

# Unveiling consumer preferences and intentions for cocreated features of a combined diet and physical activity app: a cross-sectional study in four European countries

Article

Supplemental Material

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#### **Supplementary materials**

### Example quotations from the co-creative work aligning with each of the questionnaire

items.

Table S1

#### Example suggestions from co-creation study to support app features named in the

questionnaire

| Questionnaire item   | Example quotation  |
|--|--|
| Suggest home workouts no   | Videos, preferably without the use of gym equipment as lots  |
| equipment required   | of people are unable to purchase gym equipment   |
| Exercise tips  | An app service that gives exercising tips  |
| Show your progress in graphs and charts                          | Have a chart of activities, or diet  |
| Suggest quick workouts   | Include 15 minutes of physical activity  |
| Healthy eating tips  | There would recipes and tips along the way   |
| Set regular goals  |  |
| Set goals for you  | Maybe you could set yourself goals with your diet that you would add into an app   |
| Planner and tracker of your eating and exercise                  | <i>Keeping track of food and exercise can become addictive and makes you want to do better!</i>  |
| Provide a step by step plan<br>for eating and exercise           | <i>Trained people who can make a plan for you, check up on you and encourage you</i>   |
| Set targets and offer feedback                                   | By using the app to monitor extra food consumed, exercise patterns and body stats, it can suggest exercise plans   |
| Motion sensor to detect your activity level                      | It can make tailored recommendations according to what goals you inputted  |
| Meal planning advice   | Monitor what you are eating throughout the dayit would create menus, recipes, shopping lists and meal planners   |
| Provide recipe suggestions<br>according to your shopping<br>list | Offer recipe guidance, and a selection of possible recipes<br>based on your shopping and the food stuffs that you can<br>input as having in the store cupboard |
| Personalised recipes   | Have recipes that feature these foods so you know what to<br>buy and how to prepare them   |
| Rewards for healthy eating                                       | Give up cake for a month and receive vouchers for free fruit   |
| Connected to running apps strava, fitbit                         | Link the app to Fitbit or similar so that it can measure and make tailored recommendations   |
| Provide advice based on your mood                                | There would be a section that allowed you to monitor how you are feeling day to day  |

| Reminders                  | Whilst shopping, if you are getting reminders, it's reinforcing the idea |
|----------------------------|--|
| Guidance from a            | Nutritionists, personal trainers, who would be there just to             |
| professional dietician/    | help with advice and new recipes   |
| fitness coach              |  |
| Goals set by a team of     | They are able to set goals, or have them set by a trainer                |
| mentors                    | which would be constantly changing and adapting to how                   |
| montors                    | they are progressing   |
| Mood detector suggest food | It would be useful for someone who is doing this on their                |
| and activity according to  | own and needs the support to continue                                    |
| your mood                  | own and needs the support to continue                                    |
| Provide location of local  | In conjunction with supermarkets would make it more                      |
| Provide location of local  | in conjunction with supermarkets would make it more                      |
|                            | ajjoraubie, using wonky veg eic.   |
| Get feedback from a team   | A plethora of health and fitness professionals all inputting             |
| of mentors                 | into your pursuit, supporting your journey                               |
| Reward for trying rather   | The person can try what they like after trying an activity,              |
| than succeeding            | then continue to take part or start the circuit again                    |
| Motivational messages      | The app could send you notifications with motivational                   |
|                            | pictures and quotes  |
| Sharing and exchanging     | If you wanted to cook a healthy meal but lacked                          |
| recipes                    | inspirationtake a photo of your fridgeother people                       |
|                            | could help, suggesting meals you could cook                              |
| Emotional/moral support    | It's a network to offer moral, emotional and physical                    |
| from a professional        | support  |
| Mindfulness, yoga and      | Mindfulness, breathing exercises and stretching exercises                |
| meditation short clips     | could be included  |
| Latest news and trends in  | Perhaps a newsletter linked to the appit could feature                   |
| eating and exercise        | interviews with people who have used it to get healthy                   |
| Connected to supermarket   | It could easily be incorporated into something like the Tesco            |
| for grocery shopping       | Clubcard, or Sainsbury's Nectar cardit would be one of                   |
|                            | their offerings to promote healthy eating                                |
| Scanner for supermarket    | I keep a log of all the food I huy along with Best Before                |
| receipts                   | Date How about an app which is a log of the same details                 |
| receipts                   | notifies you when the date is coming up?                                 |
| Match you to app users in  | The app could have some kind of community behing it which                |
| similar situation as you   | would allow you to connect with people in similar situations             |
| Community support          | Paopla most sugged when they have support from others                    |
| Community support          | <i>Consume tities and the support from others</i>                        |
| Competitions among users   | and friends  |
| Challenges with close ones | Weekly workshops with games and challenges, and prizes                   |
| Connected to close ones    | The app would geolocate you and link you with others                     |
|                            | nearby who are also looking to go out exercising                         |
| Connected to Facebook.     | There could be a private Facebook group, for example.                    |
|                            | $\mathbf{r}$   |
| Twitter, Instagram etc     | where you share personal stories and struggles                           |

#### Ranking the preferences of mobile app features based on consumers' attitudes

Table S2

#### Rank case analysis on mean score of attitudes towards mobile app features and the rewards for

#### app features.

|         | App features Rewards   |      |         |   |      |
|---------|--|------|---------|---|------|
| Ranking | Items  | М    | Ranking |   | М    |
| 1       | Suggest home workouts (no equipment required)                    | 5.98 | 1       | Gift vouchers   | 5.56 |
| 2       | Exercise tips  | 5.73 | 2       | Discount on your shopping                                       | 5.55 |
| 2       | Show your progress in graphs and charts                          | 5.73 | 3       | Prizes like books, watches, fitbit, sports equipment            | 5.45 |
| 4       | Suggest quick workouts   | 5.65 | 4       | Points that can be redeemed for experiences, shopping, days out | 5.40 |
| 5       | Healthy eating tips  | 5.63 | 5       | Points can be redeemed for charitable causes                    | 4.88 |
| 6       | Set regulatory goals   | 5.62 |         |   |      |
| 7       | Set goals for you  | 5.53 |         |   |      |
| 8       | Planner and tracker of your eating and exercise                  | 5.50 |         |   |      |
| 9       | Provide a step by step plan for eating and exercise              | 5.46 |         |   |      |
| 10      | Motion sensor (to detect your activity level)                    | 5.38 |         |   |      |
| 11      | Meal planning advice   | 5.36 |         |   |      |
| 12      | Provide recipe suggestions according to your shopping list       | 5.36 |         |   |      |
| 13      | Personalised recipes   | 5.19 |         |   |      |
| 14      | Rewards for healthy eating                                       | 4.92 |         |   |      |
| 15      | Connected to running apps (strava, fitbit)                       | 4.86 |         |   |      |
| 16      | Provide advice based on your mood                                | 4.85 |         |   |      |
| 17      | Reminders  | 4.83 |         |   |      |
| 18      | Guidance from a professional (dietician/<br>fitness coach)       | 4.77 |         |   |      |
| 19      | Mood detector (suggest food and activity according to your mood) | 4.67 |         |   |      |
| 20      | Provide location of local producers                              | 4.64 |         |   |      |
| 21      | Reward for trying rather than succeeding                         | 4.60 |         |   |      |
| 22      | Motivational messages  | 4.50 |         |   |      |
| 23      | Sharing and exchanging recipes                                   | 4.49 |         |   |      |
| 24      | Emotional/moral support from a professional                      | 4.36 |         |   |      |
| 25      | Mindfulness, yoga and meditation (short clips)                   | 4.30 |         |   |      |
| 26      | Latest news and trends in eating and exercise                    | 4.29 |         |   |      |
| 27      | Connected to supermarket (for grocery shopping)                  | 4.13 |         |   |      |

| 28 | Scanner for supermarket receipts            | 4.07 |  |  |
|----|---|------|--|--|
| 20 | Match you to app users in similar situation |      |  |  |
| 29 | as you                                      |      |  |  |
| 30 | Community support                           | 3.88 |  |  |
| 31 | Competitions among users                    | 3.62 |  |  |
| 32 | Challenges with close ones                  | 3.59 |  |  |
| 33 | Connected to close ones                     | 3.55 |  |  |
| 24 | Connected to Facebook, twitter, Instagram   | 2.72 |  |  |
| 54 | etc   |      |  |  |

#### **Correlations among variables**

We used correlation analyses (see Table S3) to understand the relationships between consumers' positive app feature attitudes with their intention to use and willingness to pay for the app and to explore how these variables are associated with differences in consumers' health status, motivational factors, and basic demographics and socioeconomic status (SES).

Table S3

|                    |     | 1     | 2    | 3    | 4    | 5     | 6     | 7     | 8     |
|--------------------|-----|-------|------|------|------|-------|-------|-------|-------|
| 1-Age              | r   | -     |      |      |      |       |       |       |       |
| -                  | sig |       |      |      |      |       |       |       |       |
| 2-Gender           | r   | .090  | -    |      |      |       |       |       |       |
|                    | sig | .197  |      |      |      |       |       |       |       |
| 3-Education        | r   | 041   | .049 | -    |      |       |       |       |       |
|                    | sig | .554  | .483 |      |      |       |       |       |       |
| 4-Income           | r   | .148  | .049 | .183 | -    |       |       |       |       |
|                    | sig | .038  | .496 | .010 |      |       |       |       |       |
| 5-BMI              | r   | .175  | .087 | 218  | 080  | -     |       |       |       |
|                    | sig | .013  | .219 | .002 | .270 |       |       |       |       |
| 6-Motivation-EAT   | r   | 043   | 075  | 135  | 021  | .173  | -     |       |       |
|                    | sig | .542  | .286 | .052 | .767 | .014  |       |       |       |
| 7-Barrier-EAT      | r   | 089   | .008 | 213  | 125  | .275  | .141  | -     |       |
|                    | sig | .202  | .909 | .002 | .078 | <.001 | .043  |       |       |
| 8- Solution -EAT   | r   | 068   | 151  | 088  | 130  | .003  | .626  | .116  | -     |
|                    | sig | .331  | .030 | .206 | .067 | .971  | <.001 | .096  |       |
| 9-Motivation-      | r   | 083   | 057  | 094  | .059 | .158  | .810  | .163  | .577  |
| PHYSIC             | sig | .237  | .414 | .177 | .411 | .024  | <.001 | .019  | <.001 |
| 10-Barrier-PHYSIC  | r   | 139   | 100  | 186  | 162  | .187  | .099  | .783  | .097  |
|                    | sig | .045  | .153 | .007 | .023 | .008  | .156  | <.001 | .166  |
| 11- Solution -     | r   | 111   | 102  | 066  | 072  | .065  | .509  | .053  | .707  |
| PHYSIC             | sig | .111  | .144 | .347 | .315 | .358  | <.001 | .449  | <.001 |
| 12-F1              | r   | 020   | 037  | .022 | 027  | .043  | .423  | .064  | .616  |
|                    | sig | .779  | .596 | .751 | .704 | .539  | <.001 | .360  | <.001 |
| 13-F2              | r   | 090   | 113  | 083  | .065 | .023  | .410  | .058  | .548  |
|                    | sig | .197  | .104 | .233 | .364 | .746  | <.001 | .408  | <.001 |
| 14-F3              | r   | 152   | 052  | 104  | 126  | .007  | .397  | 021   | .498  |
|                    | sig | .029  | .456 | .137 | .077 | .923  | <.001 | .767  | <.001 |
| 15-F4              | r   | 063   | 060  | 134  | 097  | .136  | .421  | .194  | .459  |
|                    | sig | .370  | .388 | .055 | .173 | .052  | <.001 | .005  | <.001 |
| 16- Health         | r   | 080   | 020  | 043  | .055 | .052  | .424  | .007  | .488  |
| Confidence         | sig | .250  | .775 | .537 | .440 | .460  | <.001 | .922  | <.001 |
| 17- Health         | r   | 118   | 073  | 100  | .007 | .106  | .446  | .016  | .548  |
| Maintenance        | sig | .091  | .297 | .151 | .923 | .131  | <.001 | .816  | <.001 |
| 18-Intention       | r   | 105   | 021  | 086  | .005 | .078  | .469  | .068  | .564  |
|                    | sig | .133  | .761 | .221 | .940 | .271  | <.001 | .330  | <.001 |
| 19-Pav             | r   | 088   | 020  | .040 | .053 | .075  | .156  | .029  | .233  |
|                    | sig | .211  | .773 | .572 | .465 | .291  | .026  | .679  | <.001 |
| 20-Health/Activity | r   | .093  | 055  | .132 | .146 | 264   | .268  | 477   | .241  |
|                    | sig | .182  | .433 | .059 | .039 | <.001 | <.001 | <.001 | <.001 |
| 21-Cluster         | r   | 244   | 117  | 136  | 139  | .017  | .427  | .107  | .597  |
| Membership         | sig | <.001 | .107 | .061 | .055 | .819  | <.001 | .141  | <.001 |

Correlations between variables

*Notes.* F1= Social support, connectedness and mindfulness; F2= Goal setting, tracking, and advice for

exercising; F3= Tips and advice for food and home workouts; F4= Digital score connection and mood management; Health Confidence = Perception of ability and confidence for healthy eating and exercise; Health Maintenance = Perception of ability to maintain healthy eating and exercise habits; Intention = Intention to use the app; Pay = Willingness to pay for the app.

Table S3 Continuance

| Correlations           | betw       | een var | iables |       |       |       |       |       |       |        |       |       |      |    |
|------------------------|------------|---------|--------|-------|-------|-------|-------|-------|-------|--------|-------|-------|------|----|
|                        |            | 9       | 10     | 11    | 12    | 13    | 14    | 15    | 16    | 17     | 18    | 19    | 20   | 21 |
| 9-                     | r          | -       |        |       |       |       |       |       |       |        |       |       |      |    |
| Motivation -<br>PHYSIC | sig        |         |        |       |       |       |       |       |       |        |       |       |      |    |
| 10-Barrier-            | r          | .069    | -      |       |       |       |       |       |       |        |       |       |      |    |
| PHYSIC                 | sig        | .321    |        |       |       |       |       |       |       |        |       |       |      |    |
| 11- Solution           | r          | .570    | .020   | -     |       |       |       |       |       |        |       |       |      |    |
| -PHYSIC                | sig        | <.001   | .770   |       |       |       |       |       |       |        |       |       |      |    |
| 12-F1                  | r          | .425    | .043   | .573  | -     |       |       |       |       |        |       |       |      |    |
|                        | sig        | <.001   | .538   | <.001 |       |       |       |       |       |        |       |       |      |    |
| 13-F2                  | r          | .435    | .024   | .475  | .626  | -     |       |       |       |        |       |       |      |    |
|                        | sig        | <.001   | .728   | <.001 | <.001 |       |       |       |       |        |       |       |      |    |
| 14-F3                  | r          | .329    | 024    | .393  | .546  | .653  | -     |       |       |        |       |       |      |    |
|                        | sig        | <.001   | .732   | <.001 | <.001 | <.001 |       |       |       |        |       |       |      |    |
| 15-F4                  | r          | .399    | .226   | .342  | .515  | .530  | .494  | -     |       |        |       |       |      |    |
|                        | sig        | <.001   | .001   | <.001 | <.001 | <.001 | <.001 |       |       |        |       |       |      |    |
| 16- Health             | r          | .447    | 045    | .385  | .476  | .633  | .433  | .406  | -     |        |       |       |      |    |
| Confidence             | sig        | <.001   | .525   | <.001 | <.001 | <.001 | <.001 | <.001 |       |        |       |       |      |    |
| 17- Health             | $r^{\Box}$ | .515    | 037    | .481  | .528  | .678  | .531  | .427  | .800  | -      |       |       |      |    |
| Maintenance            | sig        | <.001   | .594   | <.001 | <.001 | <.001 | <.001 | <.001 | <.001 |        |       |       |      |    |
| 18-Intention           | r          | .530    | .029   | .533  | .546  | .612  | .467  | .493  | .740  | .813   | -     |       |      |    |
|                        | sig        | <.001   | .683   | <.001 | <.001 | <.001 | <.001 | <.001 | <.001 | <.001  |       |       |      |    |
| 19-Pay                 | r          | .204    | .082   | .209  | .312  | .215  | .151  | .196  | .272  | .338** | .319  | -     |      |    |
| •                      | sig        | .003    | .242   | .003  | <.001 | .002  | .032  | .005  | <.001 | <.001  | <.001 |       |      |    |
| 20-Health /            | r          | .235    | 527    | .289  | .242  | .167  | .123  | 034   | .321  | .239** | .237  | .058  | -    |    |
| Activity               | sig        | <.001   | <.001  | <.001 | <.001 | .016  | .078  | .628  | <.001 | <.001  | <.001 | .410  |      |    |
| 21- Cluster            | r          | .467    | .023   | .551  | .581  | .620  | .569  | .522  | .572  | .635   | .726  | .320  | .224 | -  |
| Membership             | sig        | <.001   | .748   | <.001 | <.001 | <.001 | <.001 | <.001 | <.001 | <.001  | <.001 | <.001 | .002 |    |

Notes. F1= Social support, connectedness and mindfulness; F2= Goal setting, tracking, and advice for

exercising; F3= Tips and advice for food and home workouts; F4= Digital score connection and mood management; Health Confidence = Perception of ability and confidence for healthy eating and exercise; Health Maintenance = Perception of ability to maintain healthy eating and exercise habits; Intention = Intention to use the app; Pay = Willingness to pay for the app.

#### Predicting roles of factors of app feature attitudes on self-efficacy

To investigate whether factors of app feature attitudes predict 'perception of ability

and confidence for healthy eating and exercise' and 'perception of ability to maintain healthy

eating and exercise habits', we used two multiple regression analyses (see Table S4 and S5).

Table S4

Regression analysis summary for factors of app feature attitudes predicting perception of ability and confidence for healthy eating and exercise

|   | В     | SE    | β      | Sig   |
|---|-------|-------|--------|-------|
| (Constant)  | 3.099 | 1.575 |        | .051  |
| F1: Social support, connectedness and mindfulness     | .050  | .032  | .114   | .119  |
| F2: Goal setting, tracking, and advice for exercising | .245  | .037  | .529   | <.001 |
| F3: Tips and advice for food and home workouts        | 0005  | .043  | 009    | .900  |
| F4: Digital score connection and mood management      | .064  | .058  | .073   | .276  |
| $R^2$   |       |       | .415   |       |
| Adjusted $R^2$  |       |       | .403   | 001   |
| F   |       |       | 35.677 | <.001 |

Multiple regression analysis is used to test which one of the factors related to app features significantly predict participants' '*perception of ability and confidence for healthy eating and exercise*' (see Table S4). The results of the regression indicate that the only factor two ('*goal setting, tracking, and advice for exercising*') significantly predicts participants' '*perception of ability and confidence for healthy eating and exercise*' ( $\beta = .529, p < .001$ ).

Table S5

Regression analysis summary for factors of app features predicting perception of ability to maintain healthy

eating and exercise habits

|  | В    | SE   | β    | Sig   |  |
|--|------|------|------|-------|--|
| (Constant)                                 | 078  | .797 |      | .922  |  |
| F1: Social support, connectedness and      | .031 | .016 | .134 | .051  |  |
| mindfulness                                |      |      |      |       |  |
| F2: Goal setting, tracking, and advice for | .125 | .019 | .501 | <.001 |  |
| exercising                                 |      |      |      |       |  |
| F3: Tips and advice for food and home      | .035 | .022 | .112 | .109  |  |
| workouts                                   |      |      |      |       |  |

|                                       |      |      |        |       | 0 |  |
|---------------------------------------|------|------|--------|-------|---|--|
| F4: Digital score connection and mood | .017 | .029 | .037   | .560  |   |  |
| management                            |      |      |        |       |   |  |
| $\mathbf{P}^{2}$                      |      |      | 10.6   |       |   |  |
| $R^2$                                 |      |      | .486   |       |   |  |
| Adjusted $R^2$                        |      |      | .475   |       |   |  |
| F                                     |      |      | 47.666 | <.001 |   |  |
|                                       |      |      |        |       |   |  |

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Multiple regression analysis is used to test which one of the factors related to app features significantly predict participants' '*perception of ability to maintain healthy eating and exercise habits*' (see Table S5). The results of the regression indicate that the only factor two ('*goal setting, tracking, and advice for exercising*') significantly predicts participant's '*perception of ability to maintain healthy eating and exercise habits*' ( $\beta = .501, p < .001$ ).

#### Mediating impact of self-efficacy

We used Process Macro model 4 to investigate whether self-efficacy ('*perception of ability and confidence for healthy eating and exercise*' and '*perception of ability to maintain healthy eating and exercise habits*') mediates the relationship between intention to use and intention to pay for the app.



*Figure S1*. Direct and indirect effects of intention to use the app on willingness to pay for the app through perception of ability to maintain healthy eating and exercise habits; Health Maintenance = Perception of ability to maintain healthy eating and exercise habits.

The results indicate a significant mediating impact of 'perception of ability to maintain

healthy eating and exercise habits' on the link between intention to use the app and willingness to

9

pay for the app, B = .26, SE = .12, CI [.04, .53]. This means that higher intention to use the app is

associated with higher 'perception of ability to maintain healthy eating and exercise habits'

which in turn leads to higher willingness to pay for the app.



*Figure S2*. Direct and indirect effects of intention to use the app on willingness to pay for the app through perception of ability and confidence for healthy eating and exercise; Health Confidence = Perception of ability and confidence for healthy eating and exercise.

However, the results do not indicate a significant mediating impact of 'perception

of ability and confidence for healthy eating and exercise ' on the link between intention to use

app and willingness to pay for the app, B=.08, SE = .11, CI [-.14, .30].

#### Backward regression analyses for intention to use an app and willingness to pay for an

#### app

#### Table S6

Summary of backward stepwise regression analysis for variables predicting intention to use

| the app   |        |      |      |       |
|---|--------|------|------|-------|
| Predictor   | В      | SE B | β    | Sig   |
| Constant  | -2.950 | .589 |      | <.001 |
| Digital score connection and mood management                          | .084   | .025 | .153 | <.001 |
| Health Maintenance  | .690   | .060 | .574 | <.001 |
| Cluster Membership  | 2.222  | .361 | .307 | <.001 |
| Social support, connectedness and mindfulness $\times$ BMI            | .327   | .116 | .104 | .005  |
| Goal setting, tracking, and advice for exercising × Health Confidence | .664   | .176 | .319 | <.001 |
| Tips and advice for food and home workouts × Health Confidence        | 722    | .189 | 316  | <.001 |

| $R^2$          | .762   |       |
|----------------|--------|-------|
| Adjusted $R^2$ | .754   |       |
| F              | 98.274 | <.001 |

*Notes.* Health Confidence = Perception of ability and confidence for healthy eating and exercise; Health Maintenance = Perception of ability to maintain healthy eating and exercise habits

#### Table S7

#### Descriptive statistics of classification variables in Clusters 1 (Low Health App Users) and 2

(Motivated Health App Enthusiasts), and t test results for investigating differences between

the two clusters.

|                                    | Cluster 1 | (N=58) | Cluster 2 ( | (N=133) |         |       |             |
|------------------------------------|-----------|--------|-------------|---------|---------|-------|-------------|
| Variables                          | Cluster   | SD     | Cluster     | SD      | t       | Sig   | Effect size |
|                                    | centers   |        | centers     |         |         |       | $(\eta^2)$  |
| Demo/Geographic                    |           |        |             |         |         |       |             |
| Age                                | .390      | 1.009  | 144         | .969    | 3.463   | .001  | .069        |
| Gender                             | .216      | 1.033  | 037         | .981    | 1.619   | .107  | .016        |
| Education                          | .200      | 1.091  | 092         | .938    | 1.885   | .061  | .021        |
| Family status                      | .15598    | 1.038  | 026         | .968    | 1.171   | .243  | .008        |
| Number of households               | .263      | 1.122  | 102         | .909    | 2.378   | .018  | .033        |
| Income                             | .208      | 1.106  | 095         | .952    | 1.929   | .055  | .022        |
| Country                            | .145      | .866   | 158         | 1.038   | 1.956   | .052  | .023        |
| Health factors                     |           |        |             |         |         |       |             |
| Height                             | .168      | .970   | 017         | 1.029   | 1.172   | .243  | .008        |
| Weight                             | 006       | .529   | 030         | .377    | .358    | .721  | .0008       |
| BMI                                | .033      | 1.246  | .069        | .868    | 229     | .819  | .0003       |
| Health/Activity                    | 338       | .988   | .150        | .979    | -3.162  | .002  | .058        |
| Previous Experience/Knowledge      |           |        |             |         |         |       |             |
| Using app for healthy eating       | 607       | .860   | .240        | .928    | -5.931  | <.001 | .178        |
| Using app for physical activity    | 614       | .974   | .228        | .909    | -5.767  | <.001 | .170        |
| Matingtion bomions and solutions   |           |        |             |         |         |       |             |
| Motivation, barriers and solutions | 617       | 822    | 269         | 001     | 6 401   | < 001 | 0.206       |
| NOUVAUOI-EAT                       | 017       | .652   | .208        | .001    | -0.491  | <.001 | 0.200       |
| Solution EAT                       | 108       | 674    | .117        | .930    | -1.4/9  | .141  | 0.013       |
| Solution -EAT                      | 899       | .074   | .555        | .019    | -10.245 | <.001 | 0.393       |
| Motivation-PHYSIC                  | 084       | .842   | .309        | .881    | -7.250  | <.001 | 0.245       |
| Solution DUVSIC                    | .002      | 1.001  | .031        | .971    | 521     | ./40  | 0.0000      |
| Solution -PH I SIC                 | 040       | .001   | .500        | .057    | -9.087  | .000  | 0.328       |
| App Feature Attitude               | 0.64      | 510    | 205         | 0.40    | 0.000   | 001   |             |
| F1: Social support,                | 864       | .742   | .387        | .840    | -9.802  | <.001 | .372        |
| connectedness, and                 |           |        |             |         |         |       |             |
| mindfulness                        | 0.52      | 1.072  | 100         | (21     | 10.072  | 001   | 100         |
| F2: Goal setting, tracking, and    | 953       | 1.073  | .400        | .631    | -10.8/3 | <.001 | .422        |
| advice for exercising              | 072       | 1.024  | 271         | 705     | 0.524   | . 001 | 257         |
| F3: Tips and advice for food       | 8/3       | 1.034  | .3/1        | .725    | -9.524  | <.001 | .357        |
| and nome workouts                  | 901       | 024    | 202         | 970     | 9 405   | < 001 | 204         |
| and mood management                | 821       | .834   | .323        | .879    | -8.405  | <.001 | .304        |
|                                    |           |        |             |         |         |       |             |
| Rewards Ammae                      | 152       | 1 244  | 248         | 746     | 4 912   | < 001 | 125         |
| Rewards: vouchers                  | 452       | 1.244  | .248        | .740    | -4.812  | <.001 | .125        |
| Rewards: Prizes                    | 655       | 1.248  | .272        | ./2/    | -6.440  | <.001 | .204        |
| Rewards: Experience                | 485       | 1.140  | .223        | .846    | -4.768  | <.001 | .123        |
| Rewards: Discount                  | 529       | 1.208  | .249        | .747    | -5.430  | <.001 | .154        |
| Rewards: Charitable                | 491       | 1.150  | .210        | .861    | -4.654  | <.001 | .118        |

|                    |        |       |      |       |         |       | 11   |
|--------------------|--------|-------|------|-------|---------|-------|------|
| Health Confidence  | 819    | 1.066 | .400 | .667  | -9.583  | <.001 | .362 |
| Health Maintenance | 941    | 1.097 | .422 | .570  | -11.290 | <.001 | .441 |
| Use/Pay            |        |       |      |       |         |       |      |
| Intention          | -1.059 | .857  | .492 | .585  | -14.533 | <.001 | .566 |
| Pay                | 476    | .498  | .212 | 1.079 | -4.649  | <.001 | .117 |

*Note.* Analysis is done based on standardized (Z) scores. Country; Health/Activity = Healthy Lifestyle scale; Motivation-EAT=Motivation to eat healthily; Barrier-EAT = Barriers to eating healthily; Solution -EAT = Solutions to eating healthily; Motivation-PHYSIC= Motivation to do physical activity and exercise; Barrier -PHYSIC = Barriers to physical activity and exercise; Solution -PHYSIC = Solutions for physical activity/exercise; F1= Social support, connectedness and mindfulness; F2= Goal setting, tracking, and advice for exercising; F3= Tips and advice for food and home workouts; F4= Digital score connection and mood management; Health Confidence = Perception of ability and confidence for healthy eating and exercise; Health Maintenance = Perception of ability to maintain healthy eating and exercise habits; Intention = Intention to use the app; Pay = Willingness to pay for the app.

#### Table S8

Descriptive statistics of demographic/geographic variables and the questions related to using

apps for healthy eating and physical activity in Clusters 1 (Low Health App Users) and 2

(Motivated Health App Enthusiasts)

| Demographic/Geographic variables                             | Cluster |            |            |  |
|--|---------|------------|------------|--|
|  |         | 1          | 2          |  |
| Gender   |         |            |            |  |
| Female   |         | 24 (41.4%) | 70 (52.6%) |  |
| Male   |         | 33 (56.9%) | 63 (47.4%) |  |
| Other  |         | 1 (1.6%)   | 0 (0.0%)   |  |
|  | Total   | 58 (100%)  | 133 (100%) |  |
| Education  |         |            |            |  |
| Less than High School  |         | 1 (1.7%)   | 1 (0.8%)   |  |
| High School / GCSE   |         | 2 (3.4%)   | 12 (9%)    |  |
| A Levels   |         | 10 (17.2%) | 20 (15 %)  |  |
| Bachelors degree   |         | 17 (29.3%) | 54 (40.6%) |  |
| Masters degree   |         | 21 (36.2%) | 41 (30.8%) |  |
| Doctoral Degree  |         | 4 (6.9%)   | 4 (3 %)    |  |
| Other  |         | 3 (5.2%)   | 1 (0.8%)   |  |
|  | Total   | 58 (100%)  | 133 (100%) |  |
| Family status  |         |            |            |  |
| Single without child/children                                |         | 21 (36.2%) | 51 (38.3%) |  |
| Single with child/children from present or past relationship |         | 1 (1.7%)   | 10 (7.5%)  |  |
| Couple without child/children                                |         | 14 (24.1%) | 39 (29.3%) |  |
| Couple with child/children from present or past              |         | 22 (37.9%) | 33 (24.8%) |  |
| relationship   | Total   | 58 (100%)  | 133 (100%) |  |
| Country  |         |            |            |  |
| UK   |         | 8 (13.8%)  | 43 (32.3%) |  |
| Germany  |         | 16 (27.6%) | 36 (27.1%) |  |
| France   |         | 22 (37.9%) | 23 (17.3%) |  |
| Italy  |         | 12 (20.7%) | 31 (22.5%) |  |
|  | Total   | 62 (100%)  | 129 (100%) |  |

| What do you think about using an app for healthy eating?<br>I have never thought about using an app for that.<br>I have thought about using an app for that, but so far I<br>did not do it |       | 39 (67.2%)<br>8 (13.8%) | 19 (14.3%)<br>41 (30.8%) |
|--|-------|-------------------------|--------------------------|
| I have thought about using an app for that, but it is not<br>necessary for me to do it   |       | 3 (5.2%)                | 16 (12%)                 |
| I am currently using an app for that and intend to<br>continue to use it   |       | 1 (1.7%)                | 19 (14.3%)               |
| I have used an app for that, but I do not use it anymore.  |       | 7 (12.1%)               | 38 (28.6%)               |
|  | Total | 58 (100%)               | 133 (100%)               |
| What do you think about using an app to for physical activity and exercise?  |       |                         |                          |
| I have never thought about using an app for that.  |       | 27 (46.6%)              | 9 (6.8%)                 |
| I have thought about using an app for that, but so far I did not do it.  |       | 14 (24.1%)              | 38 (28.6%)               |
| I have thought about using an app for that, but it is not necessary for me to do it.   |       | 3 (5.2%)                | 9 (6.8%)                 |
| I am currently using an app for that and intend to continue to use it.   |       | 6 (10.3%)               | 34 (25.6%)               |
| I have used an app for that, but I do not use it anymore.  |       | 8 (13.8%)               | 43 (32.3%)               |
|  | Total | 58 (100%)               | 133 (100%)               |

# Exploring differences between countries in their attitude towards app features and intention to use.

Table S9

One-way ANOVA results to compare the intention to use and attitude towards app factors between countries

| Variables   | df     | F     | Sig    |
|---|--------|-------|--------|
| F1: Social support, connectedness and mindfulness | 3,206  | 3.158 | . 025  |
| F2: Goal setting, tracking, and advice for        | 3, 206 | 1.509 | .213   |
| exercising  |        |       |        |
| F3: Tips and advice for food and home workouts    | 3, 206 | 3.578 | .015   |
| F4: Digital score connection and mood             | 3,206  | 5.003 | < .001 |
| management  |        |       |        |
| Intention to use                                  | 3, 206 | 3.256 | .023   |
| Intention to use                                  | 3, 206 | 3.256 | .023   |

#### Measurements

#### App feature attitude

The attitude towards mobile app features scale (See Table S10) included 37 items. We told participants that we are in the process of designing an app to motivate people to eat healthily and exercise regularly. Hereafter, we asked them to rate the features of the app (See Table S10) according to how valuable they find them on a scale from 1 = has no value at all to 7 = extremely valuable. Items 27, 27A and 27B were removed from the analysis because of \_\_incomplete answers.

#### **Reward Attitude**

We asked participants, what form of rewards they would like to receive from a mobile

app about healthy food and exercising which provided rewards for achieving goals. In five

questions (See Table S10), we asked them to indicate their answers on a scale from 1=

*strongly disagree* to 7 = *strongly agree*.

#### Table S10

| Items of | f the | scales | App | feature | attitudes | and | Rewards | attitudes |
|----------|-------|--------|-----|---------|-----------|-----|---------|-----------|
|          |       |        |     |         |           |     |         |           |

| App feature attitudes                               | Rewards attitudes                                       |
|---|---|
| 1. Latest news and trends in eating and exercise    | 1. Gift vouchers  |
| 2. Exercise tips                                    | 2. Prizes like books, watches, fitbit, sports equipment |
| 3. Healthy eating tips                              | 3. Points that can be redeemed for experiences,         |
|   | shopping, days out                                      |
| 4. Meal planning advice                             | 4. Discount on your shopping                            |
| 5. Set regular goals (daily/weekly/monthly)         | 5. Points can be redeemed for charitable causes         |
| 6. Personalised recipes                             |   |
| 7. Provide a step by step plan for eating and       |   |
| exercise  |   |
| 8. Sharing and exchanging recipes                   |   |
| 9. Connected to Facebook, twitter, insta etc        |   |
| 10. Connected to close ones                         |   |
| 11. Community support                               |   |
| 12. Connected to supermarket (for grocery shopping) |   |
| 13. Provide recipe suggestions according to your    |   |
| shopping list                                       |   |
| 14. Provide location of local producers             |   |
| 15. Rewards for healthy eating                      |   |
| 16. Competitions among users                        |   |
| 17. Reminders                                       |   |
|   |   |

- 18. Planner and tracker of your eating and exercise
- 19. Show your progress in graphs and charts
- 20. Connected to running apps (strava, fitbit)
- 21. Provide advice based on your mood
- 22. Set goals for you
- 23. Match you to app users in similar situation as you
- 24. Motion sensor (to detect your activity level
- 25. Scanner for supermarket receipts
- 26. Mood detector (suggest food and activity according to your mood)
- 27. Set targets and offer feedback27A. Goals set by a team of mentors27B. Get feedback from a team of mentors
- 28. Suggest quick workouts
- 29. Suggest home workouts (no equipment required)
- 30. Mindfulness, yoga and meditation (short clips)
- 31. Reward for trying rather than succeeding
- 32. Guidance from a professional (dietician/ fitness coach)
- 33. Emotional/moral support from a professional
- 34. Motivational messages
- 35. Challenges with close ones

#### Self-efficacy for physical activity and healthy eating

We used two different measurements (see Table S11) to evaluate people's self-

efficacy regarding physical activity and healthy eating.

'Perception of ability and confidence for healthy eating and exercise'. We asked

participants what they thought about using the described mobile app to track their healthy

eating and exercising habits. We asked participants to answer four questions on a scale from

1= *strongly disagree* to 7 = *strongly agree*.

'Perception of ability to maintain healthy eating and exercise habits'. This is another

self-efficacy measurement that we used to evaluate the extent which participants agree that the app would help them to maintain healthy eating and physical activity. We asked participants to indicate their agreement with the statements on a scale from 1= *strongly disagree* to 7 = *strongly agree*.

*Items of the self-efficacy scales* 

| Perception of ability and confidence for healthy  | Perception of ability to maintain healthy eating and                                   |
|---|--|
| eating and exercise   | exercise habits  |
| 1. If I use an app with the above-mentioned characteristics, I will be able to exercise regularly in the next 12 weeks.   | 1. This app would help me to maintain healthy eating                                   |
| <ol> <li>If I use an app with the above-mentioned<br/>characteristics, I will be confident over the next<br/>12 weeks I could overcome obstacles that<br/>prevent me from exercising regularly.</li> <li>If I use an app with the above-mentioned<br/>characteristics, I will be able to eat healthily in<br/>the next 12 weeks.</li> </ol> | <ol> <li>This app would help me maintain physical<br/>activity and exercise</li> </ol> |
| 4. If I use an app with the above mentioned   |  |
| characteristics, I will be confident over the next  |  |
| 12 weeks I could overcome obstacles that  |  |
| prevent me from eating healthily.   |  |

Motivation to eat healthily and do physical activity (These scales are reported in Snuggs et

al. 2022)

In seventeen questions (see Table S12), we asked participants to indicate to what

extent the factors motivate them to pursue a healthy diet. Similarly, in fifteen questions (see

Table S12), we asked participants to indicate to what extent the factors motivate them to do

regular physical activity and exercises on a scale from 1= *strongly disagree* to 7 = *strongly* 

agree.

Table S12

Items of the scales motivation to eat healthily and do physical activity

| Mot | ivation to eat healthily                    | Motivation to do physical activity |   |  |  |  |
|-----|---|------------------------------------|---|--|--|--|
| 1.  | Encouragement from close ones               | 1.                                 | Encouragement from close ones               |  |  |  |
| 2.  | Support from close ones                     | 2.                                 | Support from close ones                     |  |  |  |
| 3.  | Pressure/ comments from close ones          | 3.                                 | Pressure/ comments from close ones          |  |  |  |
| 4.  | Enjoyment from eating healthy food          | 4.                                 | Enjoyment from physical activity/exercise   |  |  |  |
| 5.  | Looking fit                                 | 5.                                 | Looking fit                                 |  |  |  |
| 6.  | Weight loss                                 | 6.                                 | Weight loss                                 |  |  |  |
| 7.  | Impress others                              | 7.                                 | Impress others                              |  |  |  |
| 8.  | Feel healthy                                | 8.                                 | Feel healthy                                |  |  |  |
| 9.  | Constant reminders keep me motivated to eat | 9.                                 | Constant reminders keep me motivated to eat |  |  |  |
|     | healthily                                   |                                    | healthily                                   |  |  |  |
| 10. | Seeing and tracking progress                | 10.                                | Seeing and tracking progress                |  |  |  |
| 11. | Setting health goals for myself             | 11.                                | Setting health goals for myself             |  |  |  |
| 12. | Guilt after eating unhealthy food           | 12.                                | Guilt after eating unhealthy food           |  |  |  |
| 13. | Shame from current state of health          | 13.                                | Shame from current state of health          |  |  |  |
| 14. | Medical advice or llness                    | 14.                                | Medical advice or illness                   |  |  |  |

15. So that I can celebrate the results of exercising

- 16. Take care of my close ones
- 17. So that I can celebrate my success/result from

healthy eating

Barriers to eating healthily and do physical activity (These scales are reported in Snuggs et

al. 2022)

In fourteen questions (see Table S13), we asked participants to indicate the extent to

which the barriers hinder them from pursuing a healthy diet. Similarly, using the same

fourteen questions (see Table S13), we asked participants to indicate to what extent the

barriers hinder them from doing regular physical activity and exercises on a scale from 1=

*strongly disagree* to 7 = *strongly agree*.

Table S13

Items of the scales barriers to eating healthily and do physical activity

| Items of the barrier scales                      |
|--|
| 1.I don't have the time                          |
| 2.I don't have the money                         |
| 3.I think it takes too much effort o             |
| 4.I don't have the skills                        |
| 5.I lack self control                            |
| 6.I give in to temptations                       |
| 7.I don't have the support of people close to me |
| 8. I'm too stressed                              |
| 9.I am in a bad mood                             |
| 10. I lack a routine                             |
| 11. It is difficult to change my habits          |
| 12. I don't know how to go about it              |
| 13. Lack of professional guidance                |
| 14. I don't care about eating healthily          |
|  |

#### Solutions to eating healthily and do physical activity (These scales are reported in Snuggs et

al. 2022)

In nineteen questions (see Table S14), we asked participants to indicate how the

solutions help them have a sustainable healthy eating on a scale from 1= strongly disagree to

7 = strongly agree. Moreover, in twenty questions, we asked them to indicate how the

solutions help them have sustainable physical activity and exercises on a scale from 1=

17

*strongly disagree* to 7 = *strongly agree*.

Table S14

Items of the scales solutions to eating healthily and do physical activity

| Solutions to eating healthily                   | Solutions to do physical activity                |
|---|--|
| 1.Set small goals                               | 1.Set small goals                                |
| 2. Set realistic expectations                   | 2. Set realistic expectations                    |
| 3. Make flexible plans                          | 3. Make flexible plans                           |
| 4. Set regular goals (daily/weekly/monthly)     | 4. Set regular goals (daily/weekly/monthly)      |
| 5. Seek professional advice (dietician)         | 5. Seek professional advice (fitness coach)      |
| 6. Install/Use a health app                     | 6. Use/Install a fitness app                     |
| 7. Keep a diary                                 | 7. Keep a diary                                  |
| 8. Share my recipes in a community (online/with | 8. Share my exercise routine in a community      |
| close ones)                                     | (online/with close ones)                         |
| 9. Make meal plans                              | 9. Make exercise plans                           |
| 10. Track my progress                           | 10. Track my progress                            |
| 11. Practice self control/willpower             | 11. Practice self control/willpower              |
| 12. Avoid temptation                            | 12. Avoid temptation                             |
| 13. Practice mindfulness (yoga/meditation)      | 13. Mindfulness (yoga/meditation)                |
| 14. Seek support from similar people            | 14. Seek support from similar people             |
| 15. Make healthy eating enjoyable for myself    | 15. Make exercise enjoyable for yourself         |
| 16. Pick healthy food that I like               | 16. Pick exercises that I like                   |
| 17. Choose foods that provide quick results     | 17. Pick exercises that are most efficient       |
| 18. Set constant reminders                      | 18. Choose activities that provide quick results |
| 19. Reward myself or close ones                 | 19. Set constant reminders                       |
|   | 20. Reward myself or others                      |

#### Intention to use the app

We asked participants to indicate the extent to which they would intend to use the

mobile app for healthy eating and exercise in the next six months (see Table S15). In

particular, we asked them to answer two questions on a scale from 1= strongly disagree to 7

= strongly agree.

Table S15

Items of the scales Intention to use the app

Intention to use the app

2. In the next six months I intend to use this app frequently

<sup>1.</sup> I intend to use this app in the next six months

#### Intention to pay for the app

We measured participants' willingness to pay for the mobile app for healthy eating and exercise by asking them to indicate the amount of money (in Pounds sterling and pence and in euros and cent) they would be willing to spend per month for an app that combined the features mentioned earlier in the survey.

#### Healthy Lifestyle scale

We asked participants to indicate the extent to which they agree that following a

healthy lifestyle is important to them (see Table S16). We asked them to indicate their

commitment to a healthy lifestyle on a scale from 1= *strongly disagree* to 7 = *strongly agree*.

#### Table S16

Items of the scales healthy Lifestyle scale

Healthy Lifestyle scale

1. Following a healthy lifestyle is really important to me (especially in terms of physical activity/regular exercise).

2. Following a healthy lifestyle is really important to me (especially in terms of healthy eating ).

3. Being physically active is an integral part of my daily life.

4. Eating healthy food is an integral part of my daily life.

5. I believe I am in good health

#### Table S17

Summary of backward stepwise regression analysis for variables predicting intention to use the app

|                         | Step 1 | Step 2 | Step 3 | Step 4 | Step 5 |
|-------------------------|--------|--------|--------|--------|--------|
| Variables               | b      | b      | b      | b      | b      |
| F1                      | .148*  | .148*  | .147*  | .145*  | .145*  |
| F2                      | 035    | 035    | 035    | 034    | 035    |
| F3                      | 030    | 030    | 029    | 029    | 029    |
| F4                      | .179** | .178** | .178** | .178** | .177** |
| BMI                     | 086    | 086    | 087    | 088    | 086    |
| Health Confidence       | .206** | .206** | .205** | .205** | .204** |
| Health Maintenance      | .534** | .534** | .535** | .537** | .538** |
| $F1 \times BMI$         | .104   | .102   | .102   | .105   | .109   |
| F1 × Health Confidence  | 019    | 019    | 019    |        |        |
| F1 × Health Maintenance | 088    | 088    | 088    | 103    | 107    |
| $F2 \times BMI$         | 005    |        |        |        |        |
| F2 × Health Confidence  | .449** | .448** | .450** | .449** | .445** |
| F2 × Health Maintenance | 080    | 080    | 080    | 081    | 077    |
| $F3 \times BMI$         | 093    | 095    | 095    | 096    | 094    |
| F3 × Health Confidence  | 206    | 205    | 205    | 213    | 214    |
| F3 × Health Maintenance | 094    | 094    | 094    | 087    | 084    |
| $F4 \times BMI$         | .111   | .112   | .112*  | .112*  | .112*  |
| F4 × Health Confidence  | 065    | 064    | 064    | 070    | 079    |
| F4 × Health Maintenance | .069   | .068   | .066   | .073   | .085   |
| BMI × Health Confidence | 025    | 027    | 028    | 029    | 014    |
| BMI× Health Maintenance | .023   | .023   | .024   | .023   |        |
| Age                     | 025    | 024    | 024    | 024    | 024    |
| Gender                  | .027   | .027   | .027   | .027   | .027   |
| Number of households    | 019    | 020    | 019    | 020    | 019    |
| Family status           | 019    | 018    | 019    | 019    | 018    |
| Education               | 047    | 048    | 047    | 047    | 045    |
| Income                  | .015   | .015   | .014   | .014   | .012   |
| Country                 | .005   | .005   |        |        |        |

#### Table S17 Continuance

| Summary of | f backward s | tepwise re | gression anal | vsis  | for variables | predicting                              | g intention to | use t | the a | pp         |
|------------|--------------|------------|---------------|-------|---------------|---|----------------|-------|-------|------------|
| ~          |              |            | 0             | 2~~~. |               | r · · · · · · · · · · · · · · · · · · · | ,              |       |       | ~ <b>r</b> |

|                               | Step 6 | Step 7 | Step 8 | Step 9 | Step 10 |
|-------------------------------|--------|--------|--------|--------|---------|
| Variables                     | b      | b      | b      | b      | b       |
| F1                            | .145*  | .144*  | .144*  | .138*  | .136*   |
| F2                            | 036    | 032    | 033    | 043    | 047     |
| F3                            | 026    | 028    | 026    |        |         |
| F4                            | .177** | .177** | .178** | .176** | .181**  |
| BMI                           | 084    | 085    | 085    | 085    | 083     |
| Health Confidence             | .204** | .204** | .200** | .203** | .198**  |
| Health Maintenance            | .537** | .537** | .539** | .535** | .542**  |
| $F1 \times BMI$               | .102   | .102   | .104   | .107*  | .110*   |
| F1 × Health Confidence        |        |        |        |        |         |
| F1 × Health Maintenance       | 103    | 102    | 102    | 103    | 104     |
| $F2 \times BMI$               |        |        |        |        |         |
| F2 × Health Confidence        | .447** | .452** | .458** | .453** | .404**  |
| F2 × Health Maintenance       | 078    | 081    | 080    | 066    |         |
| $F3 \times BMI$               | 094    | 094    | 094    | 096    | 099     |
| $F3 \times$ Health Confidence | 212    | 214    | 225    | 223    | 210     |
| F3 × Health Maintenance       | 089    | 090    | 084    | 089    | 114     |
| $F4 \times BMI$               | .111*  | .109   | .108   | .106   | .103    |
| F4 × Health Confidence        | 087    | 091    | 088    | 090    | 076     |
| F4 × Health Maintenance       | .088   | .093   | .090   | .086   | .069    |
| BMI × Health Confidence       |        |        |        |        |         |
| BMI× Health Maintenance       |        |        |        |        |         |
| Age                           | 024    | 024    | 028    | 026    | 024     |
| Gender                        | .027   | .028   | .030   | .029   | .028    |
| Number of households          | 019    | 016    | 022    | 022    | 024     |
| Family status                 | 019    | 015    |        |        |         |
| Education                     | 044    | 042    | 042    | 041    | 041     |
| Income                        | .012   |        |        |        |         |
| Country                       |        |        |        |        |         |

#### Table S17 Continuance

|                          | Step 11 | Step 12 | Step 13 | Step 14 | Step 15 | Step 16 |
|--------------------------|---------|---------|---------|---------|---------|---------|
| Variables                | b       | b       | b       | b       | b       | b       |
| F1                       | .136*   | .134*   | .133*   | .130*   | .132*   | .132*   |
| F2                       | 047     | 049     | 048     | 050     | 057     | 049     |
| F3                       |         |         |         |         |         |         |
| F4                       | .185**  | .192    | .193**  | .196**  | .198**  | .195**  |
| BMI                      | 081     | 082     | 081     | 087*    | 084     | 083     |
| Health Confidence        | .196**  | .200**  | .200**  | .198**  | .203**  | .183**  |
| Health Maintenance       | .543**  | .535**  | .536**  | .541**  | .534**  | .558**  |
| $F1 \times BMI$          | .109*   | .114*   | .111*   | .111*   | .109*   | .106*   |
| F1 × Health Confidence   |         |         |         |         |         |         |
| F1 × Health Maintenance  | 106     | 098     | 100     | 099     | 100     | 116*    |
| $F2 \times BMI$          |         |         |         |         |         |         |
| F2 × Health Confidence   | .402    | .400**  | .391**  | .387**  | .389**  | .389**  |
| F2 × Health Maintenance  |         |         |         |         |         |         |
| $F3 \times BMI$          | 096     | 097     | 097     | 099     | 094     | 092     |
| F3 × Health Confidence   | 217     | 246*    | 248*    | 250*    | 247*    | 304**   |
| F3 × Health Maintenance  | 105     | 075     | 071     | 071     | 082     |         |
| $F4 \times BMI$          | .100    | .104    | .103    | .105    | .102    | .100    |
| F4 × Health Confidence   | 075     | 019     |         |         |         |         |
| F4 × Health Maintenance  | .068    |         |         |         |         |         |
| BMI × Health Confidence  |         |         |         |         |         |         |
| BMI × Health Maintenance |         |         |         |         |         |         |
| Age                      | 028     | 029     | 029     | -       |         |         |
| Gender                   | .027    | .029    | .030    | .027    |         |         |
| Number of households     |         |         |         |         |         |         |
| Family status            |         |         |         |         |         |         |
| Education                | 040     | 041     | 041     | 039     | 038     | 038     |
| Income                   |         |         |         |         |         |         |
| Country                  |         |         |         |         |         |         |

#### Table S17 Continuance

|                                 | Step 17 | Step 18 | Step 19 | Step 20 | Step 21 | Step 22 | Step 23 |
|---------------------------------|---------|---------|---------|---------|---------|---------|---------|
| Variables                       | b       | b       | b       | b       | b       | b       | b       |
| F1                              | .117*   | .110*   | .112*   | .111*   | .101    | .082    |         |
| F2                              |         |         |         |         |         |         |         |
| F3                              |         |         |         |         |         |         |         |
| F4                              | .185**  | .191**  | .177**  | .175**  | .189**  | .188**  | .219**  |
| BMI                             | 079     | 071     |         |         |         |         |         |
| Health Confidence               | .178**  | .177**  | .191**  | .193**  | .186**  | .181**  | .182**  |
| Health Maintenance              | .545**  | .550**  | .539**  | .543**  | .547**  | .573**  | .602**  |
| F1 	imes BMI                    | .109*   | .105*   | .109*   | .084    | .108**  | .102*   | .114**  |
| F1 × Health Confidence          |         |         |         |         |         |         |         |
| F1 × Health Maintenance         | 114     | 113     | 113     | 116*    | 108     |         |         |
| F2 	imes BMI                    |         |         |         |         |         |         |         |
| F2 × Health Confidence          | .391**  | .386**  | .376**  | .370**  | .392**  | .314**  | .315**  |
| F2 × Health Maintenance         |         |         |         |         |         |         |         |
| F3 	imes BMI                    | 095     | 093     | 070     |         |         |         |         |
| $F3 \times Health$ Confidence   | 297**   | 291**   | 276**   | 270**   | 294**   | 289**   | 294**   |
| F3 × Health Maintenance         |         |         |         |         |         |         |         |
| $F4 \times BMI$                 | .100    | .099    | .076    | .047    |         |         |         |
| $F4 \times Health$ Confidence   |         |         |         |         |         |         |         |
| F4 × Health Maintenance         |         |         |         |         |         |         |         |
| BMI × Health Confidence         |         |         |         |         |         |         |         |
| $BMI \times Health Maintenance$ |         |         |         |         |         |         |         |
| Age                             |         |         |         |         |         |         |         |
| Number of households            |         |         |         |         |         |         |         |
| Family status                   |         |         |         |         |         |         |         |
| Education                       | - 035   |         |         |         |         |         |         |
| Income                          | .055    |         |         |         |         |         |         |
| Country                         |         |         |         |         |         |         |         |

Table S18

Summary of backward stepwise regression analysis for variables predicting willingness to pay for the app

|  | Step1 | Step 2 | Step 3 | Step 4 | Step 5 | Step 6 | Step 7 |
|--|-------|--------|--------|--------|--------|--------|--------|
| Variables  | b     | b      | b      | b      | b      | b      | b      |
| F1   | .252* | .251*  | .251*  | .251*  | .255*  | .254*  | .252*  |
| F2   | 048   | 048    | 048    | 051    | 051    | 053    | 047    |
| F3   | 090   | 090    | 091    | 090    | 091    | 092    | 094    |
| F4   | .055  | .055   | .055   | .056   | .054   | .053   | .052   |
| BMI  | .034  | .034   | .034   | .035   | .030   | .031   | .029   |
| Able   | .039  | .039   | .038   | .040   | .042   | .045   | .046   |
| Health Maintenance                               | .176  | .177   | .178   | .175*  | .174   | .173   | .173   |
| F1 	imes BMI                                     | .051  | .052   | .051   | .050   | .047   | .045   | .046   |
| $F1 \times Health$ Confidence                    | 006   |        |        |        |        |        |        |
| F1 × Health Maintenance                          | .113  | .109   | .107   | .106   | .103   | .116   | .113   |
| $F2 \times BMI$                                  | 048   | 048    | 044    | 044    | 042    | 046    | 048    |
| $F2 \times Health$ Confidence                    | .247  | .248   | .245   | .239   | .241   | .217   | .225   |
| $F2 \times Health$ Maintenance                   | .107  | .105   | .110   | .115   | .116   | .164   | .161   |
| $F3 \times BMI$                                  | 127   | 127    | 129    | 129    | 136    | 133    | 133    |
| $F3 \times$ Health Confidence                    | 240   | 243    | 241    | 235    | 232    | 201    | 207    |
| F3 × Health Maintenance                          | .070  | .072   | .069   | .063   | .000   |        |        |
| $F4 \times BMI$<br>$F4 \times Health Confidence$ | 016   | 016    | 015    | 017    | 252    | 253    | 263    |
| $F4 \times$ Health Maintenance                   | .145  | .147   | .145   | .144   | .141   | .132   | .147   |
| $BMI \times Health Confidence$                   | 176   | 176    | 179    | 180    | 180    | 177    | 173    |
| $BMI \times Health Maintenance$                  | .264  | .263   | .265   | .266   | .272   | .272   | .270   |
| Intention  | .145  | .144   | .144   | .145   | .144   | .143   | .143   |
| $F1 \times Intention$                            | .081  | .080   | .084   | .085   | .087   | .077   | .082   |
| $F2 \times Intention$                            | 217   | 216    | 217    | 216    | 224    | 241    | 241    |
| $F3 \times Intention$                            | 106   | 106    | 105    | 108    | 109    | 083    | 084    |
| $F4 \times Intention$                            | .109  | .109   | .106   | .107   | .111   | .119   | .115   |
| $BMI \times Intention$                           | 043   | 043    | 042    | 041    | 051    | 048    | 050    |
| Health Confidence $\times$ Intention             | .221  | .220   | .221   | .222   | .224   | .216   | .220   |
| Health Maintenance $\times$ Intention            | 182   | 181    | 183    | 183    | 185    | 179    | 184    |
| Age<br>Gender                                    | 079   | 079    | 079    | 077    | 076    | 076    | 074    |
| Number of households                             | .010  | .010   | .010   |        |        |        |        |
| Family status                                    | .050  | .050   | .053   | .051   | .049   | .047   | .055   |
| Education  | .038  | .038   | .038   | .038   | .038   | .037   | .042   |
| Income   | .020  | .020   | .022   | .023   | .024   | .024   |        |
| Country  | .079  | .079   | .080   | .081   | .080   | .080   | .077   |
|  |       |        |        |        |        |        |        |

#### Table S18 Continuance

Summary of backward stepwise regression analysis for variables predicting willingness to pay for the app

|  | Step 8 | Step 9 | Step 10 | Step 11 | Step 12 | Step 13 | Step 14 | Step 15 | Step 16 |
|--|--------|--------|---------|---------|---------|---------|---------|---------|---------|
| Variables  | b      | b      | b       | b       | b       | b       | b       | b       | b       |
| F1   | .255*  | .255*  | .258*   | .247*   | .245*   | .256*   | .258*   | .259*   | .265*   |
| F2   | 048    | 046    | 045     |         |         |         |         |         |         |
| F3   | 095    | 097    | 097     | 112     | 114     | 107     | 108     | 104     | 107     |
| F4   | .046   | .046   | .041    | .035    | .038    |         |         |         |         |
| BMI  | .032   | .034   | .035    | .037    | .035    | .040    | .038    | .038    | .040    |
| Able   | .052   | .051   | .053    | .044    |         |         |         |         |         |
| Health Maintenance                               | .172   | .177   | .170    | .163    | .194    | .191    | .192    | .193    | .189    |
| $F1 \times BMI$                                  | .036   | .026   |         |         |         |         |         |         |         |
| F1 × Health Confidence                           |        |        |         |         |         |         |         |         |         |
| $F1 \times Health$                               | .116   | .103   | .109    | .101    | .098    | .107    | .123    | .123    | .188    |
| Maintenance                                      |        |        |         |         |         |         |         |         |         |
| $F2 \times BMI$                                  | 046    |        |         |         |         |         |         |         |         |
| $F2 \times Health Confidence$                    | .226   | .228   | .228    | .222    | .198    | .192    | .271    | .311    | .292    |
| $F2 \times Health$                               | .158   | .147   | .149    | .144    | .161    | .142    |         |         |         |
| Maintenance                                      |        |        |         |         |         |         |         |         |         |
| $F3 \times BMI$                                  | 136    | 152    | 144     | 144     | 145     | 141     | 139     | 134     | 133     |
| $F3 \times$ Health Confidence                    | 208    | 205    | 201     | 183     | 181     | 164     | 169     | 225     | 228     |
| $F3 \times Health$                               |        |        |         |         |         |         |         |         |         |
| E4 × DMI   |        |        |         |         |         |         |         |         |         |
| $F4 \times BMI$<br>$F4 \times Health Confidence$ | - 257  | - 251  | - 258   | - 253   | - 250   | - 269   | - 282   | - 279   | - 272   |
| $F4 \times Health$                               | 142    | 151    | 250     | 255     | 250     | 207     | 202     | 193     | 152     |
| Maintenance                                      | .142   | .191   | .152    | .157    | .150    | .172    | .205    | .175    | .152    |
| $BMI \times Health$                              | 188    | 206    | 202     | 207     | 201     | 199     | 194     | 196     | 197     |
| Confidence                                       |        |        |         |         |         |         |         |         |         |
| $BMI \times Health$                              | .244   | .244   | .257    | .260    | .254    | .245    | .241    | .243    | .240    |
| Maintenance                                      |        |        |         |         |         |         |         |         |         |
| Intention  | .136   | .132   | .138    | .142    | .150    | .163    | .158    | .157    | .156    |
| $F1 \times Intention$                            | .079   | .094   | .094    | .105    | .106    | .092    | .077    | .072    |         |
| $F2 \times Intention$                            | 245    | 246    | 254     | 247     | 242     | 238     | 187     | 228     | 208     |
| $F3 \times Intention$                            | 075    | 071    | 069     | 076     | 078     | 071     | 067     |         |         |
| $F4 \times Intention$                            | .119   | .100   | .105    | .099    | .096    | .101    | .086    | .090    | .128    |
| BMI × Intention                                  |        |        |         |         |         |         |         |         |         |
| Health Confidence ×                              | .221   | .221   | .226    | .216    | .206    | .208    | .178    | .185    | .192    |
| Intention  |        |        |         |         |         |         |         |         |         |
| Health Maintenance ×                             | 187    | 188    | 198     | 194     | 182     | 179     | 140     | 147     | 154     |
| Intention  | 070    | 0.50   | 070     | 070     | 0.50    | 0.50    | 074     | 000     | 0.50    |
| Age  | 073    | 072    | 073     | 073     | 072     | 072     | 074     | 080     | 078     |
| Gender   |        |        |         |         |         |         |         |         |         |
| Number of nousenoids                             | 057    | 059    | 057     | 055     | 057     | 056     | 054     | 050     | 061     |
| Education  | .037   | .038   | .037    | .035    | .037    | .030    | .034    | .039    | .001    |
| Lucation   | .039   | .056   | .040    | .040    | .041    | .039    | .040    | .039    | .058    |
| Income   | 000    | 001    | 000     | 090     | 070     | 077     | 076     | 077     | 077     |
| Country  | .080   | .081   | .080    | .080    | .079    | .077    | .076    | .077    | .077    |

#### Table S18 Continuance

|                                | Step 17 | Step 18 | Step 19 | Step 20 | Step 21 | Step 22 | Step 23 | Step 24 | Step 25 |
|--------------------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Variables                      | b       | b       | b       | b       | b       | b       | b       | b       | b       |
| F1                             | .274*   | .273*   | .271*   | .264*   | .260*   | .247*   | .246*   | .238*   | .205*   |
| F2                             |         |         |         |         |         |         |         |         |         |
| F3                             | 116     | 114     | 114     | 113     | 110     | 095     | 103     | 099     |         |
| F4                             |         |         |         |         |         |         |         |         |         |
| BMI                            | .033    |         |         |         |         |         |         |         |         |
| Health Confidence              |         |         |         |         |         |         |         |         |         |
| Health Maintenance             | .194    | .195    | .175    | .208    | .201    | .206    | .217    | .218    | .191    |
| $F1 \times BMI$                |         |         |         |         |         |         |         |         |         |
| F1 × Health Confidence         |         |         |         |         |         |         |         |         |         |
| F1 × Health Maintenance        | 188     | 191     | 209     | 193     | 203     | 199     | 197     | 201     | 209*    |
| $F_2 \times BMI$               | .100    | .171    | .209    | .175    | .205    | .1777   | .177    | .201    | .209    |
| $F2 \times$ Health Confidence  | .308    | .324    | .341    | .372    | .406    | .422    | .399    | .385    | .440    |
| $F2 \times$ Health Maintenance |         |         |         |         |         |         |         |         |         |
| F3 × BMI                       | 133     | 139     | 140     | 140     | 135     | 133     | 134     | 133     | 154     |
| $F3 \times$ Health Confidence  | 235     | 244     | 252     | 245     | 244     | 247     | 235     | 232     | 259*    |
| $F3 \times$ Health Maintenance |         |         |         |         |         |         |         |         |         |
| $F4 \times BMI$                |         |         |         |         |         |         |         |         |         |
| F4 × Health Confidence         | 261     | 261     | 185     | 184     | 179     | 182     | 178     | 176     | 206     |
| F4 × Health Maintenance        | .146    | .131    |         |         |         |         |         |         |         |
| BMI × Health Confidence        | 206     | 221     | 235     | 209     | 202     | 206     | 206     | 211     | 192     |
| BMI × Health Maintenance       | .251    | .265    | .287    | .251    | .233    | .234    | .234    | .236    | .247    |
| Intention                      | .148    | .149    | .169    | .158    | .155    | .148    | .146    | .152    | .148    |
| F1 × Intention                 |         |         |         |         |         |         |         |         |         |
| $F2 \times Intention$          | 223     | 231     | 244     | 281     | 269     | 263     | 251     | 251     | 256     |
| $F3 \times Intention$          |         |         |         |         |         |         |         |         |         |
| F4 × Intention                 | .127    | .138    | .179    | .184    | .182    | .170    | .167    | .163    | .165    |
| $BMI \times Intention$         |         |         |         |         |         |         |         |         |         |
| Health Confidence $\times$     | .180    | .184    | .147    | .074    |         |         |         |         |         |
| Intention                      |         |         |         |         |         |         |         |         |         |
| Health Maintenance ×           | 141     | 143     | 105     |         |         |         |         |         |         |
| Intention                      |         |         |         |         |         |         |         |         |         |
| Age                            | 082     | 076     | 077     | 075     | 074     | 070     | 054     |         |         |
| Gender                         |         |         |         |         |         |         |         |         |         |
| Number of households           |         |         |         |         |         |         |         |         |         |
| Family status                  | .063    | .061    | .060    | .060    | .063    | .053    |         |         |         |
| Education                      |         |         |         |         |         |         |         |         |         |
| Income                         |         |         |         |         |         |         |         |         |         |
| Country                        | .084    | .073    | .066    | .064    | .058    |         |         |         |         |

*Notes.* F1= Social support, connectedness and mindfulness; F2= Goal setting, tracking, and advice for

exercising; F3= Tips and advice for food and home workouts; F4= Digital score connection and mood management; Health Confidence = Perception of ability and confidence for healthy eating and exercise; Health Maintenance = Perception of ability to maintain healthy eating and exercise habits; Intention = Intention to use the app; \* p < 0.05; \*\* p < 0.01

#### Table S18 Continuance

|                               | Step   | Step  | Step  | Step  | Step   | Step   | Step  | Step  | Step  | Step 35 |
|-------------------------------|--------|-------|-------|-------|--------|--------|-------|-------|-------|---------|
| Variables                     | 26     | 27    | 28    | 29    | 30     | 31     | 32    | 33    | 34    | L       |
| F1                            | 104*   | 101*  | 106*  | 176*  | 192*   | 212*   | 207*  | 210*  | 207*  | 220**   |
| F1<br>F2                      | .194** | .191* | .190* | .170* | .162** | .212** | .207* | .210* | .207* | .229*** |
| F2<br>F2                      |        |       |       |       |        |        |       |       |       |         |
| F5                            |        |       |       |       |        |        |       |       |       |         |
| F4                            |        |       |       |       |        |        |       |       |       |         |
| BMI                           |        |       |       |       |        |        |       |       |       |         |
| Health Confidence             | 22.6   | 22.6  |       | 102   | 100    | 210*   | 221.* | 2024  | 205*  | 20544   |
| Health Maintenance            | .226   | .226  | .214  | .192  | .199   | .319*  | .321* | .302* | .305* | .237**  |
| $F1 \times BMI$               |        |       |       |       |        |        |       |       |       |         |
| F1 × Health Confidence        |        |       |       |       |        |        |       |       |       |         |
| $F1 \times Health$            | .215*  | .201  | .179  | .220  | .159*  | .154*  | .132  | .136  | .136  |         |
| Maintenance                   |        |       |       |       |        |        |       |       |       |         |
| $F2 \times BMI$               |        |       |       |       |        |        |       |       |       |         |
| $F2 \times Health Confidence$ | .305   | .255  | .168  |       |        |        |       |       |       |         |
| $F2 \times Health$            |        |       |       |       |        |        |       |       |       |         |
| Maintenance                   |        |       |       |       |        |        |       |       |       |         |
| F3 × BMI                      | - 151* | - 146 | - 139 | - 132 | - 124  | - 120  |       |       |       |         |
| F3 × Health Confidence        | - 235  | - 223 | - 218 | - 100 |        |        |       |       |       |         |
| $F3 \times Health$            | .200   | .220  | .210  |       |        |        |       |       |       |         |
| Maintenance                   |        |       |       |       |        |        |       |       |       |         |
| $F4 \times BMI$               |        |       |       |       |        |        |       |       |       |         |
| F4 × Health Confidence        | - 078  |       |       |       |        |        |       |       |       |         |
| $F4 \times Health$            |        |       |       |       |        |        |       |       |       |         |
| Maintenance                   |        |       |       |       |        |        |       |       |       |         |
| $BMI \times Health$           | 227    | 253*  | 232   | 225   | 243*   | 246*   | 240   | 086   |       |         |
| Confidence                    |        |       |       |       |        |        |       |       |       |         |
| $BMI \times Health$           | .286   | .283* | .247* | .232  | .233   | .244*  | .186  |       |       |         |
| Maintenance                   |        |       |       |       |        |        |       |       |       |         |
| Intention                     | .114   | .122  | .143  | .166  | .168   |        |       |       |       |         |
| F1 × Intention                |        |       |       |       |        |        |       |       |       |         |
| $F2 \times Intention$         | - 136  | - 121 |       |       |        |        |       |       |       |         |
| $F3 \times Intention$         |        |       |       |       |        |        |       |       |       |         |
| $F4 \times Intention$         |        |       |       |       |        |        |       |       |       |         |
| BMI × Intention               |        |       |       |       |        |        |       |       |       |         |
| Health Confidence ×           |        |       |       |       |        |        |       |       |       |         |
| Intention                     |        |       |       |       |        |        |       |       |       |         |
| Health Maintenance ×          |        |       |       |       |        |        |       |       |       |         |
| Intention                     |        |       |       |       |        |        |       |       |       |         |
| Age                           |        |       |       |       |        |        |       |       |       |         |
| Gender                        |        |       |       |       |        |        |       |       |       |         |
| Number of households          |        |       |       |       |        |        |       |       |       |         |
| Family status                 |        |       |       |       |        |        |       |       |       |         |
| Education                     |        |       |       |       |        |        |       |       |       |         |
| Income                        |        |       |       |       |        |        |       |       |       |         |
| Country                       |        |       |       |       |        |        |       |       |       |         |

Table S19

Summary of backward stepwise regression analysis for variables predicting intention to use the app

|                          | Step 1 | Step 2 | Step 3 | Step 4 | Step 5 |
|--------------------------|--------|--------|--------|--------|--------|
| Variables                | b      | b      | b      | b      | b      |
| F1                       | .095   | .095   | .094   | .095   | .095   |
| F2                       | 092    | 092    | 092    | 091    | 091    |
| F3                       | 068    | 068    | 067    | 067    | 067    |
| F4                       | .145** | .145** | .145** | .145** | .145** |
| BMI                      | 061    | 062    | 062    | 061    | 061    |
| Health Confidence        | .171   | .171   | .171*  | .171*  | .170*  |
| Health Maintenance       | .466** | .466** | .466** | .466** | .466** |
| $F1 \times BMI$          | .085   | .085   | .087   | .087   | .088   |
| F1 × Health Confidence   | .072   | .072   | .072   | .073   | .073   |
| F1 × Health Maintenance  | 116    | 116    | 116    | 117    | 117    |
| $F2 \times BMI$          | .006   | .007   |        |        |        |
| F2 × Health Confidence   | .622** | .621** | .620** | .623** | .625** |
| F2 × Health Maintenance  | 360    | 358    | 354    | 357    | 358    |
| $F3 \times BMI$          | 064    | 065    | 062    | 062    | 062    |
| F3 × Health Confidence   | 412*   | 411*   | 411**  | 414**  | 417**  |
| F3 × Health Maintenance  | .129   | .128   | .126   | .129   | .131   |
| $F4 \times BMI$          | .076   | .077   | .076   | .076   | .075   |
| F4 × Health Confidence   | 131    | 130    | 131    | 131    | 132    |
| F4 × Health Maintenance  | .167   | .166   | .167   | .167   | .168   |
| BMI × Health Confidence  | 031    | 032    | 029    | 028    | 028    |
| BMI × Health Maintenance | .032   | .033   | .033   | .033   | .032   |
| Age                      | .005   | .005   | .004   |        |        |
| Gender                   | .038   | .038   | .038   | .039   | .039   |
| Number of households     | .003   |        |        |        |        |
| Family status            | 006    | 005    | 005    | 004    |        |
| Education                | 026    | 026    | 026    | 027    | 026    |
| Income                   | .034   | .035   | .035   | .035   | .033   |
| Country                  | .047   | .047   | .047   | .047   | .048   |
| Cluster membership       | .326** | .325** | .325** | .324** | .325** |

#### Table S19 Continuance

|                          | Step 6 | Step 7 | Step 8 | Step 9 | Step 10 |
|--------------------------|--------|--------|--------|--------|---------|
| Variables                | b      | b      | b      | b      | b       |
| F1                       | .094   | .095   | .101   | .094   | .093    |
| F2                       | 093    | 093    | 094    | 092    | 094     |
| F3                       | 064    | 065    | 065    | 062    | 066     |
| F4                       | .145** | .145** | .145** | .146** | .149**  |
| BMI                      | 057    | 057    | 054    | 050    | 048     |
| Health Confidence        | .169*  | .169*  | .168*  | .167*  | .172*   |
| Health Maintenance       | .466** | .468** | .464** | .465   | .463**  |
| $F1 \times BMI$          | .085   | .090   | .083   | .081   | .082    |
| F1 × Health Confidence   | .071   | .072   |        |        |         |
| F1 × Health Maintenance  | 115    | 120    | 063    | 062    | 057     |
| $F2 \times BMI$          |        |        |        |        |         |
| F2 × Health Confidence   | .624** | .619** | .610** | .611** | .540**  |
| F2 × Health Maintenance  | 355    | 352    | 336    | 338    | 253     |
| $F3 \times BMI$          | 060    | 059    | 054    | 053    | 053     |
| F3 × Health Confidence   | 415**  | 415**  | 376**  | 372**  | 297**   |
| F3 × Health Maintenance  | .128   | .131   | .099   | .097   |         |
| $F4 \times BMI$          | .074   | .075   | .075   | .073   | .070    |
| F4 × Health Confidence   | 148    | 148    | 120    | 123    | 125     |
| F4 × Health Maintenance  | .183   | .186   | .159   | .161   | .163    |
| BMI × Health Confidence  |        |        |        |        |         |
| BMI × Health Maintenance | .009   |        |        |        |         |
| Age                      |        |        |        |        |         |
| Gender                   | .039   | .040   | .041   | .041   | .035    |
| Number of households     |        |        |        |        |         |
| Family status            |        |        |        |        |         |
| Education                | 024    | 024    | 024    |        |         |
| Income                   | .032   | .032   | .033   | .029   | .026    |
| Country                  | .049   | .049   | .049   | .044   | .045    |
| Cluster membership       | .324** | .324** | .322** | .324** | .320**  |

#### Summary of backward stepwise regression analysis for variables predicting intention to use the app

#### Table S19 Continuance

|                          | Step 11           | Step 12           | Step 13           | Step 14           | Step 15           | Step 16           | Step 17           |
|--------------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Variables                | b                 | b                 | b                 | b                 | b                 | b                 | b                 |
| F1                       | .093              | .082              | .077              | .071              | .073              | .072              | .064              |
| F2                       | 085               | 084               | 086               | 111               | 120*              | 125*              | 124*              |
| F3                       | 070               | 072               | 057               |                   |                   |                   |                   |
| F4                       | .147 <sup>a</sup> | .148 <sup>a</sup> | .145 <sup>a</sup> | .142 <sup>a</sup> | .144 <sup>a</sup> | .138 <sup>a</sup> | .147 <sup>a</sup> |
| BMI                      | 052               | 053               | 065               | 064               | 062               | 051               | 045               |
| Health Confidence        | .175**            | .178**            | .176**            | .186**            | .191**            | .194**            | .187**            |
| Health Maintenance       | .465**            | .465**            | .469**            | .459**            | .451**            | .451**            | .457**            |
| $F1 \times BMI$          | .083              | .085              | .085              | .093              | .089              | .069              | .086*             |
| $F1 \times Able$         |                   |                   |                   |                   |                   |                   |                   |
| F1 × Health Maintenance  | 056               |                   |                   |                   |                   |                   |                   |
| $F2 \times BMI$          |                   |                   |                   |                   |                   |                   |                   |
| F2 × Health Confidence   | .555**            | .540**            | .553**            | .575**            | .585**            | .579**            | .584**            |
| F2 × Health Maintenance  | 262               | 284               | 278               | 276               | 287*              | 294               | 276               |
| $F3 \times BMI$          | 054               | 055               | 057               | 066               | 059               |                   |                   |
| F3 × Health Confidence   | 303               | 305**             | 311**             | 323**             | 329**             | 319**             | 337**             |
| F3 × Health Maintenance  |                   |                   |                   |                   |                   |                   |                   |
| $F4 \times BMI$          | .070              | .067              | .068              | .066              | .062              | .036              |                   |
| F4 × Health Confidence   | 133               | 122               | 122               | 135               | 137               | 142               | 141               |
| F4 × Health Maintenance  | .171              | .155              | .141              | .142              | .142              | .148              | .148              |
| BMI × Health Confidence  |                   |                   |                   |                   |                   |                   |                   |
| BMI × Health Maintenance |                   |                   |                   |                   |                   |                   |                   |
| Age                      |                   |                   |                   |                   |                   |                   |                   |
| Gender                   | .037              | .039              | .042              | .041              |                   |                   |                   |
| Number of households     |                   |                   |                   |                   |                   |                   |                   |
| Family status            |                   |                   |                   |                   |                   |                   |                   |
| Education                |                   |                   |                   |                   |                   |                   |                   |
| Income                   |                   |                   |                   |                   |                   |                   |                   |
| Country                  | .040              | .040              |                   |                   |                   |                   |                   |
| Cluster membership       | .313**            | .320**            | .311**            | .300**            | .300**            | .308**            | .311**            |

#### Table S19 Continuance

|                               | Step 18           | Step 19           | Step 20           | Step 21           | Step 22           | Step 23 | Step 24 |
|-------------------------------|-------------------|-------------------|-------------------|-------------------|-------------------|---------|---------|
| Variables                     | b                 | b                 | b                 | b                 | b                 | b       | b       |
| F1                            | .064              |                   |                   |                   |                   |         |         |
| F2                            | 116               | 093               | 100               | 100               | 099               |         |         |
| F3                            |                   |                   |                   |                   |                   |         |         |
| F4                            | .135 <sup>a</sup> | .149 <sup>a</sup> | .167 <sup>a</sup> | .169 <sup>a</sup> | .168 <sup>a</sup> | .142ª   | .153**  |
| BMI                           |                   |                   |                   |                   |                   |         |         |
| Health Confidence             | .192**            | .186**            | .185**            | .185**            | .157*             | .146*   |         |
| Health Maintenance            | .449**            | .464**            | .464**            | .463**            | .504**            | .478**  | .574**  |
| $F1 \times BMI$               | .089*             | .096*             | .101**            | .104**            | .098**            | .096**  | .104**  |
| $F1 \times Able$              |                   |                   |                   |                   |                   |         |         |
| F1 × Health Maintenance       |                   |                   |                   |                   |                   |         |         |
| $F2 \times BMI$               |                   |                   |                   |                   |                   |         |         |
| F2 × Health Confidence        | .558**            | .539**            | .447**            | .445**            | .329**            | .331**  | .319**  |
| F2 × Health Maintenance       | 259               | 238               | 136               | 125               |                   |         |         |
| $F3 \times BMI$               |                   |                   |                   |                   |                   |         |         |
| $F3 \times$ Health Confidence | 324**             | 321**             | 331**             | 332**             | 326**             | 305**   | 316**   |
| F3 × Health Maintenance       |                   |                   |                   |                   |                   |         |         |
| $F4 \times BMI$               |                   |                   |                   |                   |                   |         |         |
| F4 × Health Confidence        | 134               | 123               |                   |                   |                   |         |         |
| F4 × Health Maintenance       | .143              | .134              | .013              |                   |                   |         |         |
| BMI × Health Confidence       |                   |                   |                   |                   |                   |         |         |
| BMI × Health Maintenance      |                   |                   |                   |                   |                   |         |         |
| Age                           |                   |                   |                   |                   |                   |         |         |
| Gender                        |                   |                   |                   |                   |                   |         |         |
| Number of households          |                   |                   |                   |                   |                   |         |         |
| Family status                 |                   |                   |                   |                   |                   |         |         |
| Education                     |                   |                   |                   |                   |                   |         |         |
| Income                        |                   |                   |                   |                   |                   |         |         |
| Country                       | 214**             | 225**             | 210**             | 210**             | 01.0**            | 20.0**  | 207**   |
| Cluster membership            | .314**            | .323**            | .519**            | .518**            | .516**            | .296**  | .30/**  |

Table S20

|   | Step1 | Step 2 | Step 3 | Step 4 | Step 5 | Step 6 | Step 7 | Step 8 |
|---|-------|--------|--------|--------|--------|--------|--------|--------|
| Variables   | b     | b      | b      | b      | b      | b      | b      | b      |
| F1  | .232* | .232*  | .234*  | .235*  | .239*  | .246*  | .243*  | .245*  |
| F2  | 075   | 074    | 074    | 078    | 077    | 084    | 077    | 078    |
| F3  | 120   | 120    | 120    | 120    | 121    | 121    | 125    | 124    |
| F4  | .046  | .046   | .046   | .046   | .044   | .039   | .042   | .042   |
| BMI   | .040  | .040   | .041   | .042   | .035   | .036   | .034   | .034   |
| Health Confidence   | .036  | .036   | .036   | .038   | .041   | .045   |        |        |
| Health Maintenance  | .190  | .190   | .188   | .184   | .182   | .178   | .206   | .206   |
| F1 	imes BMI  | .052  | .053   | .050   | .047   | .043   | .045   | .049   | .049   |
| $F1 \times Health$ Confidence                                   | .020  | .022   |        |        |        |        |        |        |
| F1 × Health Maintenance   | .123  | .122   | .137   | .136   | .132   | .193   | .190   | .192   |
| $F2 \times BMI$   | 060   | 059    | 058    | 058    | 055    | 068    | 067    | 056    |
| F2 × Health Confidence  | .329  | .339   | .340   | .336   | .338   | .327   | .310   | .306   |
| $F2 \times Health Maintenance$                                  | .019  |        |        |        |        |        |        |        |
| F3 	imes BMI  | 108   | 108    | 107    | 106    | 117    | 110    | 112    | 118    |
| $F3 \times$ Health Confidence                                   | 310   | 314    | 304    | 297    | 292    | 289    | 291    | 286    |
| $F3 \times$ Health Maintenance                                  | .108  | .114   | .109   | .104   | .109   | .088   | .101   | .090   |
| $F4 \times BMI$   | 023   | 023    | 023    | 024    |        |        |        |        |
| $F4 \times$ Health Confidence<br>$E4 \times$ Health Maintenance | 285   | 287    | 281    | 283    | 283    | 285    | 281    | 270    |
| DML Haalth Canfidance   | .109  | .174   | .108   | .100   | .105   | .152   | .154   | .123   |
| BMI $\times$ Health Maintenance                                 | 169   | 169    | 169    | 170    | 1/1    | 164    | 159    | 168    |
| Intention   | .207  | .200   | .200   | .207   | .277   | .272   | .270   | .273   |
| F1 × Intention  | .002  | .001   | .002   | .004   | .002   | .002   | .071   | .071   |
| F1 × Intention  | .062  | .001   | .003   | .064   | .000   | 226    | 222    | 211    |
| F2 × Intention  | 245   | 239    | 239    | 237    | 247    | 236    | 222    | 211    |
| $F3 \times Intention$   | 087   | 088    | 090    | 094    | 097    | 083    | 092    | 090    |
| F4 × Intention  | .136  | .134   | .134   | .135   | .139   | .175   | .170   | .165   |
| BMI* Intention  | 051   | 051    | 050    | 049    | 063    | 061    | 069    | 064    |
| Intention   | .212  | .209   | .211   | .213   | .215   | .215   | .205   | .203   |
| Health Maintenance ×  | 157   | 153    | 154    | 154    | 157    | 155    | 142    | 145    |
| Intention   |       |        |        |        |        |        |        |        |
| Age   | 062   | 062    | 062    | 060    | 059    | 058    | 057    | 058    |
| Gender  | .012  | .012   | .013   |        |        |        |        |        |
| Number of households  | .027  | .027   | .027   | .029   | .028   | .032   | .031   | 055    |
| Education   | .049  | .049   | .049   | .046   | .043   | .042   | .044   | .055   |
| Education   | .045  | .045   | .046   | .046   | .045   | .045   | .046   | .043   |
| Income  | .033  | .033   | .034   | .035   | .037   | .038   | .038   | .046   |
| Country   | .100  | .100   | .100   | .101   | .100   | .099   | .098   | .100   |
| Cluster membership  | .177  | .177   | .177   | .176   | .175   | .176   | .177   | .171   |

#### Table S20 Continuance

Summary of backward stepwise regression analysis for variables predicting willingness to pay for the app

|   | Step 9     | Step 10     | Step 11     | Step 12     | Step 13    | Step 14    | Step 15    | Step 16    |
|---|------------|-------------|-------------|-------------|------------|------------|------------|------------|
| Variables   | b          | b           | b           | b           | b          | b          | b          | b          |
| F1  | .243*      | .245*       | .250*       | .251*       | .252*      | .257*      | .267**     | .271**     |
| F2  | 077        | 081         | 079         | 079         | 078        | 070        | 073        | 076        |
| F3  | 127        | 123         | 124         | 125         | 127        | 124        | 130        | 134        |
| F4  | .041       | .038        | .030        | .031        | .028       |            |            |            |
| BMI   | .034       | .035        | .037        | .039        | .042       | .046       | .040       | .041       |
| Health Confidence   |            |             |             |             |            |            |            |            |
| Health Maintenance  | .051       | .213        | .206        | .210        | .214       | .210       | .214       | .259*      |
| $F1 \times BMI$   | .051       | .042        |             |             |            |            |            |            |
| $F1 \times$ Health Confidence<br>$F1 \times$ Health Maintenance | .199       | .196        | .205        | .203        | .202       | .200       | .199       | .195       |
| F2 	imes BMI  | 056        | 052         | 037         |             |            |            |            |            |
| $F2 \times Health \ Confidence$                                 | .312       | .344        | .337        | .328        | .322       | .310       | .322       | .337       |
| $F2 \times \text{Health Maintenance}$                           |            |             |             |             |            |            |            |            |
| $F3 \times BMI$   | 116        | 112         | 108         | 124         | 129        | 127        | 127        | 126        |
| $F3 \times$ Health Confidence<br>$F3 \times$ Health Maintenance | 243        | 285         | 273         | 270         | 267        | 249        | 253        | 263        |
| $F4 \times BMI$   |            |             |             |             |            |            |            |            |
| F4 × Health Confidence  | 278        | 276         | 282         | 273         | 265        | 277        | 265        | 271        |
| F4 × Health Maintenance   | .139       | .133        | .134        | .131        | .129       | .141       | .132       | .157       |
| BMI × Health Confidence<br>BMI × Health Maintenance             | 163<br>270 | 168<br>268  | 171<br>279  | 188<br>275  | 200<br>248 | 200<br>243 | 208<br>253 | 208<br>256 |
| Intention   | 069        | 066         | 072         | 068         | 062        | 071        | 066        |            |
| F1 × Intention  | .005       | .000        | .072        | .000        | .002       | .071       | .000       |            |
| $F_1 \times Intention$  | 212        | 248         | 256         | 253         | 250        | 251        | 264        | 270        |
|   | 213        | 240         | 2.50        | 233         | 230        | 231        | 204        | 270        |
| $F3 \times Intention$<br>F4 × Intention                         | 054<br>158 | 159         | 164         | 155         | 155        | 156        | 155        | 136        |
| DMI* Intention  | .150       | .155        | .104        | .155        | .155       | .150       | .155       | .150       |
| Health Confidence ×   | 062        | 056<br>.181 | 044<br>.187 | 044<br>.189 | .186       | .188       | .175       | .173       |
| Intention   | -          | -           | -           |             |            |            | -          | -          |
| Health Maintenance ×  | 116        | 121         | 136         | 137         | 135        | 135        | 121        | 116        |
| Age<br>Gender   | 059        | 062         | 062         | 060         | 059        | 058        | 062        | 061        |
| Number of households  |            |             |             |             |            |            |            |            |
| Family status   | .051       | .055        | .054        | .056        | .057       | .056       | .056       | .056       |
| Education   | .042       | .041        | .042        | .040        | .037       | .036       |            |            |
| Income  | .044       | .045        | .046        | .047        | .047       | .046       | .054       | .055       |
| Country   | .100       | .102        | .102        | .103        | .105       | .104       | .110       | .112       |
| Cluster membership  | .171       | .174        | .175        | .173        | .171       | .173       | .171       | .192       |

Table S20 Continuance

|                                | Step  | Step    | Step    | Step  | Step    | Step  | Step    | Step  | Step  | Step    |
|--------------------------------|-------|---------|---------|-------|---------|-------|---------|-------|-------|---------|
| Variables                      | h     | 18<br>h | 19<br>h | 20    | 21<br>h | <br>h | 25<br>h | h     | <br>h | 20<br>h |
| F1                             | .271* | .271*   | .256*   | .246* | .248*   | .244* | .234*   | .235* | .224* | .213*   |
|                                | *     | *       | *       |       | *       |       |         |       |       |         |
| F2                             | 079   | 067     |         |       |         |       |         |       |       |         |
| F3                             | 130   | 136     | 158     | 157   | 158     | 155   | 157     | 161   | 137   | 134     |
| F4                             |       |         |         |       |         |       |         |       |       |         |
| BMI                            |       |         |         |       |         |       |         |       |       |         |
| Health Confidence              |       |         |         |       |         |       |         |       |       |         |
| Health Maintenance             | .263* | .266*   | .251*   | .275* | .262*   | .254* | .256*   | .268* | .272* | .291*   |
|                                |       |         |         | *     | *       |       |         | *     | *     | *       |
| $F1 \times BMI$                |       |         |         |       |         |       |         |       |       |         |
| F1 × Health Confidence         |       |         |         |       |         |       |         |       |       |         |
| F1 × Health Maintenance        | .198  | .198    | .201    | .191  | .210    | .220  | .224*   | .219* | .213* | .218*   |
| $F2 \times BMI$                |       |         |         |       |         |       |         |       |       |         |
| F2 × Health Confidence         | .358  | .370    | .369    | .409  | .417    | .452  | .436    | .417  | .436  | .288    |
| $F2 \times$ Health Maintenance |       |         |         |       |         |       |         |       |       |         |
| $F3 \times BMI$                | 133   | 133     | 133     | 133   | 134     | 129   | 128     | 129   | 127   | 124*    |
| $F3 \times Health Confidence$  | 277   | 290     | 278     | 274   | 285     | 283   | 280     | 266   | 270   | 238     |
| $F3 \times$ Health Maintenance |       |         |         |       |         |       |         |       |       |         |
| F4 × BMI                       | 07.4  |         | 271     | 220   | 150     | 150   |         | 1.60  |       | 0.42    |
| $F4 \times Health Confidence$  | 274   | 287     | 271     | 238   | 178     | 173   | 171     | 168   | 171   | 042     |
| $F4 \times Health Maintenance$ | .142  | .167    | .157    | .100  |         |       |         |       |       |         |
| $BMI \times Health$            | 225   | 219     | 229     | 207   | 227     | 219   | 224     | 223   | 227   | 259*    |
| Confidence                     | 272   | 0.67    | 07.6    | 246   | 27.64   |       | 250     | 250   | 2.50  | 2024    |
| BMI × Health                   | .272  | .267    | .276    | .246  | .276*   | .257  | .259    | .259  | .260  | .293*   |
| Maintenance                    |       |         |         |       |         |       |         |       |       |         |
| Intention<br>E1 Intention      |       |         |         |       |         |       |         |       |       |         |
| F1 × Intention                 | 201   | 200     | 275     | 221   | 221     | 210   | 200     | 202   | 201   | 156     |
| F2 × Intention                 | 261   | 280     | 275     | 321   | 521     | 510   | 309     | 293   | 264   | 130     |
| $F3 \times Intention$          | 140   | 140     | 140     | 164   | 100     | 190   | 199     | 199   | 165   |         |
| PMI* Intention                 | .149  | .140    | .140    | .104  | .190    | .169  | .100    | .100  | .105  |         |
| Health Confidence X            | 180   | 187     | 179     | 083   | 075     |       |         |       |       |         |
| Intention                      | .180  | .107    | .179    | .005  | .075    |       |         |       |       |         |
| Health Maintenance x           | - 120 | - 129   | - 131   |       |         |       |         |       |       |         |
| Intention                      | .120  | .125    | .151    |       |         |       |         |       |       |         |
| Age                            | - 054 | - 054   | - 056   | - 054 | - 054   | - 053 |         |       |       |         |
| Gender                         |       | 1001    | .020    | 1001  |         | 1000  |         |       |       |         |
| Number of households           |       |         |         |       |         |       |         |       |       |         |
| Family status                  | .056  | .073    | .071    | .070  | .069    | .072  | .057    |       |       |         |
| Education                      |       |         |         |       |         |       |         |       |       |         |
| Income                         | .049  |         |         |       |         |       |         |       |       |         |
| Country                        | .098  | .094    | .094    | .089  | .084    | .078  | .077    | .066  |       |         |
| Cluster membership             | .190  | .178    | .170    | .171  | .177    | 175   | .189    | .176  | .158  | .137    |

Notes. F1= Social support, connectedness and mindfulness; F2= Goal setting, tracking, and advice for

exercising; F3= Tips and advice for food and home workouts; F4= Digital score connection and mood management; Health Confidence = Perception of ability and confidence for healthy eating and exercise; Health Maintenance = Perception of ability to maintain healthy eating and exercise habits; Intention = Intention to use the app; \* p < 0.05; \*\* p < 0.01.

Table S20 Continuance

|                             | Step<br>27 | Step<br>28 | Step<br>29 | Step<br>30 | Step<br>31 | Step<br>32 | Step<br>33 | Step<br>34 | Step 35 | Step 36 |
|-----------------------------|------------|------------|------------|------------|------------|------------|------------|------------|---------|---------|
| Variables                   | b          | b          | b          | b          | b          | <u>b</u>   | b          | <i>b</i>   | b       | b       |
| F1                          | .215*      | .227*      | .216*      | .221*      | .230*      | .266*      | .292*      | .295*      | .285**  | .229**  |
|                             |            |            |            |            |            | *          | *          | *          |         |         |
| F2                          |            |            |            |            |            |            |            |            |         |         |
| F3                          | 148        | 147        | 164        | -          | -          | 151        | 168        | 167        | 149     |         |
|                             |            |            |            | .189*      | .181*      |            |            |            |         |         |
| F4                          |            |            |            |            |            |            |            |            |         |         |
| BMI<br>Uselth Confidence    |            |            |            |            |            |            |            |            |         |         |
| Health Confidence           | 206*       | 200*       | 2008       | 206*       | 210*       | 266*       | 214*       | 201*       | 200**   | 027**   |
| Health Maintenance          | .290*      | .500*      | .298*      | .500*      | .516**     | .300*      | .514**     | .291*      | .200*** | .237*** |
| $F1 \times BMI$             |            |            |            |            |            |            |            |            |         |         |
| $F1 \times Health$          |            |            |            |            |            |            |            |            |         |         |
| Confidence                  |            |            |            |            |            |            |            |            |         |         |
| F1 × Health                 | 210*       | 181        | 218*       | 191*       | 125        | 116        |            |            |         |         |
| Maintenance                 | .210       | .101       | .210       | .171       | .125       | .110       |            |            |         |         |
| $F2 \times BMI$             |            |            |            |            |            |            |            |            |         |         |
| $F2 \times Health$          | .257       | .158       |            |            |            |            |            |            |         |         |
| Confidence                  |            |            |            |            |            |            |            |            |         |         |
| $F2 \times Health$          |            |            |            |            |            |            |            |            |         |         |
| Maintenance                 |            |            |            |            |            |            |            |            |         |         |
| F3 	imes BMI                | 118        | 110        | 100        |            |            |            |            |            |         |         |
| $F3 \times Health$          | 230        | 229        | 119        | 109        |            |            |            |            |         |         |
| Confidence                  |            |            |            |            |            |            |            |            |         |         |
| $F3 \times Health$          |            |            |            |            |            |            |            |            |         |         |
| Maintenance                 |            |            |            |            |            |            |            |            |         |         |
| $F4 \times BMI$             |            |            |            |            |            |            |            |            |         |         |
| $F4 \times Health$          |            |            |            |            |            |            |            |            |         |         |
| Confidence                  |            |            |            |            |            |            |            |            |         |         |
| $F4 \times Health$          |            |            |            |            |            |            |            |            |         |         |
| Maintenance                 |            |            |            |            |            |            |            |            |         |         |
| $BMI \times Health$         | -          | -          | -          | -          | -          | -          | -          | 104        |         |         |
| Confidence                  | .274*      | .249*      | .245*      | .245*      | .264*      | .257*      | .265*      |            |         |         |
| $BMI \times Health$         | .291*      | .248*      | .235       | .188       | .194       | .189       | .195       |            |         |         |
| Maintenance                 |            |            |            |            |            |            |            |            |         |         |
| Intention                   |            |            |            |            |            |            |            |            |         |         |
| $F1 \times Intention$       |            |            |            |            |            |            |            |            |         |         |
| $F2 \times Intention$       | 150        |            |            |            |            |            |            |            |         |         |
| $F3 \times Intention$       |            |            |            |            |            |            |            |            |         |         |
| $F4 \times Intention$       |            |            |            |            |            |            |            |            |         |         |
| BMI* Intention              |            |            |            |            |            |            |            |            |         |         |
| Health Confidence $\times$  |            |            |            |            |            |            |            |            |         |         |
| Intention                   |            |            |            |            |            |            |            |            |         |         |
| Health Maintenance $\times$ |            |            |            |            |            |            |            |            |         |         |
| Intention                   |            |            |            |            |            |            |            |            |         |         |
| Age                         |            |            |            |            |            |            |            |            |         |         |
| Number of househalds        |            |            |            |            |            |            |            |            |         |         |
| Formily status              |            |            |            |            |            |            |            |            |         |         |
| Education                   |            |            |            |            |            |            |            |            |         |         |
| Incomo                      |            |            |            |            |            |            |            |            |         |         |
| Country                     |            |            |            |            |            |            |            |            |         |         |
| Cluster membership          | 140        | 140        | 146        | 151        | 130        |            |            |            |         |         |
|                             | .142       | .142       | .140       | .1.51      | .137       |            |            |            |         |         |

exercising; F3= Tips and advice for food and home workouts; F4= Digital score connection and mood management; Health Confidence = Perception of ability and confidence for healthy eating and exercise; Health Maintenance = Perception of ability to maintain healthy eating and exercise habits; Intention = Intention to use the app; \* p < 0.05; \*\* p < 0.01. *Figure S3.* Confirmatory Factor Analysis (CFA). All pathways are shown within the model are significant (p<.001). F1= Social support, connectedness and mindfulness; F2= Goal setting, tracking, and advice for exercising; F3= Tips and advice for food and home workouts; F4= Digital score connection and mood management.



#### Table S21

Unstandardized estimates and Standard Errors for all Covariate Paths

| Covar | riance |            | Unstandardized<br>estimates (B) | S.E. | C.R.   | sig   |
|-------|--------|------------|---------------------------------|------|--------|-------|
| F1    | <>     | F3         | 1.081                           | .186 | 5.820  | <.001 |
| F1    | <>     | F2         | .652                            | .120 | 5.455  | <.001 |
| F2    | <>     | F3         | .679                            | .123 | 5.526  | <.001 |
| F4    | <>     | F1         | 1.307                           | .231 | 5.651  | <.001 |
| F4    | <>     | F2         | .645                            | .118 | 5.467  | <.001 |
| F4    | <>     | F3         | .970                            | .199 | 4.871  | <.001 |
| e1    | <>     | e3         | .862                            | .155 | 5.576  | <.001 |
| e30   | <>     | e32        | .857                            | .197 | 4.358  | <.001 |
| e29   | <>     | e31        | .794                            | .226 | 3.519  | <.001 |
| e25   | <>     | e26        | 266                             | .096 | -2.757 | .006  |
| e24   | <>     | e26        | .419                            | .125 | 3.341  | <.001 |
| e22   | <>     | e23        | .235                            | .071 | 3.300  | <.001 |
| e21   | <>     | e24        | .390                            | .104 | 3.739  | <.001 |
| e21   | <>     | e25        | 268                             | .074 | -3.612 | <.001 |
| e20   | <>     | e23        | 312                             | .108 | -2.883 | .004  |
| e18   | <>     | e20        | .505                            | .170 | 2.967  | .003  |
| e18   | <>     | e21        | 400                             | .114 | -3.501 | <.001 |
| e21   | <>     | e28        | .371                            | .093 | 3.999  | <.001 |
| e19   | <>     | e31        | .486                            | .172 | 2.827  | .005  |
| e18   | <>     | e31        | 531                             | .168 | -3.161 | .002  |
| e16   | <>     | e32        | .179                            | .078 | 2.297  | .022  |
| e16   | <>     | e28        | .263                            | .067 | 3.911  | <.001 |
| e16   | <>     | e27        | .311                            | .087 | 3.557  | <.001 |
| e16   | <>     | e29        | 266                             | .098 | -2.721 | .007  |
| e16   | <>     | e23        | .176                            | .059 | 2.999  | .003  |
| e15   | <>     | e24        | .232                            | .083 | 2.797  | .005  |
| e14   | <>     | e28        | .284                            | .079 | 3.587  | <.001 |
| e14   | <>     | e29        | 292                             | .115 | -2.533 | .011  |
| e21   | <>     | e31        | .592                            | .142 | 4.164  | <.001 |
| e19   | <>     | e28        | .234                            | .103 | 2.260  | .024  |
| e13   | <>     | e30        | .252                            | .104 | 2.411  | .016  |
| e13   | <>     | e26        | 409                             | .130 | -3.149 | .002  |
| e13   | <>     | e22        | 342                             | .083 | -4.126 | <.001 |
| e13   | <>     | e21        | 372                             | .097 | -3.857 | <.001 |
| e13   | <>     | e15        | 308                             | .090 | -3.439 | <.001 |
| e15   | <>     | e19<br>a15 | .273                            | .140 | 1.943  | .052  |
| e12   | <>     | e15<br>•20 | .109                            | .073 | 2.327  | .012  |
| e21   | <>     | 025        | .557                            | .157 | 4.075  | <.001 |
| e12   | <>     | e23        | .210                            | .003 | 2 147  | <.001 |
| e11   | <>     | e18        | 290                             | 130  | 2.147  | .032  |
| e10   | <>     | e29        | - 234                           | .150 | -2.230 | .020  |
| e10   | <>     | e28        | .373                            | .078 | 4.803  | <.001 |
| e9    | <>     | e18        | 472                             | .179 | 2.635  | .001  |
| e8    | <>     | e27        | 1.150                           | .171 | 6.734  | <.001 |
| e7    | <>     | e23        | .337                            | .096 | 3.493  | <.001 |
| e6    | <>     | e13        | 434                             | .139 | -3.120 | .002  |
| e5    | <>     | e32        | 214                             | .107 | -2.005 | .045  |
| e5    | <>     | e26        | .392                            | .138 | 2.837  | .005  |
| e5    | <>     | e10        | 182                             | .086 | -2.108 | .035  |
| e4    | <>     | e27        | .533                            | .126 | 4.246  | <.001 |
| e4    | <>     | e14        | .362                            | .113 | 3.191  | .001  |
| e3    | <>     | e25        | 226                             | .082 | -2.740 | .006  |
| e3    | <>     | e23        | .172                            | .076 | 2.262  | .024  |
| e1    | <>     | e5         | .775                            | .149 | 5.213  | <.001 |
| e24   | <>     | e29        | .373                            | .120 | 3.106  | .002  |
| e14   | <>     | e27        | .261                            | .107 | 2.431  | .015  |
| e12   | <>     | e24        | .218                            | .074 | 2.955  | .003  |
| e10   | <>     | e21        | .242                            | .082 | 2.959  | .003  |

| e10 | <> | e19 | .276 | .103 | 2.666  | .008  |
|-----|----|-----|------|------|--------|-------|
| e10 | <> | e16 | .165 | .067 | 2.475  | .013  |
| e6  | <> | e31 | .551 | .190 | 2.902  | .004  |
| e2  | <> | e5  | .354 | .149 | 2.380  | .017  |
| e2  | <> | e13 | 237  | .109 | -2.176 | .030  |
| e20 | <> | e22 | 264  | .113 | -2.341 | .019  |
| e20 | <> | e21 | 332  | .123 | -2.694 | .007  |
| e6  | <> | e29 | .432 | .172 | 2.511  | .012  |
| e6  | <> | e26 | .394 | .159 | 2.480  | .013  |
| e1  | <> | e2  | .237 | .117 | 2.021  | .043  |
| e4  | <> | e7  | 291  | .138 | -2.116 | .034  |
| e2  | <> | e4  | .596 | .161 | 3.693  | <.001 |

Notes. Only significant covariates are shown within the table.