Detecting Prevotella and Sneathia in Adolescent Vaginal Microbiomes Using 16s rRNA Gene Sequencing and Spreading Awareness of Under-Recognized Women's Health Issues Through CARE: A Health Marketing Campaign

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Trichomonas vaginalis (TV) infections are the most prevalent sexually-transmitted infection (STI) globally, yet there remains a dearth of common knowledge about its often-asymptomatic transmission. Around 80% of TV cases are found in women, yet many do not know how TV leads to the trichomoniasis STD, know that TV increases susceptibility to other STIs (like HIV), or are aware that they are inclined to such gynecological risks. This study focuses on combating this lack of knowledge in adolescents by detecting presence of certain bacteria that increase TV-susceptibility in adolescent vaginal microbiomes and testing the efficacy of a health-marketing campaign garnered to a high school student audience. 16S rRNA gene sequencing methods were used to detect Sneathia and Prevotella, two bacteria that increase TV-susceptibility, in adolescent vaginal microbiota from self-collected samples of vaginal secretions. Out of 7 DNA samples, 3 out of 7 (~43%) had traces of Prevotella and 0 out of 7 (0%) had traces of Sneathia; this conveys the presence of Prevotella are actively present in adolescent vaginal flora. The health-marketing campaign is called CARE: Conversation, Attention, Recognition, and Expansion. CARE consists of various stations that include the distribution of CARE pencils and stickers and the playing of physical and online games. To determine if it can spread awareness and foster probable-future conversation and better vaginal care habits, surveys will be conducted before and after participation. This research is a step toward determining effective methods of countering the increase in irresponsible sexual behavior in young adults and reducing the amount of future gynecological risks in upcoming generations.

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