

# Insights into Health-related Behaviors amid HPV Infection: A Thorough Examination Utilizing the Health Belief Model

Ankita Jacob<sup>1\*</sup>, Prakash Kumar Singh<sup>2</sup>

## Abstract

*The health belief model has emerged as a valuable theoretical framework for comprehending health-related behaviors, providing insights into preventive measures and strategies for health promotion in the context of human papillomavirus infection. This systematic review thoroughly assesses the components of the health belief model—perceived susceptibility, severity, benefits, barriers, cues to action, and self-efficacy—pertaining to human papillomavirus infection. Through an in-depth analysis of existing literature, this abstract underscores the impact of individual beliefs and perceptions on shaping preventive behaviors, such as the uptake of vaccination and screening practices. Additionally, the abstract investigates the influence of sociodemographic factors on the adoption of health behaviors related to human papillomavirus infection, offering a nuanced understanding of the diverse elements contributing to varying rates of human papillomavirus-related diseases. The amalgamation of evidence presented in these abstracts aims to guide public health interventions, policy development, and educational initiatives, enhancing human papillomavirus prevention efforts and mitigating the burden of associated diseases. By illuminating the complex interplay between individual beliefs and health behaviors, this abstract contributes to the ongoing discourse on human papillomavirus infection, emphasizing the significance of tailored approaches in advancing effective prevention and control strategies.*

**Keywords:** Health Belief Model (HBM), HPV infection, health promotion, health behaviors, HPV-related diseases

## INTRODUCTION

The health belief model centers around an individual's perceptions, beliefs, and attitudes toward health and illness. These perceptions can stem from accurate or inaccurate information, logical reasoning or myths, and realistic or unrealistic expectations. Since an individual's health beliefs can significantly impact their health behaviors, they have the potential to either enhance or diminish a person's health status [1–3].

### \*Author for Correspondence

Ankita Jacob  
E-mail: ankitajacob91@gmail.com

<sup>1</sup>Vice-principal, Department of Nursing, Rajendra College of Nursing, Lucknow, Uttar Pradesh, India

<sup>2</sup>MD, Department of Nursing, Rajendra College of Nursing, Lucknow, Uttar Pradesh, India

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## CONSTRUCTION OF CONCEPTUAL FRAMEWORK

An important consideration when designing a study is the conceptual framework or theoretical foundation of research. A theory comprises a collection of concepts that offer a systematic framework for understanding a particular phenomenon [4].

It offers logically organized concepts to offer a broad explanation of the connection between the concepts investigated in the research without relying on an

established theory. These are typically formulated based on the researcher's own insights, prior research discoveries, and other relevant sources [5].

For the construction of a conceptual framework, the researcher should pass through three stages: first, the construction of a paradigm, then the subjective statement, and then the construction of a conceptual framework.

### **Paradigm**

Certain standards and rules can guide a researcher's actions and beliefs. Such standards can refer to a paradigm. A paradigm refers to a framework of beliefs and practices that guide research within a particular field, offering a perspective, structure, and methodology for conducting studies. There are five paradigms, and in this research, the researcher used the positivism paradigm.

According to positivism, there is absolute truth, and researchers from this perspective believe that through research, we can achieve this truth, and if researchers don't achieve the truth, then the method has some fault. This paradigm also believes that human behaviors are generalizable [6].

By using the positivism paradigm, the investigator constructs the concept that sensitization programs improve the acceptance and awareness of participants regarding human papillomavirus (HPV) screening.

### **Subjective Statement**

The second step in the construction of a conceptual framework is a statement of a subjective manner. A subjective statement is basically an explanation of the researcher's relationship with the research topic and area you would like to study. Discuss your initial fascination with the subject matter, detailing your own connections to the topic. Briefly outline the influence of your personal background, emotions, cultural perspectives, and professional inclinations on your approach to the research [7].

### **Substantive Content Theory**

A substantive content theory describes your particular area of research. Every discipline has a number of substantive theories, such as psychology, learning theory, and motivational theory. These substantive content theories provide the content for the literature review section in every research proposal [7].

## **CONCEPTUAL FRAMEWORK/THEORETICAL FRAMEWORK**

### **Steps for Development of Conceptual/Theoretical Framework**

Identify the general concepts by referring to a lot of previous studies, gathering relevant information, formulating a general scheme of relevant concepts, developing a logical construct, evaluation and revision, and establishing congruity [7].

Based on an extensive literature review, the investigator divulged that the most suited conceptual framework for the present research study was the health belief model by Rosenstock, 1960 [8].

### **Content of the Health Belief Model**

The health belief model assists researchers in understanding the variables that affect a client's attitudes, beliefs, and actions toward maintaining or improving health and preventing illness. At the heart of this model is the idea that people will proactively manage, screen for, or mitigate a health issue if they perceive themselves at risk, view the condition as having significant implications, recognize that specific measures can lessen their risk or the severity of the condition, and judge the benefits of taking such actions to surpass the costs involved [1].

### **Components of the Health Belief Model**

It will be categorized into three sections, as follows:

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### **1. *Modifying Factors***

- a. These are the basic characteristics of the population, such as demographic and socioeconomic factors. These will be the age of women, marital status, duration of the marriage, religion, educational status, occupation, monthly income in Rupees, type of family, number of children, frequent sexual activity, screening pattern for HPV, do you use any contraception method, if yes, then which method, do you have a family history of cervical cancer, do you have painful or irregular menstrual history, do you feel pain or bleeding during or after sexual activity, do you have any history of genital infection, if yes, then disease condition and medicine, do you suffering with any disease condition for which you are taking medicine, if yes then diseases condition and medicines.
- b. Awareness about HPV screening will be focused on self-sampling methods vs assisted sampling methods.

### **2. *Individual Perception***

- a. Perceived susceptibility: According to the health belief model, an individual's perception of their susceptibility to a health condition influences their behavior. If someone believes they are susceptible to a specific health issue, they are more inclined to adopt behaviors aimed at reducing their risk. Conversely, individuals who perceive themselves as having low susceptibility to an illness are more prone to engaging in unhealthy or risky behaviors. Moreover, those who perceive a higher personal risk of developing a health problem are more inclined to take action to mitigate that risk. In this investigation, it is perceived that there is susceptibility to HPV infection.
- b. Perceived severity: An individual's perception of the severity of a health condition when left untreated includes their beliefs about the disease, such as whether it poses a threat to life or could result in disability or discomfort, as well as its broader effects on their ability to function in work and social settings. In this investigation, this is the perceived severity of HPV infection.
- c. *Taken preventive action*: The third factor influencing whether an individual will engage in preventive measures stems from their assessment of the advantages and obstacles associated with taking such actions.
- d. Perceived benefits: The belief in the positive impact of actions taken to enhance a health situation. In the present investigation, self-sampling will increase participation in HPV screening among subjects.
- e. Perceived barriers: Perceived barriers denote an individual's evaluation of hindrances to altering behavior, where the benefits must surpass these obstacles for behavior modification to happen. These barriers encompass perceived inconveniences, costs, risks (such as side effects of medical procedures), and discomforts (such as pain or emotional distress) associated with engaging in the behavior. For example, obstacles like limited access to affordable healthcare and the belief that a flu vaccine injection will induce substantial pain can deter individuals from getting vaccinated against the flu. In the present research, the perceived barriers will be a lack of information about HPV infection and screening, lack of trust in the doctor, long waiting time, religious belief, poor health literacy, low economic status, the stigma attached to the disease, poor knowledge about the disease, fear, pain, procedural discomfort, and finding bad news.

### **3. *Likelihood of Action***

- a. Cues to action: The health belief model proposes that a prompt or signal is essential for initiating health-enhancing actions. These prompts can originate internally or externally. Internal prompts may be physiological signals, such as symptoms or discomfort. External prompts can arise from external events or advice from healthcare providers or loved ones, encouraging participation in activities related to health. In the existing investigation, it counted as a sensitization program regarding HPV screening, leaflets regarding HPV screening, and friend and relative recommendations.

- b. **Self-efficacy:** In 1988, self-efficacy was incorporated into the health belief model alongside its existing components: perceived susceptibility, severity, benefits, and barriers. Self-efficacy pertains to an individual's belief in their ability to effectively execute a behavior. This addition aimed to provide a more comprehensive explanation for variations in health-related behaviors among individuals. Over time, the health belief model was extended to address significant and enduring changes in behavior, such as dietary adjustments, physical activity, and smoking cessation. The model's creators recognized that self-confidence in one's capability to produce desired outcomes played a pivotal role in fostering health behavior modifications [1].

Here, self-efficacy will be shown by confidence in going for HPV screening and knowledge about HPV infection with SSM and ASM.

### **APPLICATION**

The health belief model serves as a foundation for crafting interventions designed to modify health-related behaviors by focusing on the model's core elements. Such interventions often strive to enhance individuals' awareness of their vulnerability to and the potential severity of a health issue through educational programs that discuss the condition's prevalence, personalized risk assessments, and the implications of the condition. Moreover, these interventions seek to adjust individuals' analysis of the advantages versus the drawbacks of adopting healthier behaviors by disseminating information on how certain actions can mitigate disease risk, addressing common barriers, offering incentives for healthy behaviors, and leveraging social support systems to foster these behaviors. Additionally, efforts are made to strengthen self-efficacy through skill-building exercises for complex lifestyle adjustments. These targeted interventions can be directed at both individual and societal levels, aiming for a comprehensive approach to health behavior change [2, 9].

### **DISCUSSION**

The outcomes of this study bear significant implications for public health initiatives, underscoring the necessity for customized interventions to boost women's participation in HPV screening. Adopting a comprehensive approach that addresses both individual perceptions and external cues aligns with the principles of the health belief model. Healthcare providers and policymakers can foster a more conducive environment for preventive actions by recognizing and addressing perceived barriers, such as information gaps, trust issues, and socioeconomic limitations.

Furthermore, the research highlights the crucial role of educational campaigns and sensitization programs in raising awareness about HPV infection and screening methods. Tailoring interventions to specific demographic and socioeconomic attributes can enhance their effectiveness, acknowledging the diverse factors influencing individual health behaviors.

The health belief model offers an insightful approach to understanding and addressing the complexities involved in preventive health actions. By acknowledging the interplay of perceived susceptibility, severity, benefits, and barriers, along with external cues and self-efficacy, interventions can be designed to resonate effectively with the target population.

Future research endeavors should consider longitudinal studies and interventions aimed at specific subgroups within the population, offering deeper insights into sustained behavior change. Additionally, collaborative efforts involving healthcare providers, community leaders, and policymakers are imperative for the successful implementation of interventions at both individual and societal levels [10].

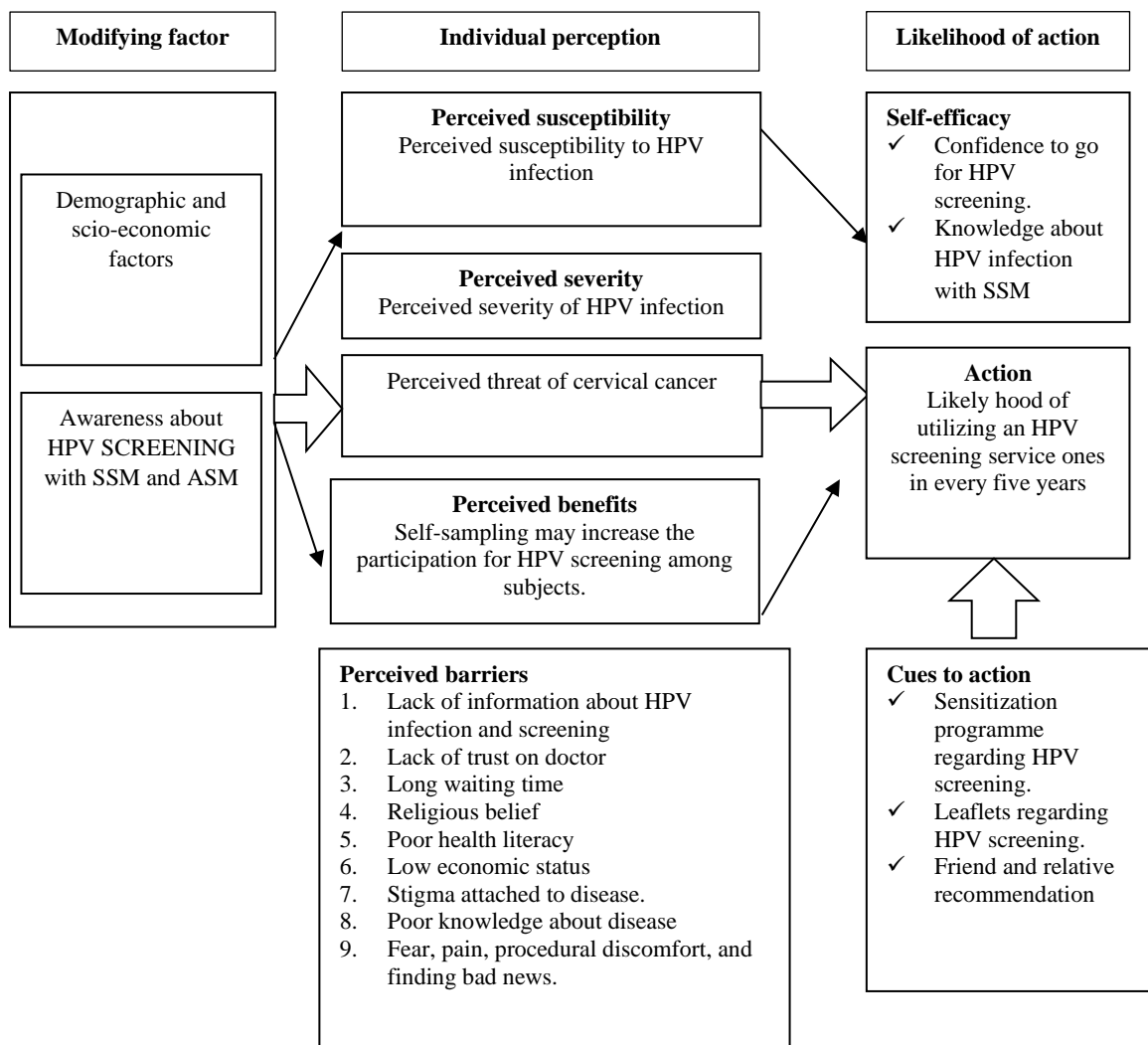
### **CONCLUSION**

The proposed study explores the determinants influencing the likelihood of women engaging in preventive measures through HPV screening. Foundational factors, including demographic and socioeconomic variables, shape individual health behaviors. Notably, awareness of HPV screening

methods, specifically the choice between self-sampling and assisted-sampling methods, is pivotal in impacting preventive actions.

Individual perceptions, as delineated by the health belief model, play a crucial role in forecasting involvement in health-promoting behaviors. The perceived susceptibility to HPV infection, the seriousness of the condition, and the equilibrium between perceived benefits and barriers collectively shape an individual's inclination toward preventive action. Additionally, cues to action, whether internal or external, and self-efficacy, representing confidence in executing the preventive behavior, emerge as pivotal influencers in this context.

Figure 1 represents the application of the health belief model and suggests that targeted interventions addressing these factors can effectively induce behavioral change. Strategies that increase awareness, tackle perceived susceptibility and severity, and adjust the cost-benefit analysis can heighten the likelihood of women opting for HPV screening. Moreover, enhancing self-efficacy through focused education and training holds promise for fostering enduring health-promoting behaviors (Figure 1).



**Figure 1.** Conceptual framework based on the health belief model [8].

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