

# Assesing the comprehension of STI risk reduction hierarchical messages among sex workers in the Dominican Republic

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## BACKGROUND

- ❖ Globally it is estimated that 340 million new cases of curable STIs occur annually among sexually active men and women.<sup>1</sup>
- ❖ Studies in this population have reported low use of male condoms with regular partners (17.6%) compared with use of condoms by new clients (94%).<sup>2</sup>
- ❖ There is scarce research about the behavioral impact of STI risk reduction messages that present a hierarchical array of methods of varying effectiveness levels in vulnerable populations such as sex workers.
- ❖ A prospective trial that looked at the effect of broadening women's choice with regard to STI prevention suggests that increasing women's barrier options improves their protective and preventive behavior and does not lead to reduced male condom use.<sup>3</sup>

## OBJECTIVE

- 1) To understand how women comprehend and act upon a hierarchical STI risk reduction message that introduces three methods from the most effective to the less effective, and
- 2) To evaluate two forms of introduction of barrier methods, randomizing women to two groups, one that received the most effective methods (female and male condoms) in the first month, followed by introduction of diaphragm, and one that received the three methods at the same time

## METHODS

- ❖ Sex workers were enrolled in the study and were randomized to either of the following two groups. Women were asked to return to four follow-up visits every month.
- Group 1 received, at the recruitment visit, only female and male condoms with instructions for using female condoms in case that male condom use cannot be negotiated. In the first follow-up visit they received all barrier methods, including the diaphragm, plus the hierarchical risk reduction message (HRM).
- Group 2 received, at the recruitment visit, all methods of the study (30 male and 30 female condoms and a diaphragm) and the hierarchical risk reduction message.

The hierarchical risk reduction message incorporates the hierarchical use of the three barrier methods: male condom, female condom, and diaphragm. The methods are presented in the following manner:

- ❖ At each follow-up visit, the study staff interviewed women about their method preferences, their experiences using each of the methods, which methods they chose with which sexual partners, and how they internalized and acted upon the hierarchical risk reduction messages



1. **The male condom** is the only method that has been proved to prevent both bacterial and viral STIs, including HIV, and it also prevents pregnancy when used consistently and accurately. Male condoms should be used with every act of intercourse.

2. **Female condoms** also prevent bacterial STIs and are the next-best option when male condom use cannot be negotiated. They may be protective against HIV transmission, but we do not know exactly how protective they are in relation to male condoms. They also prevent pregnancy when used consistently and can be used whenever male condom use cannot be negotiated.

3. **The diaphragm** might also prevent STIs, but it has not been proven to work. The method is definitely less effective than either male or female condoms, but it is probably better than using nothing. It can be used in cases where neither male nor female condom use can be negotiated. It can also be used as a back-up method with a male condom so that in case the condom breaks, another barrier is in place that might prevent transmission of STIs.

## RESULTS

- ❖ 243 women were recruited. The loss to follow-up rate was 13.6%
- ❖ We applied the chi square and t-student tests for differences between the groups in sociodemographic and reproductive characteristics. We did not find significant differences between the two groups

### Comprehension of STIs risk reduction hierarchical messages

Questions asked to participants	Visit 3		Visit 5	
	Group 1	Group 2	Group 1	Group 2
What is the best method to prevent STIs including HIV				
Female condom	21.3	19.7	24.8	21.2
Male condom	50.7	43.9	34.9	42.4
Diaphragm with male condom	0.0	1.5	0.9	0.0
Diaphragm alone	28.0	0.0	39.4	36.4
If you are in situation in which your partner or client refuse to use the male condom, what it will be your best choice to protect against ITS				
Female condom	94.5	92.4	93.4	98.9
Diaphragm alone	4.1	6.1	6.6	1.1
If you are in situation in which your partner or client refuse to use the male condom and do not permit you to use the female condom, what can you use to protect against ITS				
Nothing	12.0	9.1	22.0	20.0
Diaphragm alone	69.3	57.6	46.8	43.0
Do not have sex	16.0	33.3	30.3	37.0
Don't know	2.7	0.0	0.9	0.0
Between the female and male condom, which is the best to protect you against STIs including HIV				
Female condom	38.7	28.8	30.3	37.0
Male condom	38.7	39.4	27.5	39.0
Both offer the same protection	22.7	31.8	42.2*	24.0
Between the diaphragm alone and male condom, which is the best to protect you against STIs including HIV				
Male condom	90.7	95.5	91.7	95.0
Diaphragm	2.7	1.5	1.8	2.0
Both offer the same protection	5.3	1.5	6.4	3.0
Don't know	1.3	1.5	0.0	0.0
Between the diaphragm alone and female condom, which is the best to protect you against STIs including HIV				
Female condom	94.7	92.4	94.5	89.0
Diaphragm	0.0	7.6*	2.8	3.0
Both offer the same protection	4.0	0	1.8	6.0
Don't know	1.3	0	0.9	2.0

\* P < .05

### Use of barrier methods reported by sex workers at visits 1 and 5

Use of methods by last month and group	Visit 1		Visit 5	
	Group 1	Group 2	Group 1	Group 2
Any barrier method use				
Never used male condom /any barrier method	4.1	7.6	6.7	2.1
Sometimes used male condom/any barrier method	29.3	26.9	15.2	21.9
Always used male condom /any barrier method	66.7	65.5	78.1	76.0
	66.1		77.1*	
Any condom use				
Never used male condom/male condom or female condom	4.1	7.6	6.7	3.1
Sometimes used male condom /sometimes used male or female condoms	29.3	26.9	26.7	27.1
Always used male condom /male or female condom	66.7	65.5	66.7	69.8
	66.1		68.2	
Any male condom use or male condom plus diaphragm				
Never used male condom /never used male condom or male condom plus diaphragm	4.1	7.6	14.3	5.2
Sometimes and always used male condom or male condom plus diaphragm	95.9	92.4	85.7*	94.8
	94.2		90	

\*P =0.032

Note: Never= 0% of sex intercourses, sometimes= 1 to 99% of sex intercourses and Always= 100% of sex intercourses

## CONCLUSIONS

- ❖ Monthly interviews to evaluate the comprehension of hierarchical STIs risk reduction messages showed that sex workers understood which barrier methods give more protection in relation to others. **This understanding enhanced along the study**
- ❖ Women who received only female and male condoms in the first month (group 1), reported with more frequency that both condoms offer the same protection
- ❖ Protected sex by using any barrier method **increased along the study** from 66 to 77%, but there were not significant differences between the two groups
- ❖ The use of the most effective methods against HIV/STIs shows a slight but not significant increase from 66 to 68%, and there were not significant differences between groups
- ❖ Women who received just female and male condoms in the first month (group 1), had a lower use of male condoms alone or male condom plus diaphragm (86%) than women of group 2 (95%)
- ❖ HRM is a useful tool to increase protected sex in this population
- ❖ Introducing all barrier methods at the same time seems more successful at not decreasing the use of male condoms in this population. **Nevertheless, women replace the use of this method by using female condoms**

## REFERENCES

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