



The Acceptability Of a Stepped Package of Oral PrEP Adherence Interventions Among Adolescent Girls and Young Women in South Africa: Results From Qualitative Study

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Background

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- High HIV incidence rates (5-8%) among young women in sub-Saharan Africa
- PrEP is an important prevention method that must be evaluated for its utility in young African women.
- A gap in how to deliver PrEP to young African women with a focus on maximizing adherence
- The challenge is to identify what PrEP adherence support strategies are both scalable and effective at PrEP initiation, and what more intensive strategies work for the subset who need more intensive adherence support.

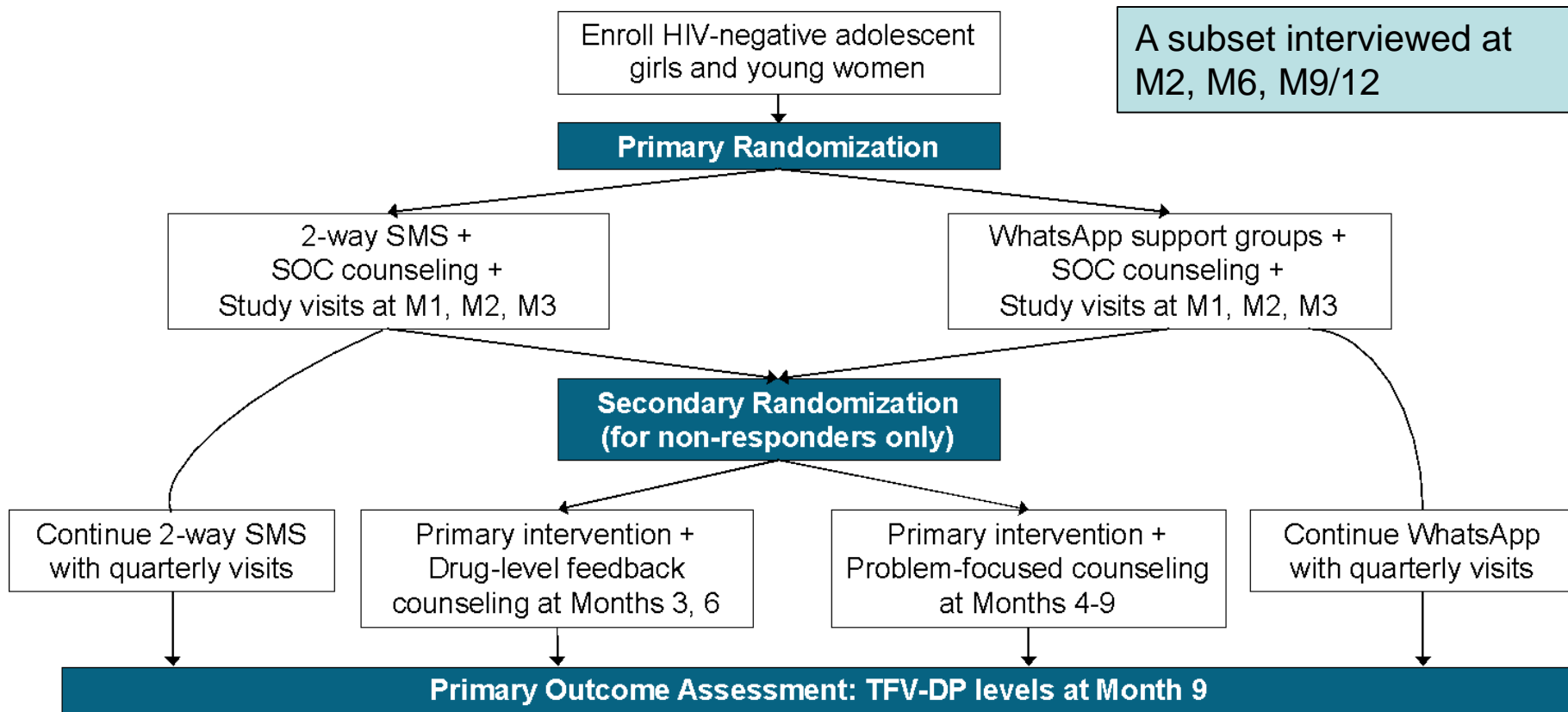


Aim of the study

Assess the acceptability of a stepped package of oral PrEP adherence interventions among adolescent girls and young women in South Africa

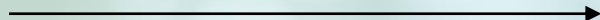


Study design





First level intervention



Second level intervention



Weekly 2-way SMS

- Programmed weekly SMS
- Reverse billing
- “Are you fine girlfriend?”
 - Yes
 - No → Follow up call







Monthly counseling

- Menu-based
- counselling
- Modules for common issues



WhatsApp groups

- Peer Facilitator
- 4 groups
- 20-40 participants/group
- Weekly schedule of topics
- Health and non-health topics

Sample Month	Results/Week	Threshold	Correcting Message
Month 1	Month 2	>100 WhatsApp	 <p>4-6 text messages per week (1000/2000/3000/4000/5000/6000/7000/8000/9000/10000/11000/12000/13000/14000/15000/16000/17000/18000/19000/20000)</p> <p>Text message: "You're doing great! Keep up the good work and remember that taking one P-OP pill every day is needed for staying protected against HIV."</p>
Month 2	Month 3	>100 WhatsApp	 <p>1-3 days per week between participants - 400/800/1200/1600/2000/2400/2800/3200/3600/4000/4400/4800/5200/5600/6000/6400/6800/7200/7600/8000/8400/8800/9200/9600/10000/10400/10800/11200/11600/12000/12400/12800/13200/13600/14000/14400/14800/15200/15600/16000/16400/16800/17200/17600/18000/18400/18800/19200/19600/20000)</p> <p>Text message: "I think like you are trying to take the P-OP medication, but are having some difficulty. Remember that taking small pills every day is needed for staying protected against HIV. How can we help you do even better?"</p>
Month 1	Month 2	80.0 <100 (WhatsApp)	 <p>100/200/300/400/500/600/700/800/900/1000/1100/1200/1300/1400/1500/1600/1700/1800/1900/2000/2100/2200/2300/2400/2500/2600/2700/2800/2900/3000/3100/3200/3300/3400/3500/3600/3700/3800/3900/4000/4100/4200/4300/4400/4500/4600/4700/4800/4900/5000/5100/5200/5300/5400/5500/5600/5700/5800/5900/6000/6100/6200/6300/6400/6500/6600/6700/6800/6900/7000/7100/7200/7300/7400/7500/7600/7700/7800/7900/8000/8100/8200/8300/8400/8500/8600/8700/8800/8900/9000/9100/9200/9300/9400/9500/9600/9700/9800/9900/10000/10100/10200/10300/10400/10500/10600/10700/10800/10900/11000/11100/11200/11300/11400/11500/11600/11700/11800/11900/12000/12100/12200/12300/12400/12500/12600/12700/12800/12900/13000/13100/13200/13300/13400/13500/13600/13700/13800/13900/14000/14100/14200/14300/14400/14500/14600/14700/14800/14900/15000/15100/15200/15300/15400/15500/15600/15700/15800/15900/16000/16100/16200/16300/16400/16500/16600/16700/16800/16900/17000/17100/17200/17300/17400/17500/17600/17700/17800/17900/18000/18100/18200/18300/18400/18500/18600/18700/18800/18900/19000/19100/19200/19300/19400/19500/19600/19700/19800/19900/20000)</p> <p>Text message: "I think like you are trying to take the P-OP medication, but are having some difficulty. Remember that taking small pills every day is needed for staying protected against HIV. How can we help you do even better?"</p>
Month 2	Month 3	80.0 <100 (WhatsApp)	 <p>100/200/300/400/500/600/700/800/900/1000/1100/1200/1300/1400/1500/1600/1700/1800/1900/2000/2100/2200/2300/2400/2500/2600/2700/2800/2900/3000/3100/3200/3300/3400/3500/3600/3700/3800/3900/4000/4100/4200/4300/4400/4500/4600/4700/4800/4900/5000/5100/5200/5300/5400/5500/5600/5700/5800/5900/6000/6100/6200/6300/6400/6500/6600/6700/6800/6900/7000/7100/7200/7300/7400/7500/7600/7700/7800/7900/8000/8100/8200/8300/8400/8500/8600/8700/8800/8900/9000/9100/9200/9300/9400/9500/9600/9700/9800/9900/10000/10100/10200/10300/10400/10500/10600/10700/10800/10900/11000/11100/11200/11300/11400/11500/11600/11700/11800/11900/12000/12100/12200/12300/12400/12500/12600/12700/12800/12900/13000/13100/13200/13300/13400/13500/13600/13700/13800/13900/14000/14100/14200/14300/14400/14500/14600/14700/14800/14900/15000/15100/15200/15300/15400/15500/15600/15700/15800/15900/16000/16100/16200/16300/16400/16500/16600/16700/16800/16900/17000/17100/17200/17300/17400/17500/17600/17700/17800/17900/18000/18100/18200/18300/18400/18500/18600/18700/18800/18900/19000/19100/19200/19300/19400/19500/19600/19700/19800/19900/20000)</p> <p>Text message: "I think like you are trying to take the P-OP medication, but are having some difficulty. Remember that taking small pills every day is needed for staying protected against HIV. How can we help you do even better?"</p>

Drug level feedback counseling

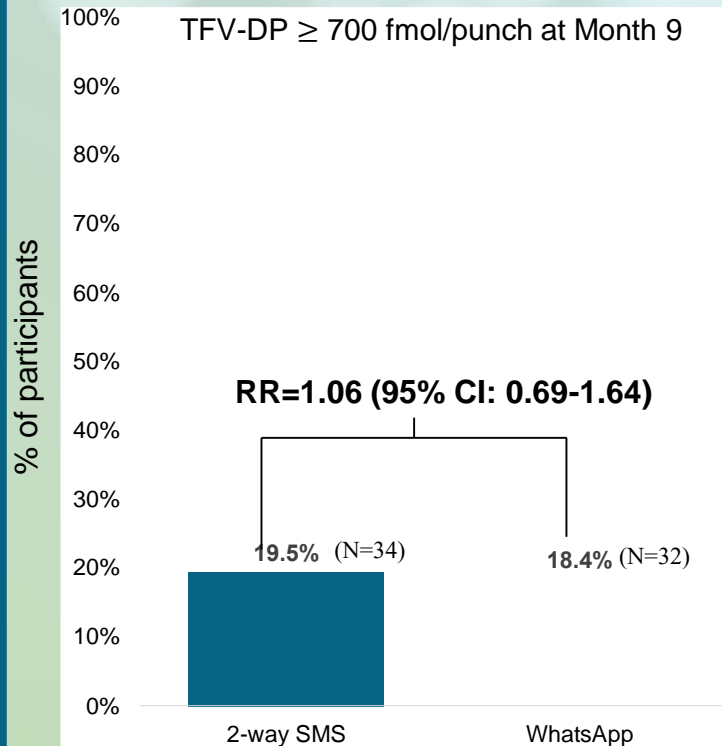
- DBS
- Clinician
- Wi-fi signal about adherence in prior 4-6 weeks

randomised

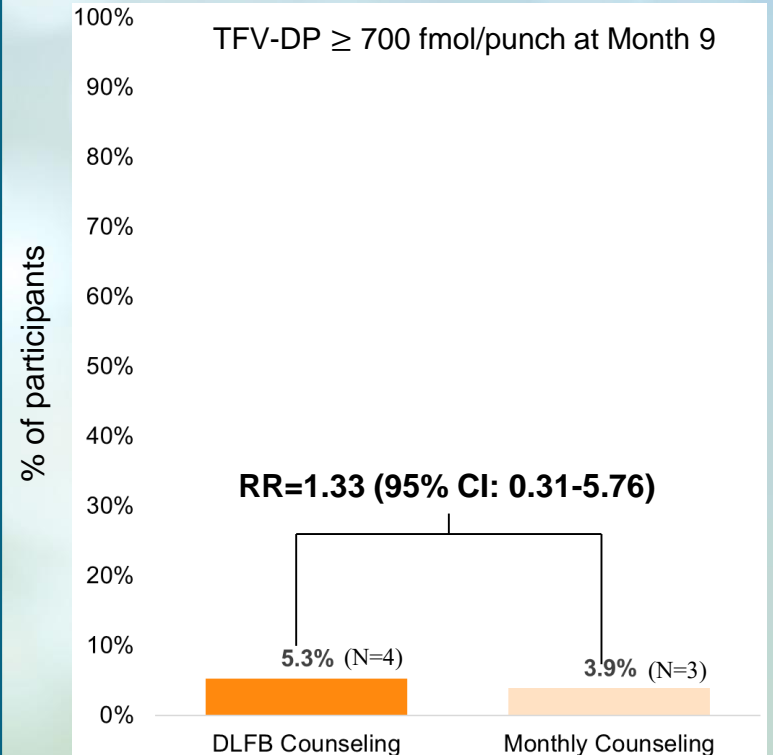
randomised



Primary Interventions (N=348)



Secondary Interventions (N=155)





Methods

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2019

Three serial in-depth interviews

2022

Enrolment

Month 2
1st interview
SMS n=25
WhatsApp n=23

Month 6
2nd interview
Monthly
counselling n=16
DLFB n=9

Month 9/12
3rd interview
n=21

Purposively selected AGYW n=48

IDIs approx. 1-hour, private room, RAs not involved in intervention delivery

Done in local languages - translations into English

Analysis: Thematic and longitudinal approaches



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Acceptability of first level interventions



M-Health: advantages



Two-way SMS

- **PrEP reminder**
- **Anonymity maintained**
- **Not only PrEP focused**
- **Health care provider support**
- Private platform
- Used to report PrEP health issues
- Access to free medical care and advice
- Access to PrEP information
- No airtime or data required
- No Smartphone required
- Ability to opt out



WhatsApp

- **PrEP reminder**
- **Anonymity maintained**
- **Not only focused on PrEP**
- **Support** from people with similar experience
- Safe, non-judgmental space
- Sharing experiences, concerns and solutions
- Benefit multiple people
- Platform to ask questions and get responses
- Facilitate learning from each other
- Neutral advises from strangers
- Empowering and build confidence



M-health: challenges



Two-way SMS

- **Phone malfunction**
- **Power outages**
- **Network issues**
- Annoying/unhelpful to receive
- SMS outdated/hardly check SMS
- 'Yes' or 'no' responses are limiting
- Once a week SMS insufficient
- Pressured to respond
- Inability to respond/SMS not sent
- Forget to respond



WhatsApp

- **Phone malfunction**
- **Power outages**
- **Network issues**
- Requires data
- No data (despite data vouchers)
- Group limits privacy and confidentiality
- Non-activity among group members
- Responses or solutions from peers unsatisfactory

M-Health: what participants said

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“They didn’t have any effect at all, they bored me because I was forced to respond.”

“It’s useful cause it doesn’t help only with PrEP itself, it helps with any difficulty you have with your health, if you can’t do it yourself, you have people to talk to, people that have experience in it, that can help you through that situation, so it helps with a lot of emotional and physical problems.”

“I feel like they care about us... they follow up to find out if there are any side effects with the pills, so that they can help.”

“Only when I ran out of data or battery died or network.”



Preferences for two-way SMS vs. WhatsApp group

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- Most AGYW preferred intervention assigned to them
- SMS vs. WhatsApp group: personality and lifestyle
 - WhatsApp requires more interactions with others
 - SMS more private and individualistic
- SMS frequency: once weekly **OR** 2/3 times weekly
- SMS alignment with PrEP use times

“I like the SMS group because it’s private enough for me, and the group chat thing doesn’t sit well with me...”



M-Health: change over time

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Changes reported at M6 and M9/12

- Non-participation to active participation
 - Initially had confidentiality concerns
 - Participated when they could relate or needed to
- Beneficial to irrelevant
 - circumstances changed
 - content changed
- Exciting to tedious/disliking
- Exited from the group/ Opted out two-way SMS



M-health: Changes over time

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“They just checking, I don’t mind...

They are just checking if I’m alright and if I’m not experiencing any problem, if I don’t have a problem wherever I am.”

“Have you ever had challenges on the SMSes where you even responded with a no?”

R: I had; it was last year. It was only last year, the time I was in a toxic situation.

“I felt that I was supported at the beginning because I was going through a tough time and I was like okay, at least they check up on me...I’m not interested in this thing anymore. I don’t have the motivation anymore.”



“We give opinions about those kinds of experiences, some of the ladies are anonymous, maybe they’ve got an experience of your question, so they can give you a good response for what you are concerned about or what you are asking about.

“At first they were interested a lot, you see, but as time goes by, the topics and conversation ran out, and people are bored because of COVID”

It was okay with me because I didn’t usually get on the group, maybe chat, or bond on a group because there was nothing to talk there... it was not fun to open the group, it was just a boring group.



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Acceptability of second level interventions

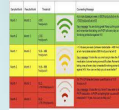


Counselling: advantages



Monthly counselling

- **Non-judgmental space**
- **PrEP support and reminders**
- Platform to voice out PrEP and personal issues
- Support from the counsellor
- Variety of topics covered on personal issues- Not only PrEP focused
- Someone to talk to other than family and friends
- Helpful devising PrEP use strategies and problem solving



Drug-level feedback counselling

- **Non-judgmental** delivery of DLFB
- **PrEP support**
- Encouragement to use PrEP for adherers and non-adherers
- Knowing drug levels in the body
 - Protected or not
 - Confirmation of PrEP use status
- Sense of pride for PrEP adherers
- Opportunity to reflect on HIV risk



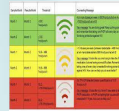
Counselling: challenges

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Monthly counselling

- Travelling to the clinic
- Long waiting times at the clinic
- Privacy and confidentiality concerns
- Uncertainty about whether they will be comfortable personal issues with the counsellor
- Conflicting schedule



Drug-level feedback counselling

- Fear of needles during blood draws
- Delayed test results

Most AGYW still had preference for **monthly counselling visits** than quarterly counselling visits

Counselling interventions: what participants said

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"I also don't like travelling, you see, then coming to sit here the whole day, that bores me."

"Good because I saw that I'm determined in taking PrEP and I know the reasons for taking it, that's why I don't want to miss it sometimes, yeah

"I have a problem with needles, so, and this taking of blood is quite draining."

"Everybody needs somebody to talk to and sometimes, it is not that you can't take the pill, it's just that you need some sort of programme or schedule, so to rearrange everything and make time for the pill."

"I would prefer it to be monthly because maybe somebody has a problem, they can't wait for three months, so it best if its every month."

Sample Month	Results Month	Theoretical		Counseling Message
Month 1	Month 2	<100 1-3 pills per week		If 4 or more times per week (1-500 pills) and at least 4 out of 7-1000 pills taken at least 3. Take message: You are doing great! Keep up the good work and remember that taking one PrEP pill every day is needed for strong protection against HIV.
Month 2	Month 1	<100 1-3 pills per week		
Month 1	Month 2	16.8 - 499 1-10 pills per week		1-3 doses per week (between 16.8-499 pills) taken at pill 4 and 10-1000 pills taken at least 3. Key message: I think like you are trying to take the PrEP medication, but you being some pills. Remember that taking one pill every day is needed for strong protection against HIV. How can we help you do even better?
Month 2	Month 3	16.8 - 499 1-10 pills per week		
Month 1	Month 2	500 11-10 pills per week		10-11 pills per week (between 500-1000 pills) taken at pill 4 and 10-1000 pills taken at least 3. Key message: I think like you aren't even able to take the PrEP medication. Is PrEP something that you are still interested in? If yes, how can we help you?
Month 2	Month 3	500 11-10 pills per week		



Conclusions

- AGYW felt supported regardless of the intervention received
 - PrEP SMART interventions offered an opportunity to talk to someone (peer/health provider)
- M-health and monthly counseling interventions are acceptable
 - help address day-to-day issues among AGYW PrEP users face.
- For some AGYW mHealth support may be enough, however, for others monthly counselling or DLFB was needed to promote self-reported PrEP use.
- Individual preferences need to be taken into account.
- AGYW found interventions helpful in the beginning as they initiate PrEP and continue to take PrEP but enthusiasm wanes off as circumstances change



Acknowledgements

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