service...A name becomes a brand when people link it to other things.” (Calkins 2005, p. 1)
- **Behaviors (vaccination?) can also be branded by creating mental associations with beneficial behavioral outcomes**

Positioning behavior – It works!



Newport pleasure!

Lights Box: 9 mg. "tar," 0.8 mg. nicotine; Medium Box: 13 mg. "tar," 1.0 mg. nicotine; Box: 18 mg. "tar," 1.3 mg. nicotine av. per cigarette by FTC method.

Newport, Newport Medium, Newport (package design), Newport Pleasure and Newport Spinaker TM Lorillard Licensing Company LLC Reg. U.S. Pat. & Tm. Off.
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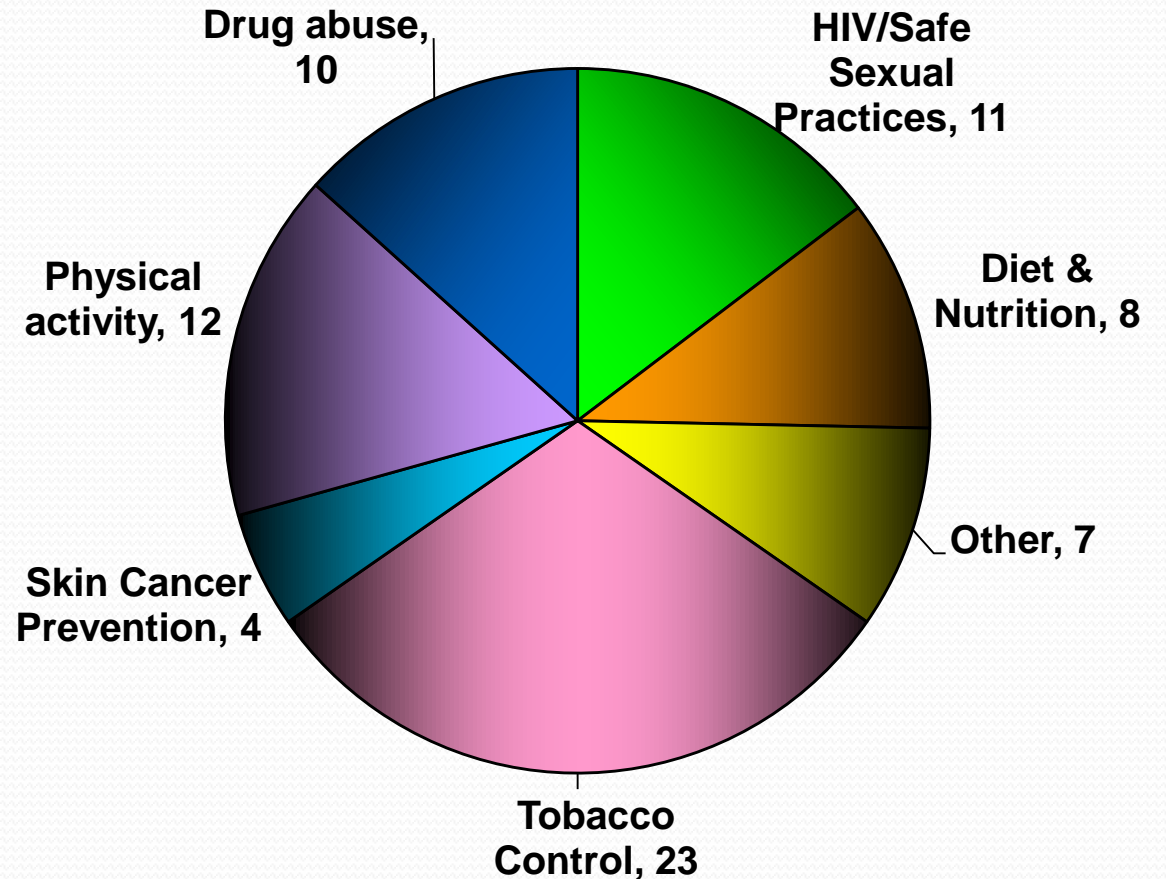
MENTHOL BOX **MENTHOL BLUE** **MENTHOL GOLD**

SURGEON GENERAL'S WARNING: Smoking Causes Lung Cancer, Heart Disease, Emphysema, And May Complicate Pregnancy.

Visit us at newport-pleasure.com
Restricted to Adult Smokers 21 or Older.

Published Health Brands (n = 75)

- Effect sizes avg $d = .12$ compared to $.05-.09$ for all campaigns (Synder et al, 2013)
- Many have large effects up to $d = .32$
- Wide range of topics, reach
- Evans et al, 2015, *Trans Behav Med*
- **PROMISING PRACTICE, BUT NOTHING ON VACCINATION BRANDING**



Promoting HPV Vaccination in Rwanda

- Vaccination mandated for girls in school, government estimates 93%
- <https://www.cnn.com/2019/05/30/health/rwanda-first-eliminate-cervical-cancer-africa-partner/index.html>
- However, not all girls are in school, estimates vary
- Existing platform for girls' empowerment, called **Ni Nyampinga**, represented an opportunity to test a novel approach to HPV vaccination promotion
- Uses an indirect, storytelling approach (as opposed to direct messages)

Ni Nyampinga – Girl Effect’s most established behavior change initiative

Launched in 2011 in Rwanda

Multi-platform youth brand that includes a magazine, a network of clubs and digital platforms, radio drama and talk show, made by and for young people.

Ni Nyampinga (NN) has become a nation-wide movement with 8-in-10 of all Rwandans aware of it and 55% of people over 10 years old reading or listening to our products every year (over 4.3 million people).



Ni Nyampinga creates entertaining educational content addressing the challenges facing girls in Rwanda



Girl Effect addresses both specific issues around **knowledge, attitudes, behaviours and norms** across the domains of **health, education, economic empowerment and safety**, alongside broader themes around confidence and value

“Horizontal” lifestyle brand, not topic specific

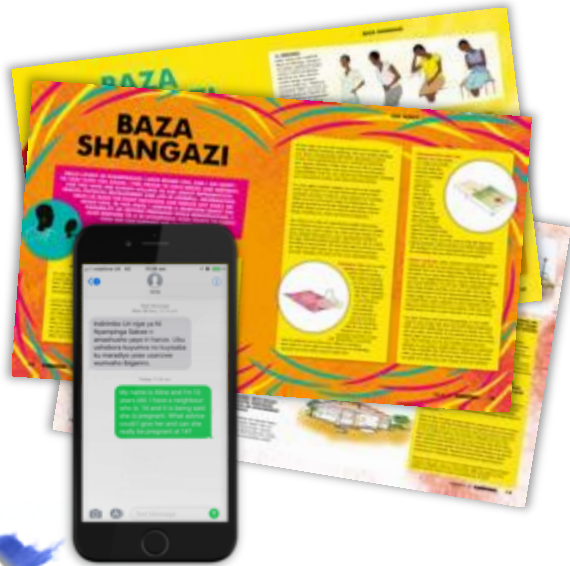
Partner with a range of supply side services, NGOs, implementers and Ministries to provide the most relevant and of value information to girls.



A range of voices and formats

Older Role Models

The 'Baza Shangazi' (Ask Aunty) character answers questions specifically around health. For Rwandan girls she is one of the most trusted sources of information.



Youth Role Models

NN journalists are 18-24 year old Rwandan women. They interview real girls and role models for magazine and radio tackling issues through the voices of girls themselves.



Fictional Characters

The radio drama 'Ni Nyampinga Sakwe' features adolescent girls and boys. These fictional characters role model sensitive and complex issues/experiences.



Three phases of research (2017-2018)

Formative Research

Literature Review
Desk Research
Formative Research

Objective:
Understand context

Prototype Testing

Prototype 1
Unbranded control
Direct

Prototype 2
NN branded
Indirect
(3 x styles)

Objective:
Test prototype content and style

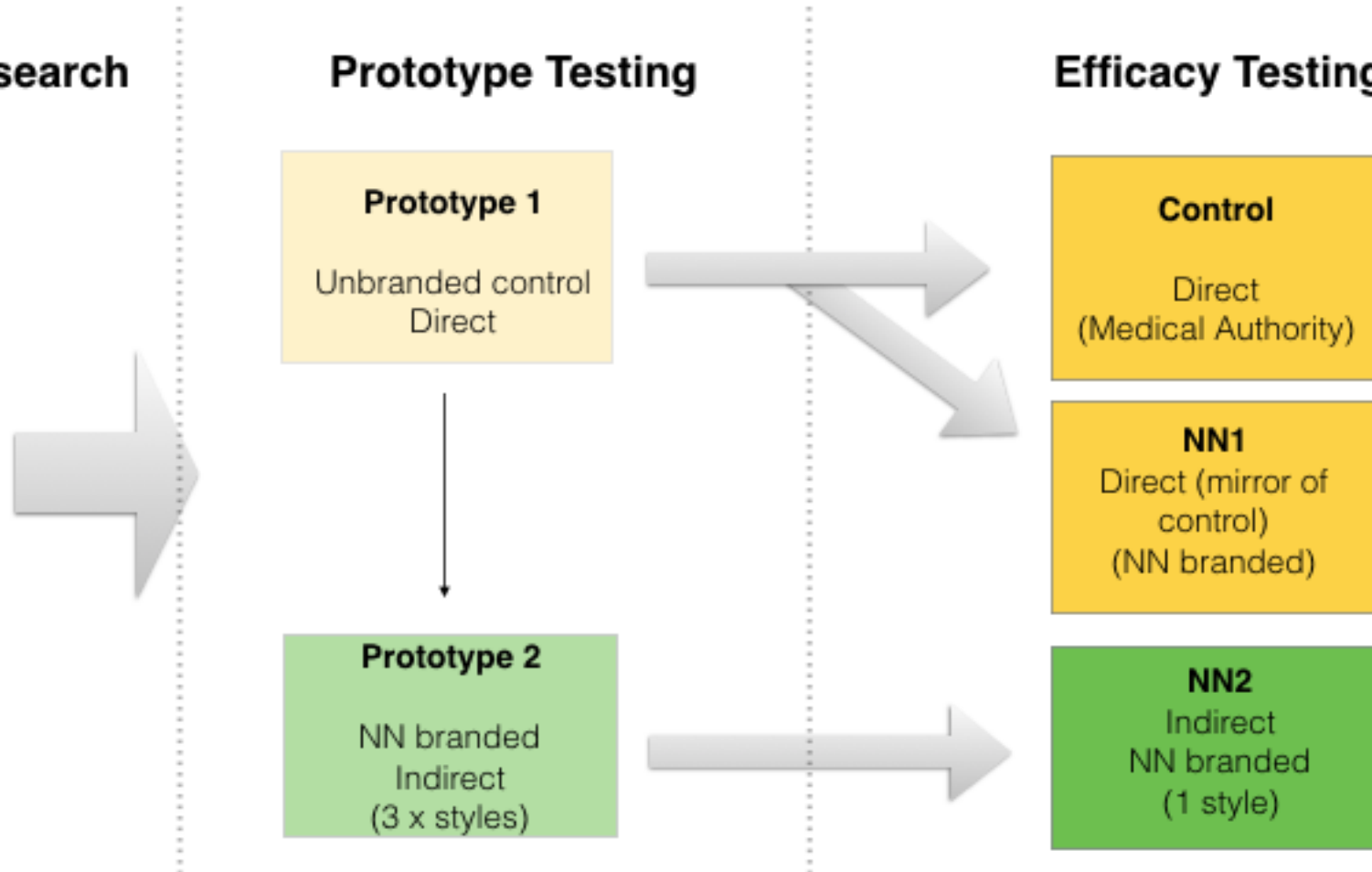
Efficacy Testing

Control
Direct
(Medical Authority)

NN1
Direct (mirror of control)
(NN branded)

NN2
Indirect
NN branded
(1 style)

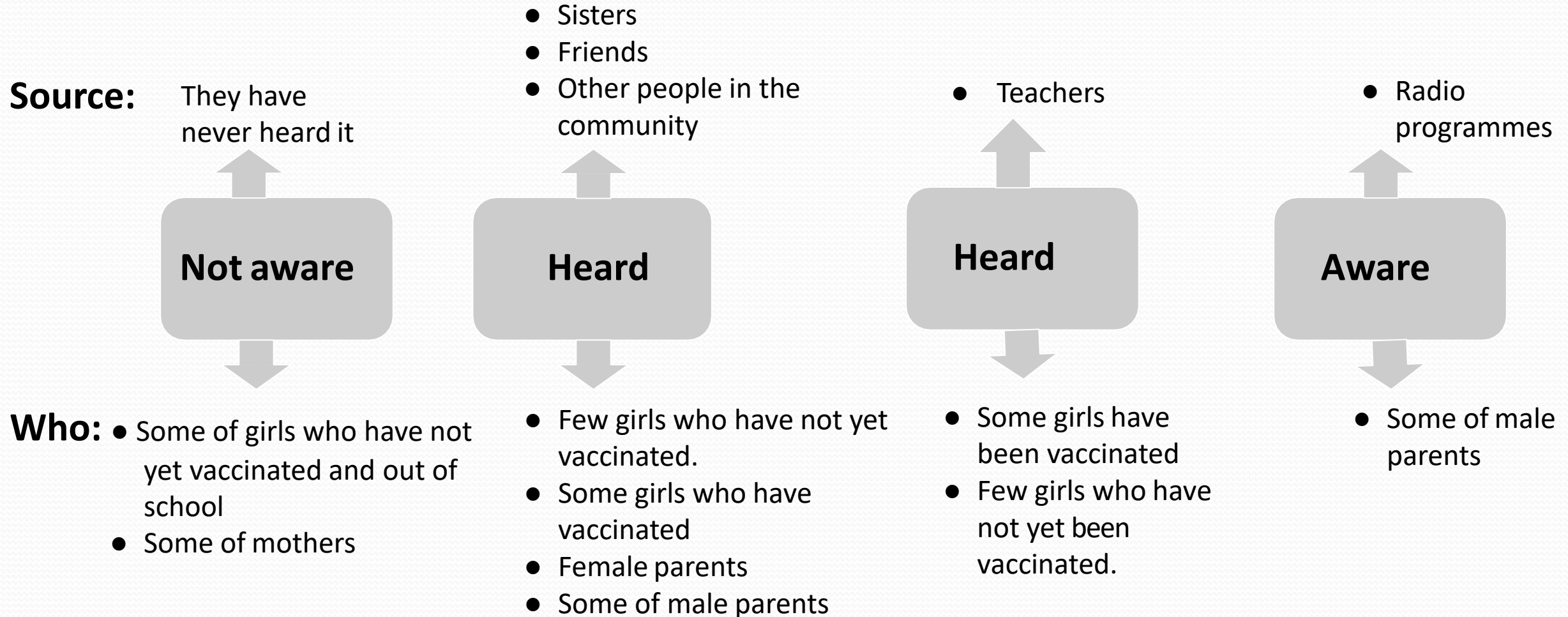
Objective:
Test impact and resonance



Methods

- Formative research (focus groups with girls age 9-15)
- Prototype test to develop **3 radio messages** to promote HPV vaccination among girls age 12-13 who had not yet been vaccinated
- Efficacy trial - Randomized 726 girls to 3 groups: 1) NN story telling style (NN branding); 2) unbranded story telling style (no NN), & 3) control condition (public service announcement)
- Pre-test survey, exposed girls to their radio spot, and then a followup
- Gave each girl an MP3 player with their condition's radio spots and asked them to listen to them for 2 weeks; re-interviewed girls at post-test

Formative: Differing knowledge/sources of HPV info



Formative research lessons learned

1. Girls show **positive relationships with health centres and vaccines generally** and are increasingly likely to visit health centres with age (i.e. 13 years cohort). Knowledge and attitudes towards vaccines in general are positive.
2. **Awareness of the HPV vaccine is variable**, and the majority understand there are significant health benefits for girls / women. Levels of detailed knowledge of the HPV vaccine (and HPV disease) can be lower among some girls and their mothers.
3. **Sub-optimal information can create space for the spreading of rumours.** One commonly cited belief is that the vaccine will stop girls from being able to give birth in the future, and these rumours can be compounded by anxiety about the pain of the needle for some.
4. **Fathers are likely to have accurate information**, as they listen to radio, however, they are less likely to speak with their daughters about it.



Prototype for efficacy test

- **Unbranded direct (control):** 78-seconds audio with direct messaging (PSA style) on how/why to seek out the vaccine.
- **Branded direct:** 77-seconds audio clip, branded as NN with an older female authority (Baza Shangazi) talking directly to the audience, and a direct message to on the importance and the need to vaccinate.
- **Branded indirect:** 88-seconds audio clip with conversation between Baza Shangazi and a female journalist around the vaccine and the health implications, value for girls' own health

Prototype testing summary results

- Indirect style of content delivery was preferred over direct style
- Familiar, older female presenter trusted to provide health information and advice
- The infertility myth can be countered
- Messages can create positive attitudes toward HPV vaccine (and vaccines in general)
- Girls respond positively to messages which encourage looking after one's own health
- Possible to talk to girls about HPV virus when presenter trusted and time to explain
- Men not viewed as appropriate presenters of HPV vaccine information for girls

Efficacy study objectives

- The purpose of the efficacy test was to compare effects of a branded approach at improving the knowledge and attitudes of girls towards the HPV vaccine, when compared to an unbranded approach
- Main objective was to understand the added-value of a branded approach to influencing knowledge & attitudes of the HPV vaccine

Top level efficacy findings

- **Knowledge** about HPV both at pre- and post-test was already quite high (most 90% or higher true responses)
 - Scale measured range of facts about the vaccine, including cervical cancer prevention
 - Lowest 71% - 'You may not notice that you have the HPV in your body' at pre-test
 - Most common place to have heard about HPV – radio 52%
 - Most common place to have heard about HPV vaccine – health worker 56%
- **Media use**
 - Radio highest (53% daily)
 - TV second (25% daily)
 - Low social media use (Facebook 23% among those with Internet, 2.2% total)

Models: Knowledge of HPV vaccination

| | Knowledge Continuous outcome (no influencers removal) | Knowledge Continuous outcome (removing influencers observations) | Knowledge of preventive medicine (single item, imputed values) | Knowledge of preventive medicine (single item, only valid responses) |
|---|---|--|--|--|
| Branded/Direct | 0.0125 | -0.0029 | 0.4516 | 0.4832 |
| Branded/Indirect | 0.0119 | -0.00624 | -0.059 | -0.177 |
| Post-stimulus effect (net effect) | 0.0881*** | 0.08974*** | 1.44*** | 0.621* |
| Branded/Direct at post post-stimulus (treatment effect) | 0.0090 | 0.0310 | -0.183 | 0.146 |
| Branded/Indirect at post post-stimulus (treatment effect) | 0.0207 | 0.0339* | 0.863* | 1.383** |
| # Observations | 1668 | 1410 | 1668 | 1025 |

Control variables: Income level, Access to media, Prior awareness of NN, family size

Branded indirect group follow up

Self-reported dosage during at post-test

| Time Audio Device Played | Freq. | Percent | Cum % |
|--------------------------|-------|---------|-------|
| Only once | 4 | 1.41 | 1.41 |
| 2 to 3 times | 28 | 9.89 | 11.31 |
| 4 to 6 times | 88 | 31.1 | 42.4 |
| More than 6 times | 161 | 56.89 | 99.29 |
| Don't know | 2 | 0.71 | 100 |
| Total | 283 | 100 | |

- Variability in self-reported frequency of exposure to messages.

Dose-response effects on vaccine attitudes

- There was a positive effect of higher dosage on attitudes about the efficacy/safety of the HPV vaccine (dose-response) in two models (attitudes more positive in both)

| | Vaccine not effective | Worry about side effects |
|--|-----------------------|--------------------------|
| Time Audio Device Played (1 level increase) | 0.0343* | 0.157* |
| 95% confidence intervals | [0.00182,0.0668] | [0.0236,0.289] |
| P-Value | (0.039) | (0.037) |
| N | 281 | 281 |

| | Vaccine not effective | Worry about side effects |
|--|-----------------------|--------------------------|
| More than 6 times vs. other (ref) | 0.0536* | 0.2364* |
| 95% confidence intervals | [0.00356,0.104] | [0.0346, 0.4383] |
| P-Value | (0.041) | (0.022) |
| N | 281 | 281 |

Overall Findings from Efficacy Study

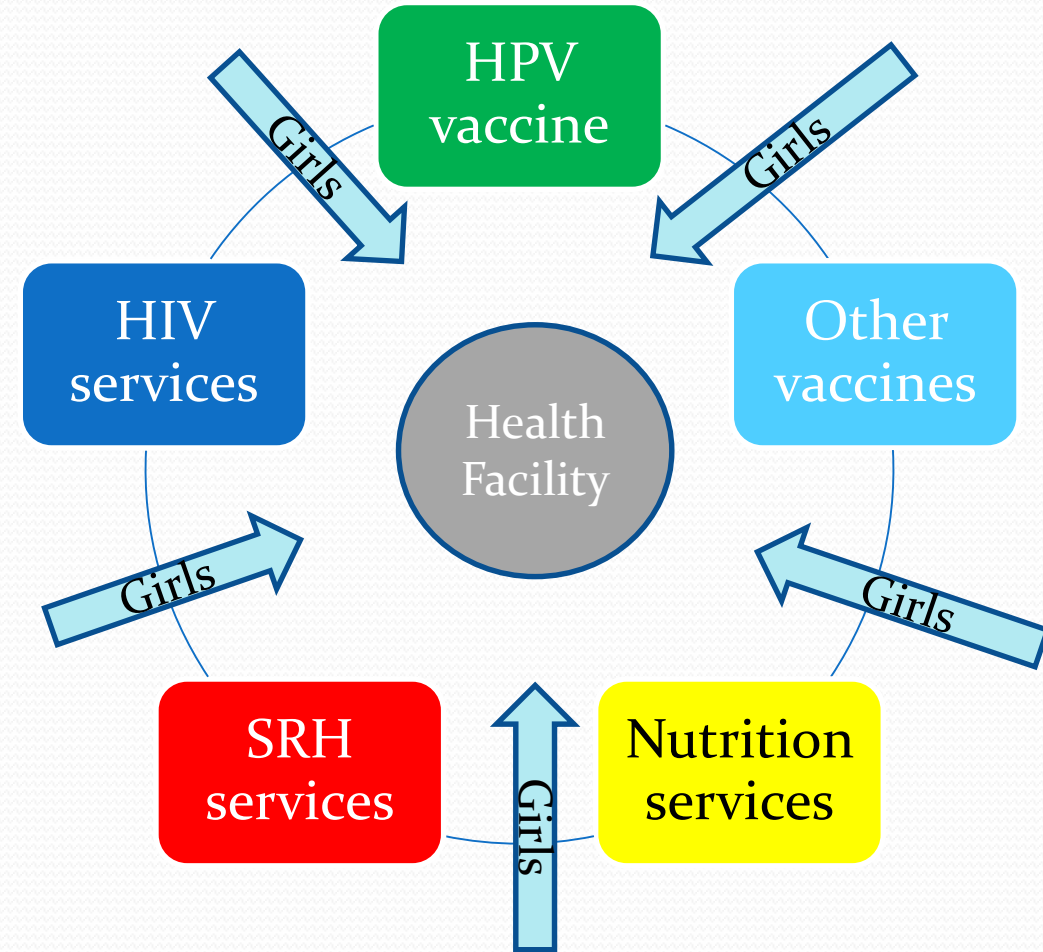
- **Significant treatment effect of the branded indirect upon levels of knowledge (overall scale), compared to the control**
- **Significant treatment effect of the branded indirect upon levels of knowledge (single item about effectiveness of HPV vaccine as preventive medicine for cervical cancer)**
- **Dose response effect of brand indirect messages on attitudes toward HPV efficacy/safety**

Discussion/limitations

- HPV vaccine knowledge/attitudes can be changed by exposure to NN branded messages
- Conclusions should be drawn with caution as the test was brief, exposure was limited, in single channel, and format was new and untested
- There are several factors to consider in future research
 - Intensity/duration of treatment
 - WHO says WHAT message to WHOM...WHEN and WHERE?
 - Channels relative to audience/location

Health seeking behavior : Demonstrate a low-cost demand model

- The biggest cost driver for HPV vaccination programmes = cost of vaccine distribution to remote locations
- Cost is substantially reduced in a health facility-based delivery setting, but challenge is to get girls to the facility
- Improving health-seeking behavior has relevance & importance beyond HPV and vaccinations
- Supporting individual health seeking behavior can drive demand for a broad range of adolescent services
- Potential for a sustainable model in adolescent health, and not just HPV/immunization



Thank you! Questions?

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