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“I don’t have time”: an exploration of the role of time pressures in acceptance of internet interventions for mental health

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ABSTRACT

Background: Internet interventions for common mental disorders are widely available, effective, and economical, yet community uptake remains low. One consistently cited reason for not engaging in mental health interventions is lack of time.

Aims: This research examined whether lack of time as a rationale for not using online interventions reflects real time scarcity, and whether time availability impacts intention to use interventions.

Methods: A nationally representative sample ($N = 1094$, 51% women) reported their time use in activity categories for a typical week. Participants rated their acceptance and likelihood of use of mental health internet interventions, and completed mental health symptom, help-seeking and stigma measures.

Results: Amount of leisure time reported by participants was not associated with acceptance or likelihood of use of internet interventions for mental health. However, respondents who worked longer hours ranked time and effort factors as more influential in their intention to use internet-based mental health programs. Younger respondents and those with greater help-seeking attitudes reported higher acceptance of use.

Conclusion: These findings suggest lack of time is not a direct barrier to use of internet interventions, and that perceived time scarcity may be masking real barriers to uptake.

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Over the past 20 years, interventions for common mental disorders have been developed and offered in an internet-based format. There is now a wide range of effective internet interventions available to the public for anxiety and mood disorders (Andrews et al., 2018), substance use (Riper et al., 2018) and suicide prevention (Andersson et al., 2019; Torok et al., 2020). Internet interventions are cost-effective to deliver (Donker et al., 2015), allow individuals to preserve anonymity (Chan et al., 2016; Wallin et al., 2016) and are spatially, temporally and financially accessible for users (Borghouts et al., 2021; Ebert et al., 2018).

Despite these advantages, both uptake of and adherence to internet interventions is relatively low (Andrews et al., 2018; Fleming et al., 2018; van Ballegooijen et al., 2014). Existing data suggest that there are many barriers to use of internet interventions for mental health, including perceived technological difficulty and confidence in material (Borghouts et al., 2021; Chan et al., 2016). Uptake is also influenced by a general preference for face-to-face mental health support (Batterham & Calear, 2017; Casey et al., 2014; Musiat et al., 2014).

One key barrier to use of internet interventions consistently cited by potential users is time scarcity, with respondents indicating that they don’t have the time or are “too busy” to utilise online interventions (Beatty & Binnion,

2016; Borghouts et al., 2021; Crisp & Griffiths, 2014; Eccles et al., 2021; Wang et al., 2016). For example, in a large population-based study of adults examining factors associated with use of internet interventions for mental health, more than 40% of people unwilling to engage cited busyness or lack of time as a reason for non-participation (Crisp & Griffiths, 2014). However, given the lower time investment required for internet interventions and their higher degree of flexibility compared with in-person therapy (Ebert et al., 2015; Musiat et al., 2014), internet interventions for mental health can provide an important alternative for time-poor users (Casey et al., 2014). In some cases, prioritisation and motivation may drive perceived time pressures rather than actual time commitments, as is seen in other health-related activities such as healthy eating and engaging in physical activity (Jabs & Devine, 2006; Pelletier & Laska, 2012). It could also be that a statement of busyness masks avoidance, stigma or disinterest, or that other known factors such as symptom severity (Borghouts et al., 2021) or ability to engage with online interventions, impact temporal availability.

Given the commonly asserted rationale of time scarcity as a barrier to use of internet interventions for mental health, gaining a greater understanding of time availability as related to barriers to use and intention to use internet interventions is important. The current study used a

nationally representative sample to examine participants' reported time spent completing various activities in a typical week. They rated the acceptance of internet interventions (measured as behavioural intention), likelihood of use, and their ratings of barriers, along with measures of anxiety and depression symptoms, help-seeking, stigma and personality variables. To gain insight into perceptions of time scarcity, participants were also asked what they thought other people meant when they said they "didn't have time" to use an internet intervention. Our aims were to assess the association between time use on acceptance and likelihood of use of internet interventions for mental health (accounting for need and related factors), and to identify perceptions of time scarcity in a representative community sample.

Methods

Ethics approval

The study was approved by The Australian National University Human Research Ethics Committee (ANU HREC protocol number 2020/593).

Participants

The data included 1094 participants (529 males, 561 females, four other). Participants were required to be living in Australia, aged 18 years and over, and able to respond to a written English language survey.

Procedure

The sample was recruited via Qualtrics Research Services (QRS) during November to December 2020, using quota sampling to ensure it was broadly representative of the Australian community aged 18 years and older in terms of age, gender and location. QRS has a large membership base of potential market research survey participants and uses multiple recruitment methods including direct email invitation, or in-app or SMS notifications of a new survey for which they may qualify. Invitations do not include details about the survey contents to avoid self-selection bias. Potential participants were invited by QRS to complete a brief voluntary survey to explore their views on what factors may prevent or encourage them to use internet interventions for mental health. After reading a detailed information sheet, informed consent was obtained from all participants by selecting "yes" to a consent statement, and by completing the full survey. Participants were advised that partial responses would indicate they wished to withdraw consent and would not be included in the analysed data. For context, the data were collected during the first year of the COVID-19 pandemic; during the time of the survey Australia had near eliminated community spread of COVID ($M = 1.33$ cases per day), and a limited amount of public health restrictions were in place. Two attention checks were included in the survey, with participants failing both checks excluded from

the final sample. In total, the view rate of the survey was 31% and completion rate was 45%; of the 3509 potential participants who entered the survey, 117 did not consent, 939 did not meet demographic quotas, and a further 1359 did not complete the survey or failed the reliability checks.

Measures

Demographic characteristics

The following demographic information was collected: age (in years); gender (male/female/other); level of education (high school/primary school, certificate/diploma/associate degree, bachelor degree, postgraduate degree/diploma); language (English only, Other/English and another language). Other demographic characteristics including region of residence, state/territory and postcode, were collected but not used in the analyses in the current study.

Time use

A modified version of the time use item from the HILDA survey was used to assess time spent on activities (Summerfield et al., 2021). The question asked respondents, "Thinking about the last few months, how much time (in hours) would you spend on each of the following activities in a typical week? Please do not count any activity twice. Approximate estimates are fine, and the total should add up to 168 hours." In addition to the original categories focused on work, travel, and family/household tasks, and to ensure we accounted for the full 168 hours in a week, we added seven further categories including health/medical care, active (exercise) and inactive leisure time, personal care (showering etc.), eating, sleeping, and "other activities". For the current study analysis, the list of 16 options provided in the survey was then collated into six categories: paid employment (including travel to work), housework (indoor and outdoor tasks), care for children or others, leisure (active and inactive), sleep, and other.

Acceptability of internet interventions for mental health

To assess acceptability of internet interventions, a brief questionnaire based on the Unified Theory of Acceptance and Use of Technology model (UTAUT; Ebert et al., 2015) was used. Acceptance is defined as the behavioural intent to use the proposed system (Ebert et al., 2015) and is assessed using four items beginning with the statement "If I were suffering from a mental health problem..." followed by (1) "...I could imagine trying out an internet-based program for mental health problems", (2) "...I would use an internet-based psychological program, if offered", (3) "...I would recommend an internet-based psychological program to a friend", and (4) "...I would be willing to pay for an internet-based psychological program for psychological strain". Each item is rated on a five-point scale (totally disagree = 1 to totally agree = 5). A total acceptance score was calculated by taking the mean of the four items.

Likelihood of using internet interventions for mental health

Intended use of internet interventions was assessed using a purpose-designed a measure that asked “In each of the following situations, how likely is it that you would try an internet-based program to support your mental health?” followed by seven scenarios, including “if a clinician recommended that I try a program,” “if I was concerned that I had a mental health condition,” and “if a friend or colleague recommended a program.” These scenarios were identified from previous literature and expert consensus to incorporate a diverse range of likely usage scenarios. Responses were provided on a five-point scale (extremely unlikely = 1 to extremely likely = 5). The mean likelihood score across the seven items was calculated.

Rankings of factors

A list of 15 factors was presented to participants and they were asked to rank at least five of them from most to least important in what “would most influence whether you would try an internet-based program to support your mental health?”. The factors listed were identified by previous research as barriers and facilitators to the use of internet interventions for mental health (Batterham et al., 2021; Gulliver et al., 2020). Factors relevant to the current analysis were the statements: “the effort it takes to do the program” and “the amount of time I have.” Participants’ rankings were reverse-scored so that higher scores indicated higher importance.

Qualitative question

An open-ended qualitative question was used to further understand what people mean when they say they do not have time to use an internet intervention for mental health. Respondents were provided a free-text box and asked “Some people say that lack of time is the main reason they wouldn’t use an internet intervention – what do you think people mean when they say that they don’t have time?”

Mental health symptoms

Anxiety was assessed using the Generalised Anxiety Disorder-7 (GAD-7) (Spitzer et al., 2006), a seven-item scale which assesses the frequency of anxiety symptoms experienced on a four-point scale (not at all = 0 to nearly every day = 3) assessed over the past 2 weeks. Item scores are summed to produce an overall score (range: 0–21). Previous research has demonstrated that the GAD-7 has good psychometric properties in general population and clinical samples (acceptable internal consistency: $\alpha = 0.89$ – 0.92 (Lowe et al., 2008; Spitzer et al., 2006)) and provides accuracy compared with clinical diagnosis (Kroenke et al., 2010; Lowe et al., 2008).

Depression was measured using the Patient Health Questionnaire-9 (PHQ-9) (Spitzer et al., 2006) with nine items assessing depression symptom frequency using the same four-point response scale over the past 2 weeks. Scores for each item are summed to form the total scale score

(range: 0–27). The PHQ-9 displays high sensitivity (.77–.88) and specificity (.88–.94) for detecting major depression in clinical and general population samples (Kroenke et al., 2010), and has acceptable internal consistency in the general population ($\alpha = 0.87$) (Kocalevent et al., 2013).

Distress was assessed using the Distress Questionnaire-5 (DQ5) (Batterham et al., 2016), which incorporates five items asking respondents to indicate the frequency of distressing situations, thoughts, and feelings on a five-point scale (never = 1 to always = 5) over the past 30 days. Scores for each item are summed to form the total scale score (range: 5–25). Previous research shows high internal consistency and external validity for the DQ5 (Batterham et al., 2016, 2018).

Higher scores on the aforementioned symptom scales represent greater symptom severity and all three scales displayed high internal consistency in the current study (GAD-7: $\alpha = 0.95$; PHQ-9: $\alpha = 0.93$; DQ5: $\alpha = 0.94$).

Help-seeking

Help-seeking attitudes were assessed using the adapted 10-item short form of the Attitudes Towards Seeking Professional Psychological Help scale (ATSPPH-SF) (Calear et al., 2014). The items assess attitudes towards seeking professional psychological help using a four-point Likert scale (disagree = 0 to agree = 3). Scores on the scale range from 0 to 30, with higher scores indicating more positive attitudes towards seeking professional help. An example item includes “If I was having personal or emotional problems, the first thing I would do is seek professional help”. The ATSPPH-SF has shown good psychometric properties in previous research (Calear et al., 2014; Elhai et al., 2008; Fischer & Farina, 1995), and displayed moderate internal consistency in the current study ($\alpha = 0.81$).

Stigma

We used a five-item version of the Social Distance Scale (Link et al., 1999) to measure stigmatising attitudes towards people with a mental illness. The question asks how willing respondents would be to do various actions, such as “Move next door to a person with a mental illness” or “Have someone with a mental illness marry into the family” (definitely willing = 1, definitely not willing = 4). A mean score was calculated so scores could range from 1 (low social distance) to 4 (high social distance). Previous research has found good internal consistency (0.75–0.90) using highly similar scales (Link et al., 2004), and the current study alpha was 0.94.

Personality

Extraversion and neuroticism were measured using the Big Five Inventory-10 (BFI-10) (Rammstedt, 2007). The scale comprises 10 statements for which the participant indicates how well each describes their personality. For example, “I see myself as someone who...is reserved” (disagree strongly = 1, agree strongly = 5). A mean score was calculated for each participant ranging from 1 to 5. Current study alphas

for extraversion (0.65) and neuroticism (0.70) were acceptable.

Data analyses

Descriptive statistics (means, standard deviations, percentages) were used to examine demographic, response and symptom variables. Correlations assessed the relationship between self-reported time use and rankings of factors affecting internet intervention use. Linear regressions were conducted to assess the role of demographic, time use and symptom variables in acceptance of internet interventions for mental health and likelihood of use. To analyse the qualitative responses, the first author inductively created a coding framework from the data, then the first and second author independently coded a random subset of 20% of the data using that framework, with inter-rater consistency of 86%. Discrepancies between coders were discussed and resolved and the coding framework updated. The first author coded the remainder of the data. Responses were coded into eight thematic categories (see below for further detail). Percentages of text responses falling into each category were reported.

Results

A total of 1094 participants completed the online survey; demographic characteristics and response variables are provided in Table 1. Participants were on average 46 years of age and 51% were women. Just under half (43%) had completed at least a Bachelor's degree. The mental health

symptom mean scores (PHQ-9, GAD-7 and DQ5) are reported in Table 1.

The relationship between self-reported time spent on activities and relative rankings of time and effort factors influencing acceptance of internet interventions for mental health were assessed with a series of bivariate correlations. Analyses revealed significant positive correlations between hours in paid employment and amount of time and effort as factors in online intervention use. Respondents who worked longer hours rated "the amount of time I have" ($r(1093) = .204, p < .001$) and "how much effort it takes" ($r(1093) = .084, p = .006$) as influential factors in their use of internet interventions. There were also significant negative correlations between the ranking of the time factor and amount of leisure time ($r(1093) = -.147, p < .001$), housework ($r(1093) = -.060, p = .046$) and sleep ($r(1093) = -.147, p < .001$), such that those with more leisure time, who spent more time doing housework, and reported sleeping more, ranked "the amount of time I have" as lower in importance.

A linear regression testing the role of time spent on activities (employment, leisure, caring duties, housework, sleep) in acceptance of internet interventions is presented in Table 2. Age, gender, depression symptoms, anxiety symptoms, psychological distress, help-seeking attitudes, stigma and personality variables were also included in the regression, based on previously established relationships with use of internet interventions. The strongest associations with acceptance were age, with younger age associated with higher acceptance, and help-seeking attitudes, with greater self-reported help-seeking attitudes associated with greater acceptance. However, even with age and help-seeking

Table 1. Participant demographic characteristics and response variables ($N = 1094$).

Characteristics		$n(\%)$; $M(SD)$
Age (years)		46.5 (18.06)
Gender	Male	529 (48.35%)
	Female	561 (51.28%)
	Other	4 (.37%)
Education	High/primary school	295 (26.97%)
	Certificate/diploma/associate degree	330 (30.17%)
	Bachelor degree	287 (26.23%)
	Postgraduate degree/diploma	182 (16.63%)
Language	English only	946 (86.47%)
	Other/English and another language	148 (13.53%)
Time use (hours/week)	Employment	22.63 (26.27)
	Leisure	28.73 (21.50)
	Child/other care	8.89 (17.19)
	Housework	19.59 (17.34)
	Sleep	46.95 (19.13)
Acceptance	UTAUT	2.75 (1.07) ^a
Likelihood	Likelihood of use scale	3.02 (1.01)
Factors impacting use (% ranked in top 5)	The effort it takes	32.27%
	The time I have	29.34%
Symptom measures	PHQ-9	6.84 (6.95)
	GAD-7	5.27 (5.94)
	DQ5	10.35 (5.46)
Help-seeking attitudes	ATSPPH-SF	16.22 (5.50)
Stigma	Social Distance Scale	2.17 (.77)
Personality	Extroversion	2.74 (.97)
	Neuroticism	2.94 (1.05)

UTAUT: Unified Theory of Acceptance and Use of Technology (acceptance subscale); PHQ-9: Patient Health Questionnaire-9 depression score; GAD-7: Generalised Anxiety Disorder-7 anxiety score; DQ5: Distress Questionnaire-5; ATSPPH-SF: Attitudes Towards Seeking Professional Psychological Help short form scale.

^a $N = 1093$.

Table 2. Linear regression model of predictors for acceptance of internet-based interventions for mental health ($N = 1089$)^a.

Independent variable	Estimate B (95% CI)	p
Age (years)	-.016 (-.020, -.012)	<.001*
Gender	.105 (-.024, .234)	.110
Time use (hours/week)		
Employment	.005 (.002, .007)	.003*
Leisure	-.002 (-.006, .001)	.171
Child/other care	.002 (-.002, .006)	.442
Housework	.000 (-.004, .004)	.992
Sleep	.000 (-.004, .004)	.989
Symptom measures		
PHQ-9	-.011 (-.030, .008)	.262
GAD-7	.004 (-.021, .029)	.764
DQ5	.021 (-.005, .048)	.115
Help-seeking attitudes		
ATSPPH	.024 (.013, .036)	<.001*
Stigma	-.040 (-.125, .045)	.354
Personality		
Extroversion	.011 (-.055, .076)	.747
Neuroticism	-.040 (-.117, .038)	.318

UTAUT: Unified Theory of Acceptance and Use of Technology (acceptance subscale); PHQ-9: Patient Health Questionnaire-9 depression score; GAD-7: Generalised Anxiety Disorder-7 anxiety score; DQ5: Distress Questionnaire-5; ATSPPH-SF: Attitudes Towards Seeking Professional Psychological Help short form scale.

* $p < .05$.

^aExcluding $n = 4$ other responses.

attitudes in the regression equation, hours spent in employment was a significant positive predictor of acceptance of online interventions for mental health, with those working longer hours more likely to report higher acceptability of internet interventions. The analysis suggests that working 20 additional hours would be associated with a 0.1 increase on the combined acceptance scale (measured 1–5). No symptom or personality measures were significantly associated with acceptance of internet interventions.

A second linear regression was conducted using the same set of variables to examine predictors of likelihood of using internet interventions for mental health. The findings revealed a very similar pattern of results for likelihood as for acceptance, with age ($B = -.013$, 95% CIs [-.017, -.008], $p < .001$) and help-seeking attitudes ($B = .023$, 95% CIs [.012, .034], $p < .001$) significantly associated with likelihood of use. In this analysis, employment hours ($B = .003$, 95% CIs [.000, .006], $p = .058$) did not have a significant association with likelihood of using internet interventions.

Responses to the open-ended question examining what people mean by “lack of time” were coded into eight thematic categories: time scarcity (they actually don’t have time), excuse (they do not want to find the time/are not motivated or interested/don’t prioritise their mental health), efficacy (they don’t think it would help/won’t work), avoidance (they are scared/in denial/embarrassed), technological issues (they can’t use the technology/don’t understand the technology), don’t know (respondent doesn’t know what they mean) and other. Only 4.1% of respondents ($n = 45$) did not answer the question. Of those that did respond ($n = 1049$), 37.8% of respondents reported that they thought the statement “lack of time” was an excuse to not engage in the intervention, with text responses including “not interested in doing it”, “don’t want to spend that time”, “they’re not committed” and “laziness”. Only 30.1% of respondents thought that this statement actually reflected time scarcity, with responses such as “too busy” and “life gets in the way”. Other reasons respondents suggested included concerns with the technology at 7.1% (“they don’t trust someone they don’t see”, “lack of confidence using technology”), avoidance or embarrassment at 6.2% (“it

would make them feel uncomfortable”, “they are scared”) and a lack of understanding of the intervention or its efficacy at 3.7% (“they are not convinced”, “not knowing how long it would take”, “unsure about the process”).

Discussion

The current study sought to provide insight into “lack of time” as a common reason provided by potential users for not engaging with internet interventions for mental health. Findings indicated that participants who worked more hours and had fewer leisure hours prioritised their time as a factor in the use of internet interventions. However, time scarcity was not a driver of acceptability or likelihood of use of internet interventions for mental health, with leisure time not associated with acceptability or likelihood. Working hours showed a small but significant positive association, such that those working longer hours reported greater acceptability (but not likelihood of use of) internet interventions, controlling for other factors. This reflects previous findings that being employed is associated with greater uptake of internet interventions (Graham et al., 2018; Gunn et al., 2018; Kannisto et al., 2017) and extends this finding to include the number of hours worked. This finding may reflect that those working longer hours may find it difficult to access traditional in-person services during business hours and provides further support for the flexibility provided by internet interventions.

The finding that number of leisure hours was not associated with acceptance or likelihood of internet intervention use suggests that “lack of time” as a reason for non-use (Beatty & Binnion, 2016; Borghouts et al., 2021; Crisp & Griffiths, 2014; Eccles et al., 2021; Wang et al., 2016) may not reflect actual time scarcity. Responses to the qualitative question supported this inference, with more than a third of respondents indicating that “I don’t have time” may actually reflect a lack of prioritisation, motivation, or interest, and with only 30% thinking that this reflected actual time scarcity. This suggests that future research is needed to explore the reasons provided by users for non-engagement

in more depth, rather than considering them at face value. The qualitative findings suggest that many people may use this rationale to conceal other concerns about engaging in internet interventions such as prioritisation, avoidance and technology-related issues, which have been identified in other research as potential drivers (Crisp & Griffiths, 2014).

The strongest predictors of acceptability of internet interventions for mental health were age and help-seeking attitudes, with older age and poorer help-seeking attitudes associated with lower acceptability. These factors have similarly been identified as drivers in previous research (Borghouts et al., 2021). This age-related hesitancy to use internet interventions suggests there is a need to consider how to engage older adults with digital interventions, as although many older people are highly active online and skilled in using digital technology, age persists as a key predictor of use. Help-seeking attitude is a modifiable factor identified as important in the use of internet interventions in the current study, and is consistent with previous research that has also identified poor help-seeking attitudes (Gulliver et al., 2021) as a factor in acceptability of internet interventions for mental health. More positive attitudes towards help-seeking could reflect a general openness to psychological interventions being effective and a willingness to take steps to improve mental health. This finding emphasises the importance of improving help-seeking attitudes in the community as another potential avenue to increase internet intervention uptake. However, greater desire for social distance was not associated with acceptance or likelihood of use. Although this finding suggests stigma may be less relevant to use of internet interventions than face-to-face services, it is possible that other forms of stigmatising attitudes may influence online help seeking behaviour (Lamela et al., 2020).

Several targets for improving uptake of internet interventions for mental health emerge from this research. As previously discussed (Borghouts et al., 2021), tailoring program features may enhance uptake; in particular, the current study suggests that time-poor populations prioritise time and effort-saving interventions, so clearly delineating briefer intervention options may be useful in reaching this group. The association between work hours and acceptability also suggests that while embedding internet interventions into workplaces may be important, we should consider delivering mental health interventions through unemployment/social services and community services for people not in the workforce, such as students, retirees and stay-at-home parents (e.g. universities, aged care). These groups (particularly unemployed, new parents) may be particularly at risk of mental ill health and be less likely to engage in interventions, so identifying opportunities for intervention at critical timepoints across a range of community settings may increase the uptake of interventions and lead to reductions in the burden of mental illness in vulnerable groups. However, outside the peripartum and tertiary student literature, there are limited trials investigating the effectiveness and implementation of interventions for these groups within community settings. Finally, adopting strategies used by healthy eating and exercise interventions to address similar

perceived (though not necessarily accurate) time scarcity may provide means of improving uptake for internet interventions for mental health, such as highlighting brief intervention options (Pelletier & Laska, 2012), tailoring interventions (Muller-Riemenschneider et al., 2008), motivational interviewing (Samdal et al., 2017) and self-monitoring (Knittle et al., 2018).

Limitations

This study used self-reported time activity assessments (which may reflect bias in perceptions) and necessarily simplified activity categories, as compared with diary data; however, there is evidence (Siminski, 2006) that this type of temporal reporting is generally accurate. The data were also collected during the first year of the COVID-19 pandemic and as such both time use and need for mental health support could have been different from usual, although the data collection occurred during a particularly low period of infection rates in Australia. While symptom features were assessed (and found not to be a predictor of acceptability), self-awareness of need of mental health support is distinct and could also be assessed as a potential predictor. It is also plausible that mental health symptoms may have moderated the relationship between time and acceptance or likelihood of use of internet interventions; however, as no *a priori* hypothesis was in place regarding such complex interactions, further research may be required to better understand potential interactions between drivers of uptake. Finally, the effects identified, particularly with respect to employment hours, were very small, which suggests that other unmeasured factors may also influence likelihood of use of internet interventions.

Conclusion

The current analysis found that time scarcity did not predict acceptability or likelihood of using internet interventions for mental health, with number of leisure hours unrelated and number of working hours positively related to acceptance of internet interventions. Qualitative responses suggested the “lack of time” rationale may mask other reasons for lack of uptake such as prioritisation, avoidance and technology issues. Further understanding of time availability is needed, and pathways to improve uptake such as program tailoring, targeting of non-working populations and adopting paradigms from other health promotion activities may be warranted.

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