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Article

Rapid Development of a Theory-Based Targeted Intervention and Communication Plan for HPV Vaccine Introduction in Kosovo¹ Using the Behaviour Change Wheel Model

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1 All references to Kosovo in this document should be understood to be in the context of the United Nations Security Council resolution 1244(1999)

Abstract

Background: Human papillomavirus (HPV) infections cause cervical cancer, which presents a significant health burden in low- and middle-income contexts like Kosovo¹, where it is the second cause of death among women. HPV vaccines are effective and integral to global cervical cancer elimination efforts. In 2024, Kosovo¹ introduced the HPV vaccine in the immunization schedule via a school-based introduction for sixth-grade girls. Rapid theory-based insights research supported development of a tailored communication and intervention plan ahead of introduction. **Methods:** Qualitative research was conducted with 102 participants over two weeks, including healthcare professionals, parents, target-aged girls, school staff, and community influencers. Data collection and analysis, and intervention development were carried out using the Behaviour Change Wheel (BCW) model, grounded in the Capability, Opportunity, and Motivation for Behaviour change (COM-B) theoretical framework. **Results:** Findings indicated trust in school-based immunization and healthcare professionals as key drivers, while a predominance of capability and physical opportunity-related barriers across target groups underscored a need for targeted communication and capacity-building efforts for all stakeholders. Using the BCW model, communication and intervention activities were developed for implementation by partners. **Conclusions:** Using rapid insights research grounded in the BCW model supported quickly identifying multiple factors affecting HPV vaccine acceptance and developing a targeted intervention plan. Findings echoed global research in HPV vaccine introduction, highlighting contextual needs and support and contributing to a successful introduction with high uptake in the first six months.

Keywords: HPV Vaccine; behavioural insights; intervention development; behaviour change wheel; COM-B; Kosovo¹

1. Introduction

Kosovo¹ introduced the Human papillomavirus (HPV) vaccine into its immunization schedule in February 2024 via school-based immunization for 6th-grade girls. Ahead of introduction, originally forecast for October 2023, the Institute of Public Health (IPH), with support from the WHO Office in Pristina and WHO Regional Office for Europe (Regional Office), developed a theory-based HPV

vaccine introduction intervention and communication plan (HPV-ICP). The HPV-ICP was developed in two stages of conducting rapid context-specific insights research, then using results to identify appropriate interventions and collaborate with relevant actors to adapt and finalize the HPV-ICP. Given initial constraints, only two weeks were available for undertaking this process. Insights research and intervention development was guided by the Behaviour Change Wheel (BCW) model.

HPV vaccination is recommended for children aged 9-14, and HPV vaccines have been shown to be safe and effective in decreasing the incidence of cervical cancer in a population, especially when administered for this target group, i.e. before potential exposure to sexually transmitted infections [1–4]. Cervical cancer is the fourth most common cancer among women globally, with approximately 85% of cases occurring in lower- and middle-income contexts (LMIC) like Kosovo¹, where cervical cancer is the second leading cause of death among women, with an average burden of 120 cases a year and approximately 89 new cases diagnosed annually in 2020-2022 [2,5,6].

Countries, territories and areas introducing the HPV vaccine can face several challenges to uptake that must be addressed in context [3–7]. Low confidence in vaccination or vaccine refusal can be affected by multiple factors including access barriers, awareness of vaccines and vaccination, or perceptions of vaccine safety and effectiveness [8–10]. Prior to HPV vaccine introduction in Kosovo¹, limited research indicated low to moderate awareness and support for HPV vaccine, similar to Western Balkans contexts, with almost no data available on HPV vaccine introduction interventions for the region [11–14]. In this vein, following broader global evidence, developing a theory-based HPV-ICP based on context-specific insights was seen as crucial to ensuring efforts targeted correct audiences with appropriate messages and activities, to promote vaccination behaviour leading to greater HPV vaccine uptake [15,16]. In describing the process followed in Kosovo¹ to develop the HPV-ICP, this article contributes to more recent research on HPV vaccine attitudes in the region, while also adding to a research on effective use of behaviour change theory to develop interventions that address HPV vaccine uptake [17–20].

2. Materials and Methods

2.1. Study Design

The two-step process to develop the HPV-ICP was designed using the BCW model: a multi-stepped model linking identified behavioural barriers and drivers with a set of evidence-based public health intervention types. While multiple theoretical frameworks such as the Behavioural and Social Drivers or Theory of Planned Behaviour can allow for understanding public health behaviours like vaccination, the BCW model provides a comprehensive framework linking behavioural insights to intervention types to support the needs of rapid research with time limitations [21–24]. Developed and tested on the basis of a review of 19 existing behaviour change intervention frameworks, the BCW model is built around the COM-B theoretical framework of public health behaviour that asserts specific public health behaviours are affected by three interrelated factors, each comprising of two sub-factors [25,26]. This framework has been adapted for developing interventions to address vaccine uptake, by focussing on specific factors: capability, physical opportunity social opportunity, and motivation. Capability relates to how individuals’ knowledge or ability affect performance of a specific behaviour; physical opportunity identifies affordances in the physical context that influence the possibility for performing the behaviour, like access, cost, legislation, etc.; social opportunity concerns aspects of social context, like taboos, mores, discourses, or attitudes, that permit or impede performance of the behaviour; and morality assesses individuals’ instinctive or calculated deliberations on whether or not to perform a behaviour [27]. These COM-B factors are further linked to a set of intervention types shown to address barriers under each factor. Table 1 below provides descriptions of the interventions and which COM-B factor they address.

Table 1. BCW model intervention types and linked COM-B factors.

Intervention Types	COM-B Factors			
	Capability	Physical Opportunity	Social Opportunity	Motivation
Education: Increase knowledge or understanding	✓	×	×	✓
Persuasion: Using communication to induce positive or negative feelings or stimulate action	×	×	×	✓
Incentivization: Creating expectation of reward	×	×	×	✓
Coercion: Creating expectation of punishment or cost	×	×	×	✓
Training: Imparting skills	✓	✓	×	✓
Restriction: Using rules that limit engagement in the target behaviour or competing or supporting behaviour	×	✓	✓	×
Environmental Restructuring: Changing the physical or social context	×	✓	✓	✓
Modelling: Providing an example for people to aspire to or imitate	×	✓	✓	✓

The first step of the process consisted of a cross-sectional qualitative study on barriers and drivers to HPV vaccine uptake related behaviours for selected target groups. A protocol was developed on the basis of a literature review and consultations with relevant stakeholder representatives including from the IPH and WHO Office in Pristina and Regional Office technical staff. IPH and WHO ethical approvals were obtained for research, which was conducted across urban and peri-urban neighbourhoods in Pristina, and in two rural locations in the south of Kosovo¹ where lack of vaccine uptake had recently been observed. With a two-week limitation for conducting insights research, sample sizes were estimated with consideration of the ‘information power’ of such qualitative research, that is with the aim to capture pertinent social issues, relationships, and dynamics within and across target groups, by attending to the specificity of aims, targeted sampling of participants, instrumentalization of the theoretical framework, ensuring of discussion quality, and application of analysis strategy [28].

In the second step, using the BCW model, insights research results on COM-B barriers and drivers to HPV vaccine-related behaviours for each target group were linked to intervention types. On this basis, the research team drafted a set of potential interventions relating to each intervention type and developed a draft HPV-ICP outlining possible targets, contents, materials required, method of delivery, timeframes, and monitoring requirements for each possible intervention. An initial workshop was held with actors across various sectors relating to HPV vaccine introduction to provide feedback on the draft HPV-ICP. Changes to the draft HPV-ICP were then finalized in a second, smaller workshop with key actors and partners responsible for implementing the final HPV-ICP.

2.2. Research Participants

A private research company was contracted to support with recruiting research participants across four target groups. Health workers, including general practitioners (GPs), paediatricians, gynaecologists, vaccination nurses, and vaccination team members were randomly selected from publicly available lists for each study site. School staff in the study sites, including primary school principals and teachers of target-aged girls, were similarly selected from publicly available rosters of education professionals. Target-aged girls and mothers and fathers of 12-year-old girls were also randomly selected from the research company’s roster of individuals who had agreed to participate in research. Civil society influencers were purposively sampled to include representatives of organizations working on women and girls’ health across different communities in Kosovo¹.

2.3. Ethical Considerations

Written consent to participate in research was obtained from all research participants in Albanian prior to inclusion, including written parental assent for target-aged girls participating in research. As the study aimed to gauge current levels of knowledge about vaccination, participants were informed beforehand that they will be involved in discussing childhood vaccination, but were not informed of HPV vaccine introduction until participation in research activities

This study was conducted in accordance with the Declaration of Helsinki and ap- proved by the Doctors Chamber Ethical Issues Committee (protocol number 128/23, approved 14 July 2023) and the WHO Research Ethics Review Committee (protocol number ERC.0003986, approved 21 July 2023).

2.4. Data Collection and Analysis

Data was collected via a process of simultaneous research and analysis [23]. Focus group discussions (FGDs) and in-depth interviews (IDIs) were conducted using guides developed in English and translated into Albanian. To ensure correspondence across all versions, each guide was reviewed line by line by a group of researchers from the IPH, WHO, and the private research company contracted to organize logistics and moderate research activities. FGDs and IDIs explored drivers and barriers across target groups with regard to physical and social contexts affecting access to general health and vaccination services, as well as individual knowledge, beliefs, attitudes, and practices impacting childhood vaccination behaviours.

FGDs and IDIs were audio-recorded and conducted by a trained moderator. Each activity was observed by an IPH and WHO researcher who took notes on the discussions and participated in moderation to ensure discussion quality [28]. The IPH and WHO researchers convened after the activity or at the end of the day to collectively compile and update a Rapid Assessment Procedures (RAP) sheet for each target group. A RAP sheet is a tool to summarize findings while research is ongoing [29]. A single RAP sheet was compiled for observations relating to each target sub-group. Rows in a RAP sheet were organized by topics from the discussion guide, and columns by the subgroups being compared. Audio recordings of each activity were consulted by the researchers if there was a need to verify a finding. Following this process meant that all RAP sheets were completed with the conclusion of the final research activity, allowing for quick analysis of RAP sheets. Over a day, RAP sheets across target groups were compared and deductively coded to identify thematic COM-B barriers and drivers within and across target groups, both those perceived from outside a target groups or self-reported within a target group [30]. Once a list of barriers and drivers was compiled for each target group, the research team identified which drivers and barriers could respectively be feasibly instrumentalized or addressed as part of an intervention prior to HPV vaccine introduction.

Using the BCW model, researchers then specified intervention types connected to the COM-B factors related to the barriers and listed potential feasible interventions for each target group. These potential interventions were then grouped into thematic categories and developed into a table, which served as the basis of the HPV-ICP. For each intervention activity, the table target populations, materials needed, any informational or material contents required, method of delivery, timeframe, and intervention monitoring methods.

3. Results

3.1. Qualitative Insights Research

Over eleven days, 13 FGDs and 6 IDIs were conducted with 102 research participants drawn from across Pristina and selected rural areas. Table 2 below provides a breakdown of participants and activities.

Table 2. Research participants and activities conducted by target group.

		Participants		
Target groups		Activity	Urban and Peri-Urban	Rural
Health workers	GPs, paediatricians, gynaecologists	2 FGDs	n= 10 (7F, 3M)	n= 6 (1F, 5M)
	Nurses (vaccination)	2 FGDs	n= 10 (10F)	n= 8 (2F, 6M)
	Mobile vaccination team members	1 FGD	n= 16 (16F)	--
Parents and girls	Mothers of target-aged girls	2 FGDs	n= 5 (5F)	n= 6 (6F)
	Fathers of target-aged girls	2 FGDs	n= 4 (4M)	n= 4 (4M)
	12-year-old girls	2 FGDs	n= 6 (6F)	n= 4 (4F)
Social influencers	School staff (principals)	2 IDIs	n= 1 (1M)	n= 1 (1M)
	School staff (teachers)	2 FGDs	n= 9 (9F)	n= 7 (4F, 3M)
	Civil society influencers	4 IDIs	n= 3 (2F, 1M)	n= 2 (1F, 1M)
Total		13 FGDs 6 IDIs	n= 64 (55F, 9M)	n= 38 (18F, 20M)

FGDs and IDIs examined the factors affecting health workers’ and social influencers behaviour of recommending or advising on HPV vaccine uptake, target-aged girls’ parents’ behaviour of vaccinating their daughters, and target-aged girls’ behaviour of getting vaccinated. Across all target groups, 89 COM-B drivers and barriers were identified, of which 60 were considered for intervention development ahead of the HPV vaccine introduction. Only barriers and drivers that could be addressed or instrumentalized in the short-term ahead of HPV vaccine introduction were selected for intervention development. This included all identified capability-related barriers, about 90% of identified motivation-related barriers, and about half of identified physical and social opportunity barriers. Excepting school staff, for each target group the majority of barriers related to capability- or physical opportunity-related issues, reflecting mostly knowledge and skills gaps and barriers to accessing information or services. For school staff, the majority of barriers related to motivation and capability factors, discussed further below.

Across all target groups excluding health workers, capability barriers primarily included gaps in understanding on how vaccines create immunity, about HPV and cervical cancer, and, especially among male participants, on cervical cancer as a relevant problem for their communities. A major driver was a belief in the validity and authority of information provided by the IPH and health workers. Among health workers, one capability barrier was a lack of information on HPV and cervical cancer incidence and mortality in Kosovo¹, as well as a general knowledge gaps on HPV vaccine among some health workers like nurses, though a related driver was a belief in the authority of IHP and specialist health workers to provide this information. A capability barrier reported by other target groups was that health workers might believe and share incorrect information on measles, mumps, and rubella (MMR) vaccine and autism risks, heightening vaccine safety concerns. This related to another barrier on skills gaps on vaccine communication with patients, in particular with those minority ethnic group parents, those lacking confidence in vaccines, or those perceived as religious.

Physical opportunity barriers across target groups, excepting health workers and young girls, included receiving incorrect or insufficient vaccine information from health workers (reported by urban parents), as well as not knowing where to find information on vaccines and seeking vaccination information online via mobile phones. Particularly with regard to ethnic minority groups, barriers included limited access to information or health services due to illiteracy, girls not being enrolled in school, lack of transport, or health worker attitudes. An important physical opportunity driver identified was the pre-existing collaboration among schools, health facilities, and civil society organizations on health topics, particularly the discussion of reproductive health with target-aged girls at some schools. Among parents, a social opportunity barrier identified was that HPV and cervical cancer were seen as women’s issues that men would not consider of interest and, especially among rural participants, something that might not be appropriate to discuss in public or mixed company.

For all target groups, the primary motivation barrier was unawareness of information on the safety, effectiveness, and evidence for of the HPV vaccine beyond general online information, especially regarding evidence for future fertility for vaccinated girls. For health workers, this manifested as a concern around how to communicate with parents on these issues. For school staff there was an additional motivation barrier around not considering vaccination or health discussions with parents as part of their professional role. For all target groups, a significant driver was trust in information and guidance from the IHP and health workers, and a motivation driver for young girls was the desire to make their own health decisions and know why they are getting vaccinated and how it will help them.

3.2. Intervention and Communication Plan Development

As the COM-B factors are interconnected, many of the identified barriers and drivers were related within and across target groups. For example, a capability barrier of weak health worker patient communication skills was related to a motivation barrier of not feeling able to effectively engage with hesitant parents on vaccination, which in turn was connected to parents’ physical opportunity barrier of not being sufficiently informed during vaccination visits. In a general sense, barriers related to not possessing sufficient or correct information on vaccination, HPV vaccine, or cervical cancer; not knowing where to get this information or not having access to services or individuals that would support confidence in HPV vaccine; and wanting to receive detailed and thorough information on HPV vaccine safety and effectiveness from authoritative sources. Insights findings for each target group provided information on the details of what information was needed, why it was required, from and for whom, and how it could be best delivered.

Ahead of intervention development, it was agreed not to consider the intervention types of incentivization, restriction, and coercion, as the latter two had been shown to potentially result in shorter-term, unsustainable changes in behaviour, the first two were not considered contextually feasible, and incentivization lacked evidenced as an effective vaccination interventions.[31–34] The intervention types suggested to address the identified COM-B barriers were education, training, persuasion, environmental restructuring, and modelling. After potential interventions were listed for each barrier, they were thematically grouped by activities at the systems level, overarching interventions to address shared barriers across groups, target group-specific interventions based on insights, and communication-based activities. Table 3 provides an overview of the suggested interventions, targets and related target group COM-B driver/barrier informing the intervention.

Table 3. Suggested interventions, targets, and related insights target group COM-B factor.

Suggested Intervention	Intervention Target (<i>Intervention Type</i>)	Insights research target group (<i>COM-B factor</i>) informing intervention
Systems Level Activities		
HPV vaccine introduction document	Health system, and international partner representatives (<i>Education</i>)	Health workers (<i>physical opportunity, motivation</i>) Parents (<i>motivation</i>)
Round table and resolution on HPV vaccine introduction and cervical cancer elimination	Health system, and international partner representatives (<i>Education</i>)	School Staff (<i>motivation</i>) Civil society reps (<i>motivation</i>)
Overarching Activities		
Kosovo ¹ -wide-, regional-, and municipal expert spokesperson group (medical professionals, influential actors)	General public (<i>Environmental restructuring</i>)	Health workers (<i>physical opportunity, motivation</i>) Parents (<i>motivation</i>) School Staff (<i>motivation</i>) Civil society reps (<i>motivation</i>)
Intersectoral collaboration and exchange platform/mechanism	Actors supporting in HPV vaccine introduction (<i>Environmental restructuring</i>)	Parents (<i>motivation</i>) School Staff (<i>motivation</i>) Civil society reps (<i>motivation</i>)

HPV vaccine Scientific conference	Scientific and medical community, civil society, journalists (Education)	Health workers (capability, physical opportunity) Civil society reps (motivation)
Vaccine launch press conference	Health workers, civil society, public (Environmental restructuring, education)	Health workers (motivation) Parents (motivation) School Staff (motivation) Civil society reps (motivation)
Journalist preparation	Journalists (Education, training, modelling)	Parents (capability, physical opportunity, social opportunity)
Research Target Group-Specific Activities		
Tailored community engagement	Parents, girls, minority groups, rural/urban populations, civil society organizations (Education, persuasion, modelling)	Parents (capability, physical opportunity, social opportunity, motivation) Civil society reps (capability, physical opportunity, social opportunity)
School staff awareness and communication training	School principals, teachers, teacher associations, municipal directorates (Education, training, modelling)	School staff (capability, physical opportunity, social opportunity, motivation)
School-based activities for parents and girls	Parents, girls (Education, persuasion)	Parents (capability, physical opportunity, social opportunity, motivation) Girls (capability, motivation)
Health worker awareness and communication trainings	GPs, nurses, narrow specialists, public health experts (Education, training, modelling)	Health workers (capability, physical opportunity, motivation) Parents (physical opportunity, social opportunity, motivation)
Communication Activities		
Communication materials (insights-based) Dedicated vaccines website, print materials, Video PSAs, TV talk-shows, Social media tiles	Public, health workers, girls (Environmental restructuring, education)	Health workers (capability, physical opportunity) Parents (capability, physical opportunity, motivation) Girls (capability, motivation) Civil society (capability, physical opportunity, motivation)
Social media monitoring	Actors supporting in HPV vaccine introduction (Environmental restructuring)	Health workers (physical opportunity, social opportunity) Parents (capability social opportunity) Civil society (capability, social opportunity)

Two systems level activities were developed based on motivation drivers for all target groups, illustrating a need for information and support of stakeholders, health system level, and international partners involved in the introduction. These activities were developing and distributing an overview document on HPV vaccine evidence, safety, and introduction to relevant actors, and holding a roundtable with these actors to adopt a resolution relating to HPV vaccine introduction and cervical cancer elimination. Three of the five overarching activities were developed as environmental restructuring interventions, i.e. changing the physical or social context by (1) creating and training Kosovo¹-wide-, regional-, and municipal-level expert spokespersons (medical professionals or other socially prominent individuals) who could support introduction or address any crises as needed; (2) creating a platform or mechanism to allow actors involved in the introduction to access all developed materials for any activities; and (3) holding a press conference on the HPV vaccination launch to raise general awareness and emphasize public authorities’ support for the introduction. An educational intervention of holding a scientific conference was developed to ensure support from the medical community, allaying health worker motivation barriers and addressing capability barriers for narrow specialists, and journalist preparation was suggested as an intervention combining education, training, and modelling to equip journalists with correct information, link them with reliable sources for reporting, and demonstrate best practices for reporting on immunization.

Specific interventions for health workers, schools, and communities were built to incorporate education, to fill knowledge gaps; training, to address skills gaps in advocating for vaccination; persuasion to encourage HPV vaccine uptake through communication; and modelling, to provide examples of how to advocate or communicate on vaccination and personal examples to inspire HPV vaccine uptake. Insights research indicated multiple trainings would be required health for workers and different levels of health workers would need to be trained separately, with specialist health workers providing key trainings. Beyond detailed information on the HPV vaccine outlined in section 3.1 above, health workers would require communication skills training on to effectively and efficiently address parents' concerns, engage with hesitant parents, and be aware of any biases that might impede engaging with religious or minority parents. A recently developed WHO training was suggested in which examples and role-plays would allow health workers to acquire and practice communication skills. Similar to health workers, school staff required a similar kind of engagement via trusted health professionals, and findings indicated they would also need time and persuasion to be confident not just in HPV vaccine, but also in their role as trusted information sources for parents and girls whom they could encourage to get vaccinated.

A set of community-based activities were also included that incorporated education, persuasion, and modelling. It was noted that these would need to be adapted at the local level based on contextually relevant actors and as while urban parents might be more sceptical, rural communities might be more sensitive in speaking about cervical cancer or HPV. Key goals would be to reach fathers as well as mothers – a group not always easy to reach on children's immunization – through face-to-face community health worker visits, village council meetings with health workers, and civil society organizations, especially those working with minority communities that could face specific challenges in accessing health services and whose daughters might not be enrolled in school. Targeted school-based activities were also suggested for target-aged girls to be engaged by health workers, as well as for parents to learn about and discuss any concerns on the HPV vaccine with a trusted health worker at schools, which would allow engaging both fathers and mothers, especially in urban settings. Beyond information dissemination, research insights specified parents would be persuaded through health worker, civil society influencer, or other trusted actors' confidence explaining and presenting details on evidence of HPV vaccine safety, effectiveness, and necessity.

In this vein, a set of communication activities were built around environmental restructuring to make information in currently unavailable in content and formats suited to parents and others, persuasion to encourage HPV vaccine uptake through presenting targeted messaging, and modelling through stories of vaccinated women and parents who chose to vaccinate their children against HPV. A key intervention was the creation of a dedicated website for vaccination that would provide key details and evidence for childhood vaccines including HPV vaccine, accessible by mobile phones, and referenced across all materials developed. Print, video, and social media materials, as well as the production of TV talk shows with specialist health workers and health officials were suggested with key messages from findings targeting mothers, fathers, girls, health workers, and the general public. A final suggested environmental restructuring intervention was the conducting of social media monitoring to support timely identification and addressing of mis- or disinformation risks or other crises. Upon conclusion of the second workshop, administrators overseeing the HPV vaccine introduction indicated all suggested HPV-ICP interventions would incorporated into the broader introduction planning.

4. Discussion

Research on employing the BCW model for intervention design has been limited, with studies primarily focussing on using the model to analyse health behaviour and developed interventions.[35,36] While limited, studies on utilizing the model for public health intervention design or strengthening, including for addressing HPV or other vaccine uptake, have mostly been conducted in the global north with some research also done with populations in or from LMIC contexts. This research has reported on processes spanning periods between six months to multiple

years.[20,37–40] The HPV-ICP development process detailed in this article contributes to this literature by describing use of the BCW model for rapid qualitative research to develop interventions in an LMIC context, while also addressing a gap in literature on HPV vaccine uptake in the Southern Balkans.

Conducted in the wake of the COVID-19 pandemic, circumstances required the process of insights research and intervention development be completed in two weeks. In this context, rapid research methods were used that have been proven effective and rigorous, but also shown to be open to challenges including small sample sizes, limited time for data triangulation, and lower granularity of research data.[21,41] The study did indeed face recruiting challenges with parents and girls, where FGDs were planned for 5-8 participants each representing a different demographic within the study site, but not all of those recruited were able to participate on the day and, given time constraints, research could not be replanned. To counteract such expected challenges, guidance on increasing information power of qualitative research had been followed by employing an overall theoretical framework and engaging trained qualitative researchers with local and subject area expertise to participate in each stage of the process, while also involving decision makers and potential intervention implementers in the process where and as feasible.[28] Thus, while insights results were limited in not being representative across Kosovo¹, they did give an indication of the dynamics and issues affecting HPV vaccine uptake that could be addressed via interventions. Insights research results did reflect global findings on behavioural factors affecting HPV vaccine uptake, specifically how preparation and engagement of health workers, including narrow specialists, and teachers was vital for school interventions, and that beyond addressing knowledge gaps and emphasizing actors' influential role for parents, bolstering effective communication skills and strategies to address parents' questions and concerns was crucial.[42–45]

Findings across all target groups safety and effectiveness concerns echoed global research highlighting not just people's anxieties around HPV vaccine's potential effects on fertility, but also their challenges to accessing trusted information, and social taboos around discussing women and girls' health in public or mixed settings.[46–49] The finding that, all target groups, excepting health workers, would need more than just IPH approval of HPV vaccine to be confident, but would also require detailed information on the vaccine's safety, including contents, scientific evidence, longitudinal research results, etc., is also in line with research showing perceived lack of information on HPV vaccine as the most frequent concern reported across studies on HPV and other vaccines' confidence.[50,51] While other research suggests such concerns on HPV vaccine safety are more connected to low trust in authorities, in this context authorities enjoy high public trust, evidenced in research but also by almost all study participants indicating trust in IPH vaccine decision making.[50,52,53] Insights research limitations precluded exploring this issue in-depth. It is possible this need for more detailed scientific information on HPV vaccine relates to changes in post-pandemic information seeking behaviour on vaccines, or in perceptions of authoritative safety evidence for vaccine perceived as 'new', or that it could reflect the means through which authorities' engagement supported increases in COVID-19 vaccine uptake.[54]

While the BCW model facilitated identifying the intervention types, study results suggested individuals influential at the community level (health workers, community leaders, etc.) would need to be involved in delivering interventions. Other research has shown while no significant evidence exists, even specifically for vaccination, on most effective interventions, tailoring activities to the local context and simple action-oriented interventions ones are more effective.[34,55,56] The need for local-level engagement was particularly salient for the identified need to engage with men on HPV vaccine. While studies have emphasized the need for vaccinating boys and men and increasing their HPV awareness, to our knowledge, no research exists on effective interventions to engage men as vaccine advocates.[57–59]

While efforts were undertaken to minimize study limitations and the use of rapid research methods permitted the development of an evidence-based HPV-ICP within the short period of two weeks, time limitations did impact intervention development. Data analysis was focussed primarily

on identifying intervention types related to COM-B barriers, with intervention details depending on researcher experience and stakeholder feedback. In the case of the suggested intervention on community engagement, the draft HPV-ICP had to just indicate the intervention would require local-level development. Had more time been available, additional analysis could have been conducted with insights data using the Theoretical Domains Framework (TDF) to consider specific behaviour change techniques (BCTs) linked to each of the COM-B barriers identified.[60,61]

5. Conclusions

Rapid research methods were successfully used in tandem with the BCW model for intervention design to develop an intervention and communication plan for HPV vaccine introduction within a limited period of two weeks. A two-step process was used to first identify COM-B barriers and drivers for relevant target groups via qualitative insights research, then identify feasible related intervention types, finalizing the plan in conjunction with actors responsible for intervention implementation. Most barriers were interconnected around issues of knowledge and skills gaps, highlighting the need to fully prepare health professionals and school staff ahead of the introduction and assure more detailed information on HPV vaccine and evidence of its safety and effectiveness was available to the public. Findings also emphasized the importance of community level tailoring of interventions, especially to reach particular populations like men or ethnic minority groups. Interventions largely focussed on education as well as environmental restructuring and modelling to ensure access to information and uptake of requisite skills and vaccinating behaviours. Study limitations were mitigated by ensuring research team expertise, involvement in each stage of the process, and investment of time over the two weeks available, though time limitations precluded detailed intervention development using specific behavioural change techniques.

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Informed Consent Statement: Informed consent was obtained from all subjects involved in the study.

Data Availability Statement: Data in the form of RAP sheets and RAP sheet analysis are available on request from S.M.N. until 2028 when they will be destroyed as per conditions of ethical approval.

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Abbreviations

The following abbreviations are used in this manuscript:

BCT	Behaviour change techniques
BCW	Behaviour Change Wheel
COM-B	Capability, Opportunity, and Motivation for Behaviour change
FGD	Focus Group Discussion
HPV	Human papillomavirus
HPV-ICP	HPV vaccine introduction intervention and communication plan
IDI	In-depth interview
LMIC	Lower- and middle-income context
IPH	Institute of Public Health
RAP	Rapid Assessment Procedures
TDF	Theoretical Domains Framework

References

1. Falcaro, M.; Soldan, K.; Ndlela, B.; Sasieni, P. Effect of the HPV Vaccination Programme on Incidence of Cervical Cancer and Grade 3 Cervical Intraepithelial Neoplasia by Socioeconomic Deprivation in England: Population Based Observational Study. *BMJ* 2024, e077341, doi:10.1136/bmj-2023-077341.
2. WHO Human Papillomavirus Vaccines: WHO Position Paper, May 2017. *Wkly. Epidemiol. Rec.* 2017, 92, 241–268.
3. Lee, L.A.; Franzel, L.; Atwell, J.; Datta, S.D.; Friberg, I.K.; Goldie, S.J.; Reef, S.E.; Schwalbe, N.; Simons, E.; Strebel, P.M.; et al. The Estimated Mortality Impact of Vaccinations Forecast to Be Administered during 2011–2020 in 73 Countries Supported by the GAVI Alliance. *Vaccine* 2013, 31, B61–B72, doi:10.1016/j.vaccine.2012.11.035.
4. Irzaldy, A.; Jerman, T.; De Kok, I.M.C.M.; Hontelez, J.A.C.; De Koning, H.J.; Jansen, E.E.L.; Ivanuš, U. Impact of a National HPV Vaccination Programme for Preadolescent Girls on Cytology Screening Performance and CIN2+ Incidence: Five-Year Population-Based Cervical Screening Results from Slovenia. *Lancet Reg. Health - Eur.* 2025, 50, 101203, doi:10.1016/j.lanepe.2024.101203.
5. WHO Human Papillomavirus (HPV). *Immun. Vaccines Biol.* 2018.
6. National Institute of Public Health of Kosova *Malignant diseases report for the period January-December for the years 2019-2023*; Department of Health Information System: Pristina, Kosova, 2024;
7. WHO HPV Vaccine Communication. *Special Considerations for a Unique Vaccine, 2016 Update.* (WHO/IVB/17.02). Licence: CC BY-NC-SA 3.0 IGO; World Health Organization: Geneva, 2017;
8. Nielsen, S.M.; Franklin, B.A.K.; Jackson, Cath; Ceban, A.; Shishniashvili, M.; Sahakyan, G.; Mosina, L.; Habersaat, K.B. New Vaccine Introduction: Strengthening Health Literacy to Increase Health Equity. *Public Health Panor.* 2019, 5, 291–300.
9. Craciun, C.; Baban, A. “Who Will Take the Blame?”: Understanding the Reasons Why Romanian Mothers Decline HPV Vaccination for Their Daughters. *Vaccine* 2012, 30, 6789–6793, doi:10.1016/j.vaccine.2012.09.016.
10. Warsi, S.K.; Nielsen, S.M.; Franklin, B.A.K.; Abdullaev, S.; Ruzmetova, D.; Raimjanov, R.; Nagiyeva, K.; Safaeva, K. Formative Research on HPV Vaccine Acceptance among Health Workers, Teachers, Parents, and Social Influencers in Uzbekistan. *Vaccines* 2023, 11, 754, doi:10.3390/vaccines11040754.
11. Raçi, P.Z.; Raçi, F.; Hadri, T. Kosovo Women’s Knowledge and Awareness of Human Papillomavirus (HPV) Infection, HPV Vaccination, and Its Relation to Cervical Cancer. *BMC Womens Health* 2021, 21, 354, doi:10.1186/s12905-021-01496-x.
12. Kosumi, E.; Kosumi, M.; Spasovski, M. Attitude and Practice on Human Papillomavirus, Human Papillomavirus Vaccine and Associated Factors among Population in the Republic of Kosova. *Arch. Public Health* 2022, 14, doi:10.3889/aph.2022.6067.
13. Rančić, N.K.; Golubović, M.B.; Ilić, M.V.; Ignjatović, A.S.; Živadinović, R.M.; Đenić, S.N.; Momčilović, S.D.; Kocić, B.N.; Milošević, Z.G.; Otašević, S.A. Knowledge about Cervical Cancer and Awareness of Human

- Papillomavirus (HPV) and HPV Vaccine among Female Students from Serbia. *Medicina (Mex.)* 2020, *56*, 406, doi:10.3390/medicina56080406.
14. Belavic, A.; Pavic Simetin, I. Educational Intervention for Increasing Knowledge of Human Papillomavirus and Vaccination amongst Parents of First Year High School Students in Croatia. *J. Public Health* 2022, *44*, 165–173, doi:10.1093/pubmed/fdaa201.
 15. Li, L.; Wood, C.E.; Kostkova, P. Vaccine Hesitancy and Behavior Change Theory-Based Social Media Interventions: A Systematic Review. *Transl. Behav. Med.* 2022, *12*, 243–272, doi:10.1093/tbm/ibab148.
 16. Ruiter, R.A.C.; Crutzen, R. Core Processes: How to Use Evidence, Theories, and Research in Planning Behavior Change Interventions. *Front. Public Health* 2020, *8*, 247, doi:10.3389/fpubh.2020.00247.
 17. Kotromanović Šimić, I.; Bilić-Kirin, V.; Miskulin, M.; Kotromanović, D.; Olujić, M.; Kovacevic, J.; Nujić, D.; Pavlovic, N.; Vukoja, I.; Miskulin, I. The Influence of Health Education on Vaccination Coverage and Knowledge of the School Population Related to Vaccination and Infection Caused by the Human Papillomavirus. *Vaccines* 2024, *12*, 1222, doi:10.3390/vaccines12111222.
 18. Cooper, S.C.; Davies, C.; McBride, K.; Blades, J.; Stoney, T.; Marshall, H.; Skinner, S.R. Development of a Human Papillomavirus Vaccination Intervention for Australian Adolescents. *Health Educ. J.* 2016, *75*, 610–620, doi:10.1177/0017896915608884.
 19. Garbutt, J.M.; Dodd, S.; Walling, E.; Lee, A.A.; Kulka, K.; Lobb, R. Theory-Based Development of an Implementation Intervention to Increase HPV Vaccination in Pediatric Primary Care Practices. *Implement. Sci.* 2018, *13*, 45, doi:10.1186/s13012-018-0729-6.
 20. Marshall, S.; Fleming, A.; Sahm, L.J.; Moore, A.C. Identifying Intervention Strategies to Improve HPV Vaccine Decision-Making Using Behaviour Change Theory. *Vaccine* 2023, *41*, 1368–1377, doi:10.1016/j.vaccine.2023.01.025.
 21. Johnson, G.A.; Vindrola-Padros, C. Rapid Qualitative Research Methods during Complex Health Emergencies: A Systematic Review of the Literature. *Soc. Sci. Med.* 2017, *189*, 63–75, doi:10.1016/j.socscimed.2017.07.029.
 22. Ajzen, I. The Theory of Planned Behavior. *Organ. Behav. Hum. Decis. Process.* 1991, *50*, 179–211, doi:10.1016/0749-5978(91)90020-T.
 23. Vindrola-Padros, C.; Chisnall, G.; Cooper, S.; Dowrick, A.; Djellouli, N.; Symmons, S.M.; Martin, S.; Singleton, G.; Vanderslott, S.; Vera, N.; et al. Carrying Out Rapid Qualitative Research During a Pandemic: Emerging Lessons From COVID-19. *Qual. Health Res.* 2020, *30*, 2192–2204, doi:10.1177/1049732320951526.
 24. Shapiro, G.K.; Kaufman, J.; Brewer, N.T.; Wiley, K.; Menning, L.; Leask, J.; Abad, N.; Betsch, C.; Bura, V.; Correa, G.; et al. A Critical Review of Measures of Childhood Vaccine Confidence. *Curr. Opin. Immunol.* 2021, *71*, 34–45, doi:10.1016/j.coi.2021.04.002.
 25. Michie, S.; Atkins, L.; West, R. *The Behaviour Change Wheel: A Guide to Designing Interventions*; First edition.; Silverback Publishing: London, 2014; ISBN 978-1-912141-00-5.
 26. Michie, S.; van Stralen, M.M.; West, R. The Behaviour Change Wheel: A New Method for Characterising and Designing Behaviour Change Interventions. *Implement. Sci.* 2011, *6*, 42, doi:10.1186/1748-5908-6-42.
 27. Habersaat, K.B.; Jackson, C. Understanding Vaccine Acceptance and Demand—and Ways to Increase Them. *Bundesgesundheitsblatt - Gesundheitsforschung - Gesundheitsschutz* 2020, *63*, 32–39, doi:10.1007/s00103-019-03063-0.
 28. Malterud, K.; Siersma, V.D.; Guassora, A.D. Sample Size in Qualitative Interview Studies: Guided by Information Power. *Qual. Health Res.* 2016, *26*, 1753–1760, doi:10.1177/1049732315617444.
 29. WHO Regional Office for Europe Rapid Qualitative Research to Increase COVID-19 Vaccination Uptake: A Research and Intervention Tool. 2022.
 30. Elo, S.; Kyngäs, H. The Qualitative Content Analysis Process. *J. Adv. Nurs.* 2008, *62*, 107–115, doi:10.1111/j.1365-2648.2007.04569.x.
 31. Lam, T.J.G.M.; Jansen, J.; Wessels, R.J. The RESET Mindset Model Applied on Decreasing Antibiotic Usage in Dairy Cattle in the Netherlands. *Ir. Vet. J.* 2017, *70*, 5, doi:10.1186/s13620-017-0085-x.
 32. Sidman, M. Coercion in Educational Settings. *Behav. Change* 1999, *16*, 79–88, doi:10.1375/bech.16.2.79.

33. Kuznetsova, L.; Cortassa, G.; Trilla, A. Effectiveness of Mandatory and Incentive-Based Routine Childhood Immunization Programs in Europe: A Systematic Review of the Literature. *Vaccines* 2021, 9, 1173, doi:10.3390/vaccines9101173.
34. Soames, J.; Pettigrew, L.M. Electronic Health Record-Based Behaviour Change Interventions Aimed at General Practitioners in the UK: A Mixed Methods Systematic Review Using Behaviour Change Theory. *BMJ Open* 2024, 14, e080546, doi:10.1136/bmjopen-2023-080546.
35. Cowdell, F.; Dyson, J. How Is the Theoretical Domains Framework Applied to Developing Health Behaviour Interventions? A Systematic Search and Narrative Synthesis. *BMC Public Health* 2019, 19, 1180, doi:10.1186/s12889-019-7442-5.
36. Dyson, J.; Cowdell, F. How Is the Theoretical Domains Framework Applied in Designing Interventions to Support Healthcare Practitioner Behaviour Change? A Systematic Review. *Int. J. Qual. Health Care* 2021, 33, mzab106, doi:10.1093/intqhc/mzab106.
37. Jama, A.; Appelqvist, E.; Kulane, A.; Karregård, S.; Rubin, J.; Nejat, S.; Habersaat, K.B.; Jackson, C.; Butler, R.; Lindstrand, A.; et al. Design and Implementation of Tailored Intervention to Increase Vaccine Acceptance in a Somali Community in Stockholm, Sweden - Based on the Tailoring Immunization Programmes Approach. *Public Health Pract.* 2022, 4, 100305, doi:10.1016/j.puhip.2022.100305.
38. Flood, T.; McLaughlin, M.; Hughes, C.M.; Wilson, I.M. Applying the COM-B Behaviour Model to Understand Factors Which Impact School Immunisation Nurses' Attitudes towards Designing and Delivering a HPV Educational Intervention in Post-Primary Schools for 15–17 Year Old Students in Northern Ireland, UK. *Vaccine* 2023, 41, 5630–5639, doi:10.1016/j.vaccine.2023.07.066.
39. Crawshaw, A.F.; Kitoko, L.M.; Nkembi, S.L.; Lutumba, L.M.; Hickey, C.; Deal, A.; Carter, J.; Knights, F.; Vandrevalla, T.; Forster, A.S.; et al. Co-designing a Theory-informed, Multicomponent Intervention to Increase Vaccine Uptake with Congolese Migrants: A Qualitative, Community-based Participatory Research Study (LISOLO MALAMU). *Health Expect.* 2024, 27, e13884, doi:10.1111/hex.13884.
40. Gallant, A.J.; Steenbeek, A.; Halperin, S.A.; Parsons Leigh, J.; Curran, J.A. Operationalizing the Behaviour Change Wheel and APEASE Criteria to Co-Develop Recommendations with Stakeholders to Address Barriers to School-Based Immunization Programs. *Vaccine* 2024, 42, 126226, doi:10.1016/j.vaccine.2024.126226.
41. Vindrola-Padros, C.; Johnson, G.A. Rapid Techniques in Qualitative Research: A Critical Review of the Literature. *Qual. Health Res.* 2020, 30, 1596–1604, doi:10.1177/1049732320921835.
42. Bratic, J.S.; Seyferth, E.R.; Bocchini, J.A. Update on Barriers to Human Papillomavirus Vaccination and Effective Strategies to Promote Vaccine Acceptance: *Curr. Opin. Pediatr.* 2016, 28, 407–412, doi:10.1097/MOP.0000000000000353.
43. Vadaparampil, S.T.; Malo, T.L.; Kahn, J.A.; Salmon, D.A.; Lee, J.-H.; Quinn, G.P.; Roetzheim, R.G.; Bruder, K.L.; Proveaux, T.M.; Zhao, X.; et al. Physicians' Human Papillomavirus Vaccine Recommendations, 2009 and 2011. *Am. J. Prev. Med.* 2014, 46, 80–84, doi:10.1016/j.amepre.2013.07.009.
44. Cooper Robbins, S.C.; Bernard, D.; McCaffery, K.; Brotherton, J.M.L.; Skinner, S.R. "I Just Signed": Factors Influencing Decision-Making for School-Based HPV Vaccination of Adolescent Girls. *Health Psychol.* 2010, 29, 618–625, doi:10.1037/a0021449.
45. Dubé, E.; Gagnon, D.; Clément, P.; Bettinger, J.A.; Comeau, J.L.; Deeks, S.; Guay, M.; MacDonald, S.; MacDonald, N.E.; Mijovic, H.; et al. Challenges and Opportunities of School-Based HPV Vaccination in Canada. *Hum. Vaccines Immunother.* 2019, 15, 1650–1655, doi:10.1080/21645515.2018.1564440.
46. Tatar, O.; Shapiro, G.K.; Perez, S.; Wade, K.; Rosberger, Z. Using the Precaution Adoption Process Model to Clarify Human Papillomavirus Vaccine Hesitancy in Canadian Parents of Girls and Parents of Boys. *Hum. Vaccines Immunother.* 2019, 15, 1803–1814, doi:10.1080/21645515.2019.1575711.
47. Remes, P.; Selestine, V.; Changalucha, J.; Ross, D.A.; Wight, D.; de Sanjosé, S.; Kapiga, S.; Hayes, R.J.; Watson-Jones, D. A Qualitative Study of HPV Vaccine Acceptability among Health Workers, Teachers, Parents, Female Pupils, and Religious Leaders in Northwest Tanzania. *Vaccine* 2012, 30, 5363–5367, doi:10.1016/j.vaccine.2012.06.025.
48. McRee, A.-L.; Gilkey, M.B.; Dempsey, A.F. HPV Vaccine Hesitancy: Findings From a Statewide Survey of Health Care Providers. *J. Pediatr. Health Care* 2014, 28, 541–549, doi:10.1016/j.pedhc.2014.05.003.

49. Cheung, T.; Lau, J.T.F.; Wang, J.Z.; Mo, P.; Siu, C.K.; Chan, R.T.H.; Ho, J.Y.S. The Acceptability of HPV Vaccines and Perceptions of Vaccination against HPV among Physicians and Nurses in Hong Kong. *Int. J. Environ. Res. Public Health* 2019, 16, 1700, doi:10.3390/ijerph16101700.
50. Karafillakis, E.; Simas, C.; Jarrett, C.; Verger, P.; Peretti-Watel, P.; Dib, F.; De Angelis, S.; Takacs, J.; Ali, K.A.; Pastore Celentano, L.; et al. HPV Vaccination in a Context of Public Mistrust and Uncertainty: A Systematic Literature Review of Determinants of HPV Vaccine Hesitancy in Europe. *Hum. Vaccines Immunother.* 2019, 15, 1615–1627, doi:10.1080/21645515.2018.1564436.
51. Larson, H.J.; De Figueiredo, A.; Xiahong, Z.; Schulz, W.S.; Verger, P.; Johnston, I.G.; Cook, A.R.; Jones, N.S. The State of Vaccine Confidence 2016: Global Insights Through a 67-Country Survey. *EBioMedicine* 2016, 12, 295–301, doi:10.1016/j.ebiom.2016.08.042.
52. Marlow, L.A.V.; Waller, J.; Wardle, J. Trust and Experience as Predictors of HPV Vaccine Acceptance. *Hum. Vaccin.* 2007, 3, 171–175, doi:10.4161/hv.3.5.4310.
53. Prelec, T.; Vasiljević, J.; Džihic, V.; Kmezić, M. *Policy Brief: Outta Trust? (Post)-Pandemic Trust and Democratic Resilience in the Western Balkans*; Balkans in Europe Policy Advisory Group (BiEPAG), 2021;
54. Basholli, F.M.; Berisha, M.; Scherzer, M.; Humolli, I.; Ramadani, N.; Habersaat, K.B.; Kiss, Z. “Using Behavioral Insights to Inform the COVID-19 Vaccine Response in Kosovo[1]: Population Perceptions and Interventions.” *PEC Innov.* 2024, 4, 100279, doi:10.1016/j.pecinn.2024.100279.
55. Abascal, M.L. VACÚNATE: Vaccine Access Through Communication, Understanding, and Tailored Interventions, UCSF, 2023.
56. Ekezie, W.; Connor, A.; Gibson, E.; Khunti, K.; Kamal, A. A Systematic Review of Behaviour Change Techniques within Interventions to Increase Vaccine Uptake among Ethnic Minority Populations. *Vaccines* 2023, 11, 1259, doi:10.3390/vaccines11071259.
57. Newman, P.A.; Logie, C.H.; Doukas, N.; Asakura, K. HPV Vaccine Acceptability among Men: A Systematic Review and Meta-Analysis. *Sex. Transm. Infect.* 2013, 89, 568–574, doi:10.1136/sextrans-2012-050980.
58. Naidoo, D.; Govender, K.; Mantell, J.E. Breaking Barriers: Why Including Boys and Men Is Key to HPV Prevention. *BMC Med.* 2024, 22, 525, doi:10.1186/s12916-024-03701-8.
59. Wong, L.P. Role of Men in Promoting the Uptake of HPV Vaccinations: Focus Groups’ Finding from a Developing Country. *Int. J. Public Health* 2010, 55, 35–42, doi:10.1007/s00038-009-0072-4.
60. Cane, J.; O’Connor, D.; Michie, S. Validation of the Theoretical Domains Framework for Use in Behaviour Change and Implementation Research. *Implement. Sci.* 2012, 7, 37, doi:10.1186/1748-5908-7-37.
61. Michie, S.; Richardson, M.; Johnston, M.; Abraham, C.; Francis, J.; Hardeman, W.; Eccles, M.P.; Cane, J.; Wood, C.E. The Behavior Change Technique Taxonomy (v1) of 93 Hierarchically Clustered Techniques: Building an International Consensus for the Reporting of Behavior Change Interventions. *Ann. Behav. Med.* 2013, 46, 81–95, doi:10.1007/s12160-013-9486-6.

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