SUPPLEMENTARY MATERIALS

for

The Empower Nudge lottery to increase dual protection use: A proof-of-concept randomized pilot trial in South Africa

by

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Appendix Table A: Adjusted Effects of the Intervention on Primary and Secondary Outcomes

	Adjusted Effect Estimates	
	3-month	6-month
	aOR (95% CI)	aOR (95% CI)
Interviewed	9.08 ***	5.94 ***
	(3.32 to 27.8)	(2.19 to 16.1)
Condom use	8.85 **	1.81
	(1.53 to 51.3)	(0.20 to 16.0)
Dual protection	3.91 *	0.96
	(0.89 to 17.2)	(0.14 to 6.76)

Notes: *** p<0.01, ** p<0.05, * p<0.10

Table reports effects estimates using adjusted odds ratio (aOR) from logistic regression using the control group as the reference category, and adjusting for covariates: age, South African nationality, race, student status, high school completion, total number of persons in household, years living in current area, an asset index, monthly earnings, and HIV status; 95% confidence interval (CI) with robust standard errors.

Appendix Table B: Inverse Probability Weighted Effects on Primary and Secondary Outcomes

	Inverse Probability Weighted Effect Estimates	
	3-month	**6-month**
	IPW aOR (95% CI)	IPW aOR (95% CI)
Interviewed	7.94 ***	3.82 *
	(2.62 to 24.0)	(.80 to 18.2)
Condom use	9.83 ***	4.19
	(1.32 to 72.9)	(.44 to 40)
Dual protection	3.94 *	2.29
	(.80 to 19.3)	(0.24 to 22.3)

Notes: *** p<0.01, ** p<0.05, * p<0.10

Table reports effects estimates using inverse-probability-weighted (IPW) adjusted odds ratio (aOR) from logistic regression using the control group as the reference category, and adjusting for covariates: age, South African nationality, race, student status, high school completion, total number of persons in household, years living in current area, an asset index, monthly earnings, and HIV status; 95% confidence interval (CI) with robust standard errors.

Appendix Table C: Effects-by-Time on Primary and Secondary Outcomes

	Interviewed		Condom use		Dual protection	
	(1)	(2)	(3)	(4)	(5)	(6)
Control	reference		reference		reference	
Lottery	5.091***	5.801***	0.471	0.403	0.320	0.274
	(2.323)	(2.864)	(0.262)	(0.255)	(0.377)	(0.276)
baseline visit	perfect success		reference		reference	
3-month visit	2.667***	2.611**	2.522*	3.183*	6.763**	8.632**
	(0.948)	(1.006)	(1.314)	(1.928)	(5.434)	(7.974)
6-month visit	reference		4.027**	4.410**	15.96***	22.28***
			(2.461)	(3.088)	(13.53)	(22.95)
3-month × Lottery	1.179	1.314	9.085***	9.529***	10.02*	13.36**
	(0.552)	(0.647)	(6.672)	(7.938)	(13.21)	(15.52)
6-month × Lottery			4.963*	6.381*	4.019	4.991
			(4.138)	(6.136)	(5.467)	(6.458)
Age		0.937		0.925		0.859*
		(0.0636)		(0.0656)		(0.0692)
South African national		1.393		0.421		0.542
		(0.961)		(0.303)		(0.446)
Black African race		2.893*		0.824		0.674
		(1.587)		(0.501)		(0.440)
Student		0.864		2.317		2.803
		(0.545)		(1.704)		(2.139)
Highest school completed		0.979		0.616**		0.419***
		(0.161)		(0.132)		(0.101)
Household size		0.817		1.136		0.943
		(0.111)		(0.195)		(0.176)
Years living at current area		1.016		0.992		0.992
		(0.0250)		(0.0251)		(0.0317)
Wealth index		0.960		1.225*		1.170
		(0.0964)		(0.150)		(0.143)
Monthly earnings		3.707		12.11*		90.95***
		(4.470)		(17.35)		(141.0)
HIV positive		0.817		7.415***		2.413
		(0.578)		(5.743)		(2.005)
Observations	198	196	194	190	198	194

Notes: *** p<0.01, ** p<0.05, * p<0.10 Robust standard errors in parentheses. Table presents effects-by-time (lottery fully interacted with visits) general estimating equation (GEE) models for returning for study visits, condom use and dual protection. Models (1), (3) and (5) present unadjusted odds ratios (ORs). Models (2), (4) and (6) present adjusted odds ratios (aORs) including covariates: age, South African nationality, race, student status, grade completed, total number of person in household, years living in current area, an asset index, monthly earnings, and HIV status.

Appendix Table D: Selected Questionnaire Items

Q.#	Question	Response Options	Skips
203	Are you currently using any method to delay or avoid getting pregnant? IF NO, are you planning to start using a method after your visit today?	Yes_____1 No_____2 Yes_____1 No_____2	IF NO, SKIP TO 205
204	If yes, which method are you using? *(CIRCLE ALL MENTIONED)*	Female sterilization _____1 Male sterilization _____2 IUD_____3 Injection: Depo-Provera _____ 4 Nur-Isterate_____5 Implant_____6 Oral contraceptive pill _____7 Male condom_____8 Female condom_____9 Rhythm method_____10 Withdrawal method_____ 11 Other method_____12 Specify_____	
209	Do you know what is meant by the term 'dual protection'?	Yes_____1 No_____2	IF NO, SKIP TO 211
210	Do you currently practice 'dual protection', that is do you use a male or female condom as well as a modern contraceptive method (IUD, injectable contraceptive, or implant) to prevent STIS and pregnancy?	Yes_____1 No_____2	
211	Dual protection is the use of modern contraceptive methods (IUD, injections, or implant) as well as a condom to reduce unplanned pregnancies, and to prevent sexually transmitted infections including HIV. HAVE YOU EVER USED THIS METHOD OF PREVENTION?	Yes_____1 No_____2	
212	Thinking about the contraceptive method/s you are currently using, how likely do you think it is that you will continue to use this/these method/s for the next year?	Not at all likely _____1 Somewhat likely _____2 Very likely _____3 Don't know_____88 Refused_____99	

Appendix Table E: Informed Consent Form

CONSENT TO PARTICIPATE IN A RESEARCH STUDY
Study Title: Empower, Nudge: Increasing Dual Protection among Young Women in South Africa

Hello my name is ……. I would like to ask you whether you would be interested in taking part in a research study conducted with the University of Cape Town. This is a voluntary research study which means you do not have to take part. This is a research study about dual protection, that is, the use of effective modern contraceptive methods (IUD, injectable contraceptive, or implant) as well as condom use to reduce pregnancies that are not planned, and sexually transmitted infections including HIV.

Research studies include only people who choose to take part. Please take your time to make your decision about taking part. If you have any questions, you may ask me now.

Because of the kind of study we are doing, you are being asked to take part in this study because you are a woman, 18-40 years, you've been pregnant within the last 12 months (and you either delivered a baby, had a miscarriage, or had an abortion within the last six months), and you are here at this clinic receiving reproductive health services to avoid another pregnancy.

Why is this study being done?

We do not know if giving people a chance to win some money to buy things they need in something like the "lotto" (lottery) can help young women to adopt long-acting reversible contraceptives and to keep using them over longer periods of time to avoid unintended pregnancies, and to also use condoms to reduce sexually transmitted infections including HIV. The effect of this chance to win a lotto is what we are testing in this study. This study is being funded by Brown University in Providence, RI, USA. The information gathered will be useful to the researchers, who are thinking about conducting more studies on how to meet the contraception needs of young women here, in other places in South or southern Africa and internationally.

How many people will take part in this study?

We plan to ask 100 women who have ever been pregnant to take part in this study.

What will happen if I take part in this research study?

If you decide to take part in this study, I will do a short survey to ask you a few background questions about you and your situation such as age, education, your household (belongings, expenses, use of health services) as well as some of your personal behaviours (such as condom use, number of sexual partners) and how many pregnancies you've had before, and any sexually transmitted infections.

We will also ask you for a blood sample (finger-prick drop of blood). This will be to test for sexually transmitted infections such as syphilis and HIV. We will ask you for a urine sample to test for pregnancy and other

infections such as Chlamydia or gonorrhoea. All tests will be done by a trained nurse, and analysed in a lab. A trained counsellor will share results with you. All results are confidential: we will not share them with anyone but you. This may benefit you: you will know if you have any sexual health problems and can have them treated here at the facility.

If you agree to participate, we will ask you to come back to the clinic after 3 months and again after 6 months to do a short survey and give blood and urine samples again. The questionnaire will take less than one hour to complete and will take place at [_____] Community Health Clinic.

As part of this study, you will be put into one of two groups. Everyone has exactly the same chance of being in any of the groups:

• Group 1: To cover for the costs of your transport and time, you will receive R 100 each time, at this visit today, and at 3 months and 6 months. Also, apart from this, you will get a chance to win a type of lotto ticket – this is not the lotto sold in the shops and that you see on TV – it is special to this study only and gives the chance of winning R 400 each time: (a) if you come back to the clinic and are still using contraception after 3 months; effective modern contraceptive methods include: IUD, injectable contraceptive, or implant; (b) if you come back to the clinic and are still using modern contraception after 6 months; and (c) if you come back to the clinic at 6 months and you don't have a new curable STI (such as syphilis).

• Group 2: To cover for the costs of your transport and time, you will receive R 100 each time, at this visit today, and at 3 months and 6 months. But those in group 2 will NOT get a chance to win this special kind of lotto ticket for food vouchers or air time mobile credit even if they come back and carry on using contraception at months 3 and 6.

If you are found to have any STI, you will get referred for free treatment at this clinic or another public health clinic if you prefer. If you have any STI (including HIV), you can still be in this research study.

How long will I be in the study?

Taking part in the study will take a total of about an hour at each visit, now and again at 3 months and 6 months.

Can I stop being in the study?

Yes. You can decide to stop at any time. Just tell the study researcher right away if you wish to stop being in the study. Also, the study researcher may stop you from taking part in this study at any time if she thinks that this is best for you, or if the study is stopped for some reason.

Risks or Discomforts:

Some of the things in the study may make you feel uncomfortable. Some of the questions we will ask you may be personal and make you feel uncomfortable. You do not have to answer questions that make you too uncomfortable. Also you may feel slight and short pain when there is a prick for you to give a blood sample. You may also not be keen on giving a urine sample. Both these things are usual things that are asked of you when you attend these reproductive health services. The study team will do their best to conduct the survey at a time that is convenient for you.

Are there benefits to taking part in the study?

It is hoped that this study will give better knowledge on things that make it easier or more difficult for women to carry on using contraception. You will have the chance of receiving some benefits that include transport compensation or food vouchers. You will also be able to find out if you have an STI and will be referred to treatment if you need it.

What other choices do I have if I do not take part in this study?

You are free to choose not to participate in the study. If you decide not to take part in this study, this will in no way affect the care you receive here at the clinic or be bad for you in any other way.

Will information about me be kept private?

Participation in any kind of research can involve some loss of privacy by talking with someone. But we will make sure that the personal information gathered for this study is kept private. For example, we will not record your name on any study documents, but will rather use a number. We will need your contact details to keep up with you when you come back to the clinic but will keep this information separate from all the other information provided by you. Information of yours put onto a computer will be protected by a password and only the researchers directly involved in this study will be able to see this. If information from this study is published or presented anywhere, the group information will be presented and your name or other personal information will not be used.

What are the costs of taking part in this study?

Apart from travel and time costs that we will reimburse you for, it will not cost you to participate in this study.

Will I be paid for taking part in this study?

There won't be a payment for taking part in the study. There will only be a chance for you to win a prize through the special study lotto system.

What are my rights if I take part in this study?

Taking part in this study is your choice. You may choose either to take part or not to take part in the study. No matter what decision you make, as we have said, there will be no way in which you will be affected.

Who can answer my questions about the study?

Who to contact?

If you have any questions you may ask these now or later. If there is anything that is unclear or you need further information; we will provide it. If you wish to ask questions later, you may contact:
Associate Professor Jane Harries, Director, Women's Health Research Unit, School of Public Health and Family Medicine, University of Cape Town. Tel: 021 4066798 or E mail: Jane.Harries@uct.ac.za You can also contact Associate Professor Omar Galárraga at Brown University, Providence, United States at 001-401-863-2331 or email to: omar_galarraga@brown.edu

For questions relating to study participants' rights please contact:

Professor M Blockman, Chairperson, Human Research Ethics Committee, University of Cape Town. Tel: 021 4066492. You can call Brown University Research Protections Office at 001 (401) 863-3050 or write to: rpo@brown.edu

This proposal has been reviewed and approved by the University of Cape Town's Faculty of Health Sciences Human Research Ethics Committee, whose task it is to ensure that research participants are protected from harm.

Documentation of Consent

If you accept to participate, please circle the appropriate response below or I will help you to do so if you prefer, write your name, sign and date this form. You will receive a copy of this document, so that you will have the contact information in case you have any questions or concerns.

I HAVE READ THE CONSENT FORM AND UNDERSTAND IT	yes	no	
ALL MY QUESTIONS HAVE BEEN ANSWERED	yes	no	
I AGREE TO TAKE PART IN THE STUDY	yes	no	
I CAN BE CONTACTED FOR FUTURE FOLLOW-UP STUDIES	yes	no	(optional)

_____ _____ _____

Complete name Signature Date

I have discussed the proposed research with this participant, and, in my opinion, this participant understands the benefits, risks and alternatives (including non-participation) and is capable of freely consenting to participate in this research.

_____

(Print Name of Person Obtaining Consent)

_____ _____

(Signature of Person Obtaining Consent) (Date)