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New Home, New You: A retrospective mixed-methods evaluation of a health-related behavioural intervention programme supporting social housing tenants

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1 **Title:** New Home, New You: A retrospective mixed-methods evaluation of a health-
2 related behavioural intervention programme supporting social housing tenants.

3 **Short title:** A health-related behavioural intervention for social housing tenants.

4 **Abstract**

5 **Background:** Social housing tenants are at greater risk of engaging in unhealthy
6 behaviours than the general population. Housing association employees are in an
7 ideal position to contribute positively to their tenants' health. 'New Home, New You'
8 (NHNY) is a joint venture between a social housing association, a city council and a
9 community healthcare provider in the South West of England. It was designed with the
10 aim of improving the health and wellbeing of social housing tenants.

11 **Objectives:** The aim of this retrospective evaluation was to establish whether social
12 housing tenants were benefiting from this health-related behavioural intervention in
13 terms of their mental wellbeing and health-related behaviours.

14 **Methods:** This was a mixed methods evaluation. The outcome evaluation was a
15 secondary analysis of quantitative data collected during the NHNY project. The
16 process of delivering and receiving the intervention was evaluated using qualitative,
17 semi-structured interviews with housing officers and tenants who had participated
18 in the programme. The development of the intervention was evaluated through a
19 focus group and additional semi-structured interviews with key
20 stakeholders. Quantitative data were analysed using the Statistical Package for the
21 Social Sciences. Qualitative interviews were analysed using thematic analysis.

22 **Results:** Six key stakeholders and a total of seven housing officers from several teams
23 and seven tenants were interviewed. Of the 1016 tenants who were invited to
24 participate in NHNY, 226 enrolled in the programme. For participating tenants, the
25 scope for health-related behaviour change was greatest in relation to eating and

1 smoking. Small positive statistically significant changes in mental health were found
2 between the six to the 12-month mean score and between the baseline and the 12-
3 month score.

4 **Conclusions:** The findings indicate that NHNY may have been beneficial for some
5 participating tenants. Housing officers can have a significant role in promoting health
6 messages and embedding behaviour change among their tenants. Although the
7 programme was implemented as a service improvement rather than a controlled trial
8 and focused on a particular intervention and geographical area, other housing
9 associations may find this evaluation useful for considering whether to adopt some of
10 the principles applied in NHNY in other settings.

11 **Keywords:** housing, social housing, adult, health, mental health

12 **Patient or Public Contribution:** A social housing tenant representative provided input
13 on the methodology and methods used to evaluate NHNY, as well as the information
14 sheet.

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1 **New Home, New You: A retrospective mixed-methods evaluation of a health-**
2 **related behavioural intervention programme supporting social housing tenants.**

3 **Introduction**

4 Health outcomes are strongly related to the conditions in which people are born, grow,
5 live, work and age.¹ Evidence shows that people from low income groups and those
6 residing in deprived areas are more likely to experience poor health outcomes and
7 have lower life expectancy.^{2,3} For example, in a large US study which analysed data
8 on income and mortality from 1999 through 2014, the gap in life expectancy between
9 the richest 1% and poorest 1% of individuals was 14.6 years for males and 10.1 years
10 for females.⁴ A social gradient in health can also be seen for health-related behaviours,
11 with people of lower socioeconomic status (SES) being more likely to eat unhealthily,
12 be sedentary and smoke, compared with those of higher SES.² Furthermore, although
13 there has been a general increase in prevalence of poor mental health, those of lower
14 SES are disproportionately affected.⁵

15 Social housing tenants are more likely to have lower SES and to report financial
16 hardship, therefore being made more likely due to the social determinants of health to
17 engage in unhealthy behaviours than the general population.⁶ It has been
18 demonstrated that they have higher levels of chronic conditions and health risk factors,
19 including smoking and sedentary lifestyles, compared with those living in other forms
20 of housing.⁷ In addition, they are 1.5 times more likely to experience poor mental
21 health.⁸ Both physical and mental health are important to overall wellbeing, while the
22 effect of wellbeing on health is substantial and comparable to other risk factors such
23 as unhealthy diet.⁹

1 Given the potential benefits that health-related behaviour changes can bring to
2 individual health and public health, it is no surprise that health research devotes
3 considerable time to identifying effective behavioural interventions.² Considering the
4 morbidity and mortality associated with chronic health conditions, the importance of
5 addressing modifiable health-related behaviours in high risk populations has been
6 highlighted.⁶ Promoting behaviour change among people at the lower spectrum of
7 income is considered as a major means of achieving a reduction in health inequalities.²

8 Although limited by its observational nature, previous research has identified an
9 association between housing, the built environment and aspects of mental health and
10 wellbeing. Housing associations can contribute substantially to the health of their
11 tenants.¹⁰ There are various ways in which housing can impact upon wellbeing, for
12 example, through providing a property in good material condition, or through providing
13 a trusted, central organisation which a tenant can approach if they need help, advice
14 or support. Assured tenancy with a social landlord can also give people new hope and
15 the opportunity to focus on improving their health through changing their health-related
16 behaviours. People in the housing provider workforce, especially those supporting
17 people living in social housing, have opportunities to speak with new and current
18 tenants about their health and wellbeing and support them to make behavioural
19 changes.¹¹ Although, there is some evidence to suggest that gaining a tenancy in
20 affordable and appropriate accommodation has a positive impact on health and
21 wellbeing, this association is complex.¹² This may reflect both the limitations of current
22 evidence and the complexity of the relationships between housing and wellbeing for
23 vulnerable people with complex needs.¹² To date there is little academic literature to
24 evidence the impact of public health intervention in social housing settings¹² and a
25 paucity of research specific to residents of social housing.⁶ An evidence review on

1 housing associations and housing interventions¹⁰ concluded that there is a need for
2 “evidence of the health and wellbeing impacts of housing associations’ community-
3 centred work to be produced and published” to develop the evidence base in this field.
4 While there are many health-related behaviours that influence a person’s health and
5 wellbeing, including sleep and social contact, the ‘One You’ campaign¹³ focuses on
6 the four behaviours of exercise, diet, drinking (alcohol) and smoking, for which there
7 is robust evidence that they influence health outcomes and people’s wellbeing.
8 Evidence demonstrates that people who are involved in decisions about their health
9 are more satisfied with the services they receive and feel that the decisions made were
10 the most appropriate for their circumstances.¹⁴ Thus, involving individuals in decisions
11 about their health can ensure that people make informed decisions about their
12 behaviours.

13 Plymouth Community Homes (PCH) is the largest social housing landlord in Plymouth
14 city and provide homes to over 35,000 people in the area. ‘New Home, New You’
15 (NHNY) is a joint venture between PCH, Plymouth City Council, and Livewell
16 Southwest. The programme has been designed with the aim of improving the health
17 and wellbeing of PCH customers. Applicants for PCH properties will have been waiting
18 for a suitable home for any number of years or months. Often those waiting will have
19 been living in properties that are unsuitable for them, such as being overcrowded, not
20 adapted for their disabilities or even with no home at all. Being given a home for life
21 that meets people’s needs is a good opportunity for them to decide to make other
22 positive changes to their lives. Recognising that housing association employees have
23 a unique role in engaging with people at this moment in their lives,¹¹ there was an
24 opportunity to assist with the city-wide health and wellbeing agenda by ‘Making Every
25 Contact Count (MECC)’^{15,16} and training PCH staff to provide them with the tools to

1 help people make those changes. Thus, the NHNY project was established. This
2 approach aligns with Ottawa Charter's principles of Health Promotion, namely
3 strengthening community actions and developing personal skills.¹⁷ The project
4 supports new tenants and transferring tenants to consider and achieve self-set health
5 and wellbeing goals, through interaction with suitably trained housing officers.

6 **Aim**

7 The aim of this evaluation was to establish whether social housing tenants were
8 benefiting from a health-related behavioural intervention in terms of their mental
9 wellbeing and health-related behaviours (moving, smoking, alcohol consumption, and
10 eating) and whether the intervention was delivered and received as intended. As this
11 was a pilot intervention, the evaluation also investigated the wider strategic learning
12 about developing the intervention.

13 **Staff training**

14 All housing officers and some managerial staff at PCH received training as part of the
15 NHNY project. A three-hour training session was developed and delivered by Livewell
16 Southwest, six months before the launch of the NHNY project. The content was
17 specific to Plymouth city and the NHNY project, and aimed to develop skills in
18 motivational interviewing, health considerations and signposting to suitable support
19 services and opportunities in the community and to national resources. All housing
20 officers (including any new staff) received a refresher training session from Livewell
21 Southwest, 18 months after the first training (12 months after the launch of NHNY).
22 Internal staff training about the process and monitoring of NHNY was provided to all
23 staff before the start the NHNY project and ongoing support with administration was
24 given to staff throughout.

1 **Programme delivery and monitoring**

2 Participation in the programme was entirely voluntary and offered at the time of sign-
3 up to a standard tenancy (as distinct from housing with support, provided for older
4 people with additional needs). If tenants agreed to take part in the NHNY project, they
5 were offered a one-to-one conversation with their housing officer, who had received
6 the health and wellbeing-related training.

7 Prior to this meeting, their current health and wellbeing were assessed using two
8 questionnaires. The two data collection tools used were the Short Warwick-Edinburgh
9 Mental Wellbeing Scale (SWEMWBS)¹⁸⁻²¹ and the 'How Are You' (HAY) quiz.²² The
10 housing officer then explored with the new resident whether there is anything they
11 would like to improve in relation to smoking, diet, physical activity, alcohol consumption
12 and/or mental wellbeing and if so, provided the tenant with support to achieve it using
13 goal setting and motivational interviewing. Thereafter, the housing officer suggested
14 ways to improve health and wellbeing. They also signposted people to appropriate
15 organisations for help and advice relating to their goals.

16 Tenants also received a welcome pack upon moving into their new home. In addition
17 to the useful household items included in PCH usual welcome pack (pack of tea,
18 coffee, tea-cloth and other items), NHNY participants also received wellbeing-related
19 items such as toothbrushes and toothpaste, vouchers for replacing smoking with e-
20 cigarettes (where relevant), along with information about health and wellbeing
21 services. In addition to this, participating tenants received a fortnightly, free, home-
22 delivered bag of fresh vegetables for three months. PCH also provided free cookery
23 sessions for those who wish to learn how to cook healthy meals using the vegetables
24 provided as part of the project. The housing officer then met with the tenant at one

1 month and after six months and then visited or telephoned them at twelve months for
2 a catch up and to complete the two questionnaires again.

3 **Methodology**

4 Theoretical framework

5
6 The programme theory for NHNY draws upon the 'behaviour system' of 'capability,
7 opportunity and motivation'²³ and involves:

8

- 9 • Education (provision of information to improve capability and motivation)
- 10 • Persuasion (motivational interviewing to increase motivation)
- 11 • Incentivisation (enhanced 'Welcome Pack' on moving in and fortnightly
12 vegetable bag delivery to improve motivation)
- 13 • Training (cooking lessons to improve capability)
- 14 • Enablement (access to resources to improve capability, motivation and
15 opportunity).

16

17 **Design**

18

19 The University of Plymouth was asked to evaluate the impact of the intervention
20 retrospectively. This was a mixed methods study design, which included a quantitative
21 and qualitative methodology.

22

23 The three aspects of the evaluation were:

24

25 1. Outcome evaluation:

1 This was a retrospective evaluation, which analysed data collected during the NHNY
2 project. All analysed data had already been collected and were provided by PCH,
3 following the signing of an agreement policy between the University of Plymouth and
4 PCH. The University was not involved in the choice of the NHNY data collection tools.
5 Consent to participate and share data anonymously in any written report was gathered
6 prior to the time of data collection by the housing officer. It was agreed that all data
7 would be held securely and kept in line with the PCH data storage and protection
8 policies and that they would be used to examine the impact of the project.

9 Participants in this dataset signed up to NHNY between the start of the programme
10 (23rd October 2017) and 31st December 2018. The sample consists of all NHNY
11 participants who agreed to share their data.

12 The survey outcomes for health-related behaviours were gained through the
13 completion of the How Are You (HAY) quiz.²² The HAY quiz was chosen by NHNY
14 stakeholders because it functions as an interactive tool to promote improvement in
15 health-related behaviours for those completing it, as results are accompanied by
16 specific advice. It was also publicly available and easily accessible. The HAY quiz
17 enables the assessment of an individual's health-related behaviours with regard to
18 eating, alcohol, smoking and exercising.

19 The SWEMWBS was chosen in order to assess the mental wellbeing of participants
20 throughout the programme and it is a validated tool for measuring change in
21 intervention studies.¹⁸⁻²¹ The short version includes seven more rigorously tested
22 statements each of which describes a positive state of wellbeing and is rated by
23 participants on a five-point Likert scale.

24 2. Process evaluation:

25

1 The process of delivering and receiving the intervention was evaluated using
2 qualitative, semi-structured interviews with housing officers and tenants who had
3 participated in the programme. Interviews also touched upon reported behaviour
4 changes, as part of housing officers' and tenants' experiences of the programme.

5 Housing officers were invited after a presentation by the evaluation team at a staff
6 away day. Tenants were invited by their housing officer after completion of the
7 programme, as the evaluation was conducted retrospectively and researchers did not
8 have direct access to tenants' contact details. This was followed up by a telephone
9 conversation with the interviewer (ZA) to answer tenants' questions and arrange the
10 interview. Participants provided their informed consent in writing before participating.

11
12 The semi-structured interviews were conducted face-to-face (ZA). Housing officers
13 were interviewed in private meeting rooms on PCH premises during their working
14 day. Tenants were interviewed in their own home or at a suitable location on university
15 premises, at their preference. Tenants were provided with a £30 voucher in
16 recognition of their time spent participating in the evaluation. Topic guides were
17 developed to guide the interviews with tenants and housing officers. All interviews
18 were digitally recorded and transcribed by a staff member at PCH. Interviews took
19 place between October 2019 and February 2020, immediately pre COVID-19
20 pandemic.

21 3. Formative evaluation:

22
23 The development and implementation of the intervention was evaluated through a
24 focus group and additional semi-structured interviews with key stakeholders who had
25 been involved from the outset. Potential participants were invited by email and were
26 provided with a participant information sheet. Participants provided their informed

1 consent in writing before participating. The focus group (ZA,MP) and telephone
2 interviews (ZA) followed a qualitative approach, allowing participants to respond to
3 general questions, based on a topic guide, in their own words. The focus group and
4 interviews were digitally recorded using a digital audio recorder and transcribed by a
5 staff member at PCH following the signature of a confidentiality agreement.

6

7 **Data analysis**

8 The Statistical Package for the Social Sciences (SPSS, version 24) was used for the
9 analyses of quantitative data (MP). Continuous and categorical variables are
10 presented as means [(Standard Deviation (SD)] and frequencies (%), respectively.
11 Listwise deletion was applied for missing information. Normality of data was tested
12 before statistical tests were conducted. A p-value of less than 0.05 was considered to
13 suggest statistical significance.

14 Interview transcripts were uploaded onto NVivo 12 software. Data were analysed
15 using thematic analysis as described by Braun and Clarke.²⁴ Verbatim transcripts were
16 coded line-by-line and key themes and sub-themes were developed (ZA). Coding
17 decisions and themes were interrogated (ZA, MP, JS) and adjusted part way through
18 and at the end of analysis, thus ensuring rigour in analysis. All transcripts were
19 checked for accuracy against the original recordings and corrected where necessary
20 by ZA.

21 **Ethics**

22 A confidentiality agreement was put in place between the University of Plymouth and
23 PCH, prior to data sharing. Both the formative and process evaluation and outcome
24 evaluation were approved by the Faculty of Health and Human Sciences Research

1 Ethics Committee of the University of Plymouth (ref:18/19-1147 and ref: 13/14–240,
2 respectively).

3 **Findings**

4
5 A logic model showing all intended inputs, outputs and outcomes is shown below
6 (Figure 1). This was initially developed during the evaluation planning process and
7 was updated after taking into account information gathered from people who
8 participated in the evaluation.

9 *Please insert Figure 1 here*

10 **Outcome evaluation**

11 Figure 2 below presents the flow of participants during NHNY.

12 *Please insert Figure 2 here.*

13 Of the 1016 individuals who were invited to participate in NHNY (these would have
14 been named as main tenants), 226 signed up to the intervention, yielding a response
15 rate of 22.2%. Of these, 111 completed the intervention. Therefore, the programme
16 was limited in its reach and the retention of participants was low.

17 18 Demographic characteristics

19
20 The baseline results below (Table 1) and those at months 6 and 12, refer to the 111
21 participants who completed the NHNY programme. The column in grey shows the
22 characteristics of those who dropped out (n=115).

23
24 *Please insert Table 1 here*

25
26 The average age of the participants who completed the NHNY programme was 36.6
27 years, which was similar to the mean age for all eligible tenants (38.9 years) and

1 younger than the overall PCH tenant population (52.1 years). There were 35 (31.5%)
2 males and 76 females (68.5%), which is similar to the split of gender among those
3 who were invited (35.7% male: 63.2% female) and the overall PCH tenant population
4 (39.3% male; 60.5% female and 0.2% unknown). The majority of the participants
5 completing NHNY identified as White British (n=103, 92.8%), reflecting the low ethnic
6 diversity in the city (93%).²⁵ The percentage of White British among the overall PCH
7 tenant population was 78.4%. The age and ethnicity of those recruited to the
8 intervention may differ from the overall tenant population due to the inclusion of
9 tenants of housing with support within the overall figures.

10 Comparing people who completed the programme with those who dropped out, there
11 were no significant differences in proportions in terms of gender ($\chi^2 (1)=0.145$;
12 $p=0.703$), age ($\chi^2 (5)=3.106$; $p=0.684$), ethnic group ($p=0.609$ -*exact test*) or annual
13 household income ($\chi^2 (7)=5.615$; $p=0.585$).

14 15 HAY Quiz

16
17 Most frequently, participants who completed the programme scored category 2 at
18 baseline, which is considered 'low'. A Wilcoxon, two tailed test comparing the baseline
19 median score to the 6 month median score showed that there was a positive change
20 which was statistically significant ($Z=-2.915$, $p=0.004$). The same test indicated
21 significantly statistical significant positive changes between the 6 month median score
22 to the 12 month one ($Z= -3.663$; $p<0.001$) and between the baseline and the 12 month
23 score ($Z= -5.563$; $p<0.001$).

24 25 SWEMWBS

26

1 Baseline SWEMWBS results were recorded for 103 of the NHNY participants who
2 completed the programme, with an average (mean) transformed score of 23.28 (SD
3 4.23), which was not significantly different from the England average (mean 23.5; SD
4 3.90).¹⁸

5
6 A paired t-test (two tailed) showed that there was an increase of 0.001 in the score
7 at 6 months compared to the baseline, which was not statistically significant ($t_{95}=0.002$;
8 $p=0.999$). The same test indicated statistically significant positive changes between
9 the 6-month mean score (23.56) and the 12-month score (24.74) (mean difference: -
10 1.18; $t_{98}=-2.451$; $p=0.016$) and between the baseline (23.29) and the 12-month score
11 (24.51) (mean difference: -1.22; $t_{99}=-3.425$; $p=0.001$).

12
13 Process evaluation

14
15 A total of seven housing officers from several teams were interviewed. Seven tenants
16 also participated in interviews, including four women and three men. Their ages
17 ranged from early 30s to mid-60s and all identified as being of White British ethnicity.
18 Only one tenant interviewed was raising a young child.

19
20 The following key themes were identified in participants' interviews:

- 21 • Challenges faced by tenants
- 22 • Tenants' perceptions of the value of their tenancy
- 23 • Housing officers' perceptions of their roles
- 24 • Staff training
- 25 • Invitation to participate
- 26 • Implementation
- 27 • Effects on tenants

- 1 • Staff perceptions of programme delivery

2
3 This section summarises information about these themes and includes selected
4 quotes from a range of housing officers and tenants who were interviewed, for
5 illustration.

6 7 Challenges faced by tenants

8 Housing officers and tenants reported that PCH tenants may be experiencing financial
9 constraints, health issues, vulnerability or deprivation when they begin a tenancy.
10 Housing officers mentioned financial constraints, health inequality, vulnerability and
11 deprivation. Tenants often reported health issues.

12 *“We were pleased we had got in. We thought, we have got a roof over our heads, we*
13 *are alright, we can manage.” (Tenant)*

14 *“I think the biggest impact has been Universal Credit really... people can get*
15 *themselves into a lot of trouble with the rent really quickly, due to that. (Housing*
16 *Officer)*

17 18 19 Tenants’ perceptions of the value of their tenancy when facing challenges

20
21 Tenants often described how beneficial their new PCH tenancy was for their physical
22 and mental health and social circumstances, independent of their participation in
23 NHNY.

24 *“...I just thought when I moved in here it would be like moving into anywhere else I*
25 *moved into... but it’s not like that... they look after you. It makes you feel*
26 *safe...” (Tenant)*

27
28 Tenants linked these positive impacts to the way they were treated as tenants, the
29 assurance of a long-term tenancy and the suitability of their PCH home to their
30 needs. PCH tenancies had released tenants from difficult circumstances in their
31 previous accommodation, such as overcrowding or being confined to unsuitable
32 accommodation due to impairments.

1 Older tenants, with experience of renting privately, appreciated the security of feeling
2 settled in a 'forever home' (Tenant).

3 *"...in private [rented accommodation]...you can't make it your own home. Where we
4 can make this our own home." (Tenant)*

5

6 Housing officers' perceptions of their roles

7

8 Recognising the challenges and inequalities faced by their tenants, most housing
9 officers described having a role to play in helping tenants to manage or overcome
10 these issues, which were frequently linked to suitability for a tenancy or maintaining
11 the tenancy. The social work of a housing officer had actively drawn several people
12 to take up the role and was perceived to be valued by PCH. Some also talked about
13 the communication skills they used to tackle sensitive issues with tenants in the course
14 of their work.

15 *"...I work with social services, the schools, the police, we do a lot of joint working...
16 There is a lot of social work, I will find, within the [housing officer] role..." (Housing
17 Officer)*

18

19 Some took a holistic approach to supporting tenants, whilst recognising there were
20 limits to the time that could be committed and that some tenants will not engage.
21 Others felt that health and wellbeing was a different type of work, which they were not
22 qualified to do and which would be intrusive upon all tenants.

23 *"...there's always been about level of thinking about someone's health, but this has
24 moved beyond just that, this has moved to like, what can we do to really try and
25 improve someone's general wellness and how they get on with their lives..."
26 (Housing Officer)*

27

28 Staff training

29

30 Some housing officers felt their colleagues talked more about mental health and about
31 wanting to change their health-related behaviours since receiving NHNY

1 training and some reported making changes. Others were already aware of their less
2 healthy behaviours but had not been motivated by the training to make changes.

3 *"...it is an eye opener, to be perfectly honest it is, but have I actually done anything*
4 *about it? ... maybe, maybe somewhere in the back of my mind it's stuck with me."*
5 *(Housing Officer)*

6
7 Some housing officers had become aware of local health and wellbeing services to
8 which they could signpost tenants, because of the training. Some felt the focus on
9 motivational interviewing skills would help colleagues who were uncomfortable
10 broaching personal issues with tenants; though some of the housing officers
11 interviewed felt they personally had this ability already.

12 Invitation to participate

13
14 Housing officers reported that the sign-up process had changed because it was time-
15 consuming and housing officers were uncomfortable with asking people questions
16 about health-related behaviours. The process moved online, with tenants
17 completing the health-related behaviour questions after the first meeting.

18 *"...it's morphed so that we send out this email asking people if they are interested and*
19 *that has the links on it."* *(Housing Officer)*

20
21 Housing officers suggested tenants may decline because they are not
22 interested, or they have a lot to do linked to moving home. Housing officers indicated
23 that completing online quizzes may be a barrier affecting capability, especially for older
24 tenants and people who do not have digital devices.

25
26 Some housing officers felt there were no trends, demographically, in who joined the
27 programme. One housing officer suggested that tenants' intentions to change
28 their health-related behaviours may affect motivation to participate.

29 *"It depends on someone's time of life as well, doesn't it, whether they are wanting to*
30 *make a change or not, you know."* *(Housing Officer)*

31

1 Tenants whose lives were being impacted by chronic health conditions described the
2 programme as an opportunity to obtain support to improve their current health
3 situation.

4
5 Housing officers reported that, for some tenants, access to the vegetable bags helped
6 to mitigate food poverty. Most tenants interviewed signed up for the free vegetable
7 bag deliveries, with some signing up for this reason alone.

8 *“They just said you get a free pack of veg every couple of weeks, so I thought well,*
9 *why not? Don’t look a gift horse in the mouth.” (Tenant)*

10
11 Implementation

12
13 Some tenants and housing officers viewed the programme as providing people with
14 support to make changes, without receiving criticism. Housing officers found that over
15 several visits they could build up trust and create opportunities to go into more depth
16 with health-related conversations.

17
18 However, housing officers reported that completing the quizzes and
19 conversations was time-consuming alongside their usual procedures. *“...when we do*
20 *a pre-tenancy assessment it takes an hour at least, just to go through that, and then*
21 *to add the New Home New You onto that as well, it was quite a lot...” (Housing*
22 *Officer)*

23
24 Staff were aware that the programme tailed off and tenants lost interest when the free
25 vegetable bag deliveries stopped. Visits were sometimes replaced by
26 phone calls and it could be difficult to contact people for follow up.

27
28 They also felt that worry and poor mental health were barriers to participation.
29 *“...there are people that are very low mood and how you can support them is another*
30 *thing again really.” (Housing Officer)*

31
32 Staff suggestions included offering the programme to other tenant groups, increasing
33 staff interaction and tangible support and improving digital access. Tenants who

1 completed the programme were generally happy with it, suggesting only that the
2 vegetable bags could include more variety and extend for a longer time.

3
4 Effects on tenants

5
6 Most tenants reported greater awareness of the health impacts of their behaviours.

7 Some had changed their perceptions regarding their health and capability to influence
8 it. Several reported that they had lost weight and some had noticed existing health
9 conditions and pain had improved. Some felt their relatives
10 had also benefited. *“...because I’m cooking healthier, he’s eating healthier and he’s
11 quite happy, he’s lost a bit of weight as well and he’s quite pleased about it...”*

12 *(Tenant)*

13
14 All tenants interviewed appreciated the vegetable bags, which had led to sustained
15 healthier food purchases and meal preparation for those who felt their diet could be
16 improved. A few participants felt the programme had no impact other than being a
17 source of free vegetables.

18
19 Few tenants actively discussed mental health, though several described feeling more
20 settled since moving home. Tenants reported they had engaged in walking, exercise
21 classes or using a gym, which they had maintained afterwards. Some reported a
22 social or mental health benefit to getting outdoors however some were constrained
23 by physical health or finances.

24
25 Housing officers reported that participants who smoked were often interested in
26 stopping and they felt well prepared to assist with vouchers or referrals to smoking
27 cessation services. Tenants who were interviewed and who smoked, did not use these

1 services. Tenants and housing officers reported that drinking a lot of alcohol was
2 rare.

3 4 Staff perceptions of programme delivery

5
6 The housing officers who were most enthusiastic about the programme saw it as an
7 opportunity to establish rapport with tenants, to understand their world and pre-
8 empt problems. However, some housing officers felt hypocritical about promoting
9 health-related behaviours that they did not follow themselves.

10 Housing officers often reported that there was a fine balance between offering to
11 support tenants and intruding upon their personal lives.

12 *"...it also felt a little bit intrusive, because some of the questions are really personal,*
13 *particularly the mental health sort of side of things..." (Housing Officer)*

14
15 Housing officers frequently reported feeling uncomfortable about the language used
16 in the HAY quiz, to the extent that quizzes had become an online task. In addition,
17 they found that response options did not always reflect tenants' behaviour changes.

18
19 Most housing officers valued feedback on the programme's impact on tenants, as this
20 made them feel their efforts to engage tenants were worthwhile.

21 Formative evaluation

22
23 Six key stakeholders participated in describing the prerequisites which enabled them
24 to develop and implement the NHNY programme and the challenges encountered in
25 the early stages.

26 27 Connections, leadership and social values

28
29 The leaders described having a vision for improving health and reducing inequalities
30 to increase people's life chances. They had the power and influence to initiate
31 interventions, which enabled leaders to act upon organisational values of being *'more*

1 *than just bricks and mortar'* (Stakeholder). This was seen as pivotal to developing and
2 investing in the programme.

3 *"...it was always felt that when someone moves into a new home... it was the perfect*
4 *opportunity for them to make a change..."* (Stakeholder)

5
6 Challenges of defining and resourcing the programme

7
8 It took time to agree the scope of the programme and the roles of
9 different organisations, due to differing priorities around the programme's purpose,
10 emphasis and development process. This frustrated some stakeholders.

11 *"...there was a process at the start where we had lots of meetings...about what we*
12 *were going to do, was it ethical, would it do any harm and that seemed for us to drag*
13 *on quite some months..."* (Stakeholder)

14
15 The cost of vegetable bag deliveries, welcome packs, housing officer's time and the
16 time spent devising and delivering training, were absorbed by stakeholder
17 organisations.

18
19 Success of utilising the moment of change

20
21 NHNY was considered to enable staff to support tenants at a key moment of change,
22 making best use of existing staff contacts with new tenants. It was felt to have
23 potential to increase housing officers' capability and motivation to review their own
24 health-related behaviours.

25
26 Staff perceptions and motivation

27
28 Initially, stakeholders found that staff perceptions of their role and motivation to deliver
29 NHNY varied considerably. By seeking staff feedback and acting upon suggestions,
30 stakeholders adapted NHNY to make it more acceptable and feasible for housing
31 officers to deliver the programme.

32
33
34

1 Dedicating staff time

2

3 Allowing time for staff training, engaging tenants and delivering NHNY appeared to be
4 critical to programme delivery but also at a premium, particularly for initial staff
5 training.

6 *“...a lot of praise has to go to the [external training] team...who did put together a*
7 *bespoke training programme for the housing officers.” (Stakeholder)*

8

9 Monitoring and recording participant data

10

11 Stakeholders had worked through numerous challenges around what to measure,
12 how to record data and managing the administrative burden of the
13 programme. Stakeholders decided to provide incentives (free vegetable bags) to
14 overcome possible barriers to participation linked to the formal consent process.

15

16 **Discussion**

17 Our findings indicate that although limited in its reach, NHNY may have been beneficial
18 for some participating tenants, possibly creating an opportunity and enhancing
19 capability for health-related behaviour change, particularly for participants who were
20 already internally motivated to change. The current evaluation has identified a number
21 of factors influencing participant engagement and acceptability as well as housing
22 officer engagement. Housing associations may adopt some of the principles applied
23 in NHNY in other settings to promote their tenants' wellbeing.

24 Our study has shown statistically significant improvements in some health outcomes
25 of some participating tenants. However, only 22.2% of tenants who were invited took
26 the opportunity to participate in the NHNY programme. Whilst staff did not report any
27 clear trends in their interview responses, some of the more engaged tenants who were
28 interviewed reported that significant pre-existing physical health issues had
29 contributed to their interest in participating in the programme. Of those who accepted

1 the invitation, approximately 49% completed the programme at 12 months. This is in
2 line with other research which demonstrated low retention rates with vulnerable
3 adults.²⁶ The timing and complexity of the NHNY sign-up process appeared to be a
4 barrier to participation for tenants. Proactive methods to contact participants (e.g. text
5 messaging) could help improve follow up rates.²⁶ More broadly, “a continuously
6 dynamic process of monitoring intervention progress and tailoring strategies to
7 particular circumstances”, has been recommended for maximising retention.^{26,27}

8 The mental wellbeing scores for NHNY participants compare well with the England
9 average,¹⁸ despite the recent adversity experienced by some tenants reported by
10 tenants and housing officers. Overall, there appears to be potential to improve equity
11 of access to support with mental health and health-related behaviour change by
12 adapting the programme design to enable people who are experiencing poorer mental
13 health or who are not ready to contemplate behaviour change to engage with support
14 from housing officers. It therefore appears prudent as per the principles of MECC,^{15,16}
15 to embed conversations about health in general housing officer activity, so that tenants
16 have opportunities to engage without having to formally contemplate and consent.
17 Given the complex interplay of factors affecting mental wellbeing, consideration should
18 be given to the ways in which housing associations can connect with external agencies
19 such as mental health support, the police and social services to provide such support
20 to their tenants.⁵

21 Given that participants frequently commented on the value they placed on the
22 vegetable bags, this was clearly a significant component of the NHNY intervention as
23 a whole. Interview data suggested this may have been beneficial to participants on
24 several levels, leading to sustained healthier food purchases and meal preparation for
25 those who felt their diets could be improved. Considering that lack of access to

1 affordable and nutritious foods are common barriers to healthy eating among tenants
2 in public housing,^{28,29} social housing providers should consider whether free vegetable
3 deliveries could form part of an organisation's existing support process for new tenants
4 experiencing food poverty, without obligation to sign up to a programme.

5 The evaluation showed that there was a statistically significant improvement in the
6 overall HAY quiz score over the course of the NHNY programme, for those who
7 completed the programme. When viewing individual changes in HAY score, an overall
8 improvement in individual participants' scores was seen in 43.9% of participants. The
9 finding that effects were not uniform across the participants is consistent with existing
10 literature. The scope for health-related behaviour change was greater in relation to
11 eating and smoking. Similarly, in a mixed-methods study involving public housing
12 residents, smoking among residents was found to be extremely high, while only 22%
13 and 29% of 88 of participants reported consuming more than one serving of fruit or
14 one serving of vegetables, respectively, per day.⁶ Considering that human self-
15 regulation draws on limited resources, interventions may be more effective when they
16 focus on one behaviour change at a time,² ideally the one chosen by the tenants
17 themselves.

18 There was also a statistically significant improvement in reported mental wellbeing
19 among participants by the end of the NHNY intervention. The Warwick Medical School
20 guidelines indicate that this change of 1.22 points is borderline clinically meaningful.
21 Although this positive small change could well be attributed to NHNY, we cannot
22 exclude the possibility that other factors contributed to this. Housing may facilitate
23 positive changes in the mental health of permanent supporting housing tenants.³⁰
24 However, in many cases, there is limited or lack of evidence of effect of housing
25 interventions on wellbeing and effects are not necessarily uniform across groups of

1 vulnerable people.¹² Some of the participants interviewed after the NHNY programme
2 described these positive feelings in relation to the sense of security and suitability that
3 their overall PCH tenancy provided. Owing to the design of the intervention, it is not
4 possible to ascertain the extent to which the NHNY programme contributed to the
5 positive outcome changes, independent/in addition to of this sense of security. A
6 project adopting a randomised controlled design would provide the strongest evidence
7 that improvement in outcomes were attributed to the intervention, although it is
8 recognised this design is difficult to achieve for community-based health promotion
9 interventions.

10 Owing to being landlords, housing associations could reach people that public health
11 interventions may not otherwise reach.¹⁰ As was the case with NHNY, housing officers
12 can make important contributions to the wellbeing of their tenants and may be involved
13 in the delivery of services.¹⁰ PCH staff varied in their willingness to engage in
14 conversations about health with tenants. This appeared to relate to their varying
15 perceptions about the boundaries of the housing officer role and feeling a sense of
16 intrusion if asking about tenants' behaviours before establishing rapport and trust,
17 which is in line with perceived challenges among other housing associations' staff.¹¹
18 A cultural shift, whereby staff understand the benefits of such programmes, is
19 therefore particularly important in similar contexts.¹¹ For housing officers to reach their
20 full "public health potential", effective training (e.g. understanding of public health,
21 behaviour change techniques) must be provided.¹¹

22

23 The administration of the programme, which some housing officers perceived to be
24 onerous, and the language used in the HAY quiz, which made them feel
25 uncomfortable, appeared to de-motivate housing officers, even when they were

1 committed to the programme. Housing officers welcomed simplification of the
2 administrative process and separation of housing officers from quiz completion
3 process, which may reduce barriers to staff engagement. This highlights the need to
4 involve housing officers in programme development, implementation and monitoring.
5 Such an approach can also enhance a feeling of ownership and also help staff
6 understand a project.¹¹ The organisational commitment to NHNY appeared to assist
7 some housing officers to put a greater focus on supporting tenants' and communities'
8 wellbeing and opportunities, beyond tenancy maintenance. In fact, organisational
9 readiness is considered an important element for the implementation of MECC,¹¹ while
10 a strong leadership is imperative in bringing about a cultural change.

11 12 **Limitations**

13
14 Generalisability of results to highly urban areas with diverse ethnic groups may be
15 limited. Generalisability of the study is further attenuated by the low response rate and
16 subsequently small sample size. Owing to the design of the study, it is not possible to
17 ascertain through the evaluation the extent to which the NHNY programme contributed
18 to these changes. Although having a control group would have allowed us to control
19 for confounding factors, this was not possible due to the retrospective nature of the
20 evaluation and the design of the intervention. In addition, tenants' responses to the
21 HAY quiz and SWEMWBS, are at risk of bias, as commonly with other surveys,
22 participants may have been reluctant to be open with housing officers (or with
23 themselves) about their health-related behaviours.

24
25 The HAY quiz is not a validated tool for measuring behaviour change. Therefore, it is
26 difficult to infer what change is clinically meaningful. Furthermore, as also reported by

1 housing officers, the HAY quiz scoring system did not capture all changes that tenants
2 had made to their food consumption or smoking activity, such as switching to vaping.
3 Lastly, participating tenants were recruited to take part in interviews by their housing
4 officer after completing the programme. It is likely that housing officers would have
5 been more successful in recruiting tenants with whom they had built up a good rapport
6 during the programme. It is also possible that tenants who took part in the interviews
7 were those who were motivated to change their behaviour and may have provided
8 relatively positive feedback. Therefore, the tenants who were interviewed may not be
9 representative of all participating tenants and transferability of the findings to those
10 who dropped out or who were not successful in changing their behaviour may be
11 limited. Housing officers who were interviewed may also have had a more positive
12 perception of the programme than those who did not respond to the invitation and this
13 may have been reflected in their feedback.

14
15

Conclusions

16 The findings indicate that NHNY may have been beneficial for some participating
17 tenants. During the pilot phase, many tenants did not take up the opportunity or had
18 limited engagement in the programme. The NHNY pilot has generated key learning
19 points and presents an important opportunity to show how the intervention could be
20 improved. The programme has already been adapted to overcome some barriers to
21 participation and to extend tenants' opportunities to engage in health-related
22 conversations with housing officers and to access other support services. In particular,
23 to improve uptake, administrative processes have been streamlined. The programme
24 has become more goal-focused, with tenants defining their chosen goals prior to
25 receiving free vegetable bags, making it easier for staff to provide appropriate

1 signposting. In addition, measures have been put in place to monitor and evaluate
2 programme outcomes and effectiveness of the adaptations.

3 Housing officers can undoubtedly have a significant role in promoting health messages
4 and embedding behaviours changes among their tenants. Although this study focused
5 on a particular intervention and geographical area, other housing associations may
6 find this evaluation useful for considering whether to adopt some of the principles
7 applied in NHNY in other settings. Improved interventions that target health-related
8 behaviour change among social housing tenants are warranted.

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20 **Data availability:**

21 The data that support the findings of this study are available from the corresponding
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23

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3 **Conflicts of interest:**

4 No conflicts of interest to declare.

5 **Authors' contributions:**

6 Please see title page

7 **Figure legends**

8 **Figure 1.** New Home New You: A logic model

9 **Figure 2.** Participant flow diagram

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