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BACKGROUND

- Early initiation of antiretroviral therapy (ART) benefits the health of people with HIV, reduces transmission risk and is routinely recommended. In countries where antiretroviral therapy (ART) is widely accessible, a minority of people living with HIV (PLHIV) is not currently on ART. There is a dearth of research into the interplay of factors at different levels of influence on ART (non)use.

METHOD

- From October 2014 to August 2015 we conducted an online survey among PLHIV in Australia.
- Participants were recruited through email notifications or social media advertisements by community organisations or clinical services, as well as through direct recruitment using the study Facebook page.
- Of 432 initial responses with online consent, 72 were excluded for being ineligible (n=55) or incomplete (n=17); 360 responses were retained for final analyses. The response rate was estimated to be 82.4%.
- The self-report questionnaire assessed demographic characteristics, clinical and patient reported health indicators, health system and structural factors, as well as patient's perceived concerns about and necessity of ART and their perceived ability to self-manage chronic HIV infection.

RESULTS

- The majority of participants (n=347, 96.4%) were men, who predominantly identified as gay (n=325). All 13 women identified as straight.
- Participants were, on average, 46.7 years old (SD=10.8; median=48), with close to three-quarters born in Australia (n=263).
- Apart from two participants whose ART status was unknown, the sample was divided into three groups:
 1. 208 participants (57.8%) had been on continuous ART
 2. 117 participants (32.5%) were on ART but had one or more prior treatment breaks
 3. 33 participants (9.2%) were not on ART, including 26 participants who were ART naïve.
- Bivariate associations between ART use status and potential co-variables were assessed with multinomial logistic regression analyses and are shown in Table 1.

Table 1 Key differences by ART usage history: an online sample of PLHIV in Australia

Mean (SD) or % (n*)	Currently on ART without any breaks (n=208)	Currently on ART with prior breaks (n=117)	Currently not on ART (ART naïve or experienced) (n=33)	p-value
Age (SD)	44.7 (11.3)	50.8 (9.1)	44.4 (10.0)	<0.001
Living in a non-metropolitan (i.e., outside of capital cities) area	79 (38.0%)	58 (49.6%)	20 (60.6%)	0.02
Social welfare as the main source of income	44 (21.2%)	40 (34.2%)	13 (39.4%)	0.01
Perceived somewhat/very much/extreme financial difficulties in meeting:				
daily living costs	58 (27.9%)	53 (45.3%)	13 (39.4%)	0.006
any prescribed medications (HIV or non-HIV) costs	30 (14.4%)	31 (26.5%)	7 (21.2%)	0.03
HIV diagnosis after 2003	135 (64.9%)	11 (9.4%)	18 (54.6%)	<0.001
Routine visit of one's primary HIV doctor at least once every 6 months	179 (86.1%)	100 (85.5%)	21 (63.6%)	0.004
Higher number of HIV-related service types accessed in the past 6 months (SD)	2.94 (1.77)	3.50 (2.29)	2.41 (2.40)	0.01
Any diagnosed STIs in the previous 12 months	51 (24.5%)	12 (10.3%)	8 (24.3%)	0.007
Higher number of major daily life stressors in the previous 12 months (SD)	1.25 (1.42)	1.72 (1.68)	1.50 (1.46)	0.04
Knowing at least 10 other PLHIV	88 (42.3%)	74 (63.3%)	13 (39.4%)	0.001
Knowing at least 10 other PLHIV on ART	76 (36.5%)	64 (54.7%)	10 (30.3%)	0.002
Higher number of perceived HIV-related support sources (SD)	5.07 (2.17)	5.50 (2.26)	4.33 (2.07)	0.03
Higher HIV-related symptoms and concerns in the previous 2 weeks (SD)	9.21 (6.77)	12.1 (7.97)	12.1 (7.59)	0.001
Higher reconstructed necessity-concerns differential mean score (SD)	2.17 (0.93)	2.13 (1.27)	0.10 (1.32)	<0.001
Higher self-efficacy in HIV self-management mean score (SD)	4.11 (0.63)	3.91 (0.72)	3.45 (0.83)	<0.001

*2 participants ART status unknown; Only factors showing significant associations at p<0.05 are shown.

- Multivariate multinomial logistic regression analysis shows that, **compared to those on continuous ART, participants who were not on ART were:**
 - more likely to have ART-related concerns outweighing beliefs about necessity (AOR=0.20; 95% CI=0.12-0.35; p<0.001)
 - have lower perceived competence in HIV self-management (AOR=0.31; 95% CI=0.12-0.80; p=0.015)
 - have a longer time since last visiting their primary HIV doctor (AOR=2.42; 95% CI=1.15-5.13; p=0.021).
- **Compared to people on continuous ART, those reporting prior ART breaks:**
 - had lower perceived HIV self-management competence (AOR=0.56; 95% CI 0.32-0.96)
 - were more likely diagnosed prior to 2003 (AOR=0.37; 95% CI=0.27-0.49; p<0.001).

CONCLUSION

- These findings strongly suggest that to improve timely ART initiation and consistent use, communicating the importance benefits of early ART and addressing any concerns PLHIV might have is critical, as is promoting confidence and skills in self-managing chronic HIV.