Supplementary Table S1. Table of primers and probes used to detect microorganisms involved in bacterial vaginosis and sexually transmitted infections.

Targets	Targeted sequences	Primer names	Sequences (5'-3')	Probes
Gardnerella vaginalis	*Cpn 60*	Gvaginalis_F	CGCATCTGCTAAGGATGTTG	VIC-TGCAACTATTTCTGCAGCAGATCCT
		Gvaginalis_R	CAGCAATCTTTTCGCCAACT	
Fannyhessea (*Atopobium*) *vaginae*	16S rRNA	Atop_F	CCCTATCCGCTCCTGATACC	VIC-GCAGGCTTGAGTCTGGTAGGGGA
		Atop_R	CCAAATATCTGCGCATTTCA	
Lactobacillus spp	*Tuf*	Lacto_F2	TACATYCCAACHCCAGAACG	FAM-AAGCCATTCTTRATGCCAGTTGAA
		Lacto_R2	AAGCAACAGTACCACGACCA	
Human albumin	Exon 12	Alb_F	GCTGTCATCTCTTGTGGGCTGT	FAM-CCTGTCATGCCCACACAAATCTCTCC
		Alb_R	AAACTCATGGGAGCTGCTGGTTC	
Mycoplasma genitalium	*FusA*	Mgen_fusA_F	CTGGGAAAACCACCACATCA	FAM-TGGTGAATCAGTGATGGACTGGATGGA
		Mgen_fusA_R	CACTGAAGTGGCTGCAGAGG	
Trichomonas vaginalis	Repeated sequence	Tvag_L23861_F	AAGATGGGTGTTTTAAGCTAGATAAGGT	FAM-CCGAAGTTCATGTCCTCTCCAAGCGT
		Tvag_L23861_R	CGTCTTCAAGTATGCCCCAGTAC	
Neisseria gonorrhoeae	Hypothetical protein	Ngono_2F	CATCAGCGCAATCCCTATGA	FAM-CCACGGCGCTTCCTGATGGG
		Ngono_2R	TGGTTGTCCTCAACCGTGTC	
Chlamydia trachomatis	Hypothetical protein	Ctracho_1F	AGCTCCCAAAGCAACCAGAR	FAM-CAACAGCACCACCAGCAGCTGC
		Ctracho_1R	BTGTCGCTGCGTTGGTTTTA	
Treponema pallidum	*PolA*	SyphT_F1	GTCGAGACTGAAAAGGAGTGCA	FAM-TGCTGTGCAGGATCCGGCATATGTCC
		SyphT_R1	GTGAGCGTCTCATCATTCCAAAG	
Haemophilus ducreyi	*GroESL*	H.duc_groE_F	CACAATGAGTATTCGTCCATTACAC	FAM-AGTGCTGCAATTCCAGATACCGATCGC
		H.duc_groE_R	GCAATCACTTTACCGCGAGT	
Herpes simplex virus	*Pol*	HSV DNA POL F	CATCACCGACCCGGAGAGGGAC	FAM-CCGCCGAACTGAGCAGACACCCGCGC
		HSV DNA POL R	GGGCCAGGCGCTTGTTGGTGTA	

Supplementary Table S2. Review of the international literature presenting various arguments in favour or against sexual transmission of bacterial vaginosis.

	For the sexual transmission of bacterial vaginosis	**Against the sexual transmission of bacterial vaginosis**
Epidemiology		
Bacterial transfer	- Development of typical clinical manifestations of BV, presence of *G. vaginalis* in pure culture, and characteristical microscopic findings of stained smears in women, previously free of BV and *G. vaginalis*, directly inoculated with material from the vaginas of patients with BV suggesting the possibility of sexual inoculation (**First exhaustive study on "*Haemophilus vaginalis* vaginitis" in 1955** [41]). - Enriched penile microbiome with taxa associated with BV of sex partners of women with BV → Sexual exchange of penile and vaginal taxa during intercourse (**1 study in 2020** [42]).	- Absence of microorganisms associated with BV in male partners of women with BV (**2 studies in 1984 and 1990** [43,44]).
Antigen prostatic	- Association of prostate-specific antigen, indicating recent semen exposure, with inflammatory responses in the female genital tract and the prevalence of BV (**1 study in 2021** [45]).	
Male circumcision	- Association of circumcision with a significant change in the overall microbiota and a significant decrease in putative anaerobic bacterial genera previously associated with BV (**4 studies in 2009-2020** [46–49]).	- No association found between the presence of BV in women and the circumcision status of their male partner (**1 study in 1999** [50]).
Sexual behaviors (Multiple partners, new partners, sexual practices)	- Protective effect of the consistent condom use against BV → Same protection method as for other STIs (**5 studies in 1955-2013** [41, 51–54]) - Prevalence of BV significantly associated with exposure to a new sexual partner, frequency of vaginal intercourse, unprotected intercourse, rectal intercourse, and use of lubricant → Similar sexual behavior between women with BV and those at risk for current STIs (**8 studies in 1955-2022** [7, 40,41, 55–60]). - In relationships among women who have sex with women (WSW), certain sexual behaviors, including engaging with a new female partner, having a partner with BV symptoms, practicing oral-anal sex, and inadequate hygiene practices for insertable sex toys, can lead to concordant vaginal secretions in WSW and can impact on the vaginal microbiota causing changes in the community state types of the vaginal	- No significant difference in the prevalence of BV observed between the sexually active group and the virgin group (**2 studies in 1988 and 2010** [66, 67]). - No association observed between any WSW sexual practices that would have the propensity to pass vaginal secretions from one to the other and BV (**1 study in 1999** [68]).

	microbiota **(5 studies in 1995-2019** [61–65]).					
Therapeutic	**Treatment effectiveness: 6 studies in 1989-2021**			**Treatment ineffectiveness: 4 studies in 1988-1997**		
Male treatment	**Size [References]**	**Treatment of women**	**Treatment arm for men**	**Size [References]**	**Treatment of women**	**Treatment arm for men**
	342 couples [69]	Oral MTZ 500 mg bid 7d	Oral MTZ 500 mg bid and topical clindamycin bid 7d	106 couples [70]	Oral MTZ 2 g on d1 and 3	Oral MTZ 2 g on d1 and 3
	214 couples [71]	Oral MTZ 500 mg bid 7d	Oral MTZ 500 mg bid 7d	190 couples [72]	Oral MTZ 2 g on d1 and 3	Oral MTZ 2 g on d1 and 3
	16 couples [73]	Oral MTZ 400 mg bid 7d	Oral MTZ 400 mg bid and topical clindamycin bid 7d	133 couples [74]	Oral TIN 2 g single dose	Oral TIN 2 g single dose
	34 couples [75]	Oral MTZ 400 mg bid 7d	Oral MTZ 400 mg bid and topical clindamycin bid 7d	139 couples [76]	2% clindamycin intravaginal cream 7 nights	Oral clindamycin 150 mg qid
	29 couples [77]	Oral MTZ 400 mg bid 7d	Oral MTZ 400 mg bid and topical clindamycin bid 7d			
	161 couples [78]	Oral MTZ 2 g single dose OR Oral MTZ 500 mg bid 7d	Oral MTZ 2 g single dose OR Oral MTZ 500 mg bid 7d			

* MTZ, metronidazole; TIN, tinidazole; d, days; Sample size reflects those included in the analysis.