**Title:** Decreasing HPV Vaccine hesitancy among Colombian teenagers and their families: an analysis based on the COM-B model

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**Background:** Cervical cancer in Colombia is the first cause of cancer mortality and the second in incidence among women. However, the uptake of Human Papilloma Virus (HPV) vaccine rate in the country dropped from 96.7% after its introduction in 2013 to 9% in 2020, primarily due to a 2014 massive psychogenic event post-vaccination.

**Objective:** To identify behavioral components involved in HPV vaccine hesitancy.

**Methods:** 196 parents/caregivers of age-eligible female teenagers with incomplete HPV vaccination schedules responded to an online questionnaire about their attitudes and beliefs towards HPV vaccination. Focus groups were held with 13 of these parents/caregivers and 50 age-eligible teenagers to enrich the survey responses.

**Results:** 57.1% of participants had not yet initiated the HPV vaccine. Looking at capability, participants perceived their daughter's susceptibility to cervical cancer (88%) and HPV (85%); 96.9% were aware of the need for vaccination; however, 69% were lacking information about the vaccine program. The opportunity for vaccination in provider was seen as limited. Regarding motivation, 30.1% were concerned about vaccine safety, effectiveness, and side-effects. The likelihood of getting vaccinated, getting a medical recommendation, and seeing others get vaccinated were significantly related.

**Conclusion:** Capability, in a lack of information about the vaccine, and motivation, in concern about vaccine safety, are related to vaccine hesitancy in Colombia. Addressing these behavioral barriers, as well as increasing opportunity for vaccination would decrease HPV vaccine hesitancy.