

**The Development and Validation of a Physical Activity Recall Questionnaire for  
Adults: Using a Cognitive Model of the Question-Answer Process**

**This thesis is submitted in fulfilment of the requirements for the Degree of Doctor  
of Philosophy in the Centre for Sport Science and Health at Dublin City  
University.**

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**Supervised by: Dr. Catherine Woods**

**Submission Date: July 2005**

**Volume 2 of 2.**

## DECLARATION

I hereby certify that this material which I now submit for assessment on the programme of study, leading to the award of Doctor of Philosophy, is entirely my own work and has not been taken from the work of others, save and to the extent that such work has been cited and acknowledged within the text of my work.

Signed Niamh Martin

ID NO: 51179032

Niamh Martin

Date: 08/08/05

## APPENDIX ONE - SCREENING FORM

## Information Sheet

My name is Niamh Martin and I am a research student at Dublin City University (e-mail: niamh.martin3@mail.dcu.ie). If you think you would like to participate in this study<sup>1</sup>, please complete the form below. You **DO NOT** need to be physically active to complete this questionnaire. All information given will be treated in the **strictest confidence**.

1. Name (BLOCK CAPITALS): ..... Male \_\_\_\_ Female \_\_\_\_

2. Date of Birth: ..... / ..... / .....  
(day) (month) (year)

3. Telephone No: Home ..... Mobile .....

4. E-mail address (if applicable) .....

5. Do you own a car? Yes \_\_\_\_ OR No \_\_\_\_ (Tick one)

6. Do you live in: City/ Suburb \_\_\_\_ OR Rural/ Countryside \_\_\_\_ (Tick one)

7. Are you currently in paid work? Yes \_\_\_\_ OR No \_\_\_\_ (Tick one)

If yes, what is your occupation? .....

8. Please tick ONE box which best describes you:

a) I am not regularly physically active and do not intend to be in the next six months

☐

b) I am not regularly physically active but am thinking about starting in the next six months

☐

c) I do some physical activity but not more than 30 mins a day, 4-5 times a week.....

☐

d) I am regularly physically active but only began in the last 6 months

☐

e) I am regularly physically active & have been so for longer than 6 months

☐

<sup>1</sup> A nominal reimbursement of 15 Euro will be given to all participants

## APPENDIX TWO – FOCUS GROUP SCRIPT

## SCRIPT FOR FOCUS GROUPS

### INTRODUCTION

Good evening and welcome to our discussion group. Firstly, I would like to begin by thanking you for taking the time to come here to .....(**place name**) and also, for agreeing to participate in this talk about physical activity. My name is Niamh Martin and I am a postgraduate student at Dublin City University. I am currently undertaking a research study, which involves looking at various aspects of physical activity. Also present this evening is ..... (**Name and details of assistant moderator**), who will be assisting me this evening.

Before we get started, I would like to speak a little about the types of things that we will talk about tonight and also about how you will become involved in the discussion. Over the course of the next hour or so, I will ask different questions which will relate in some way to the topic of physical activity. I am most interested in finding out any opinions or thoughts that all of you have on this topic. After I have asked each question, I would also like you to contribute any specific experiences or views you have which you think may be relevant to the discussion. On this point, I would like to highlight the fact that this is a discussion group and therefore many differing views and opinions may be aired tonight. There are NO right or wrong answers or opinions to the questions that I will be asking and it is VERY important that we get to hear everybody's opinion on the topic. Therefore, I would encourage everybody in the group to speak and share their point of view, even if it is different to those previously expressed by other people.

Finally, I would like to assure all of you here that everything said in this discussion group tonight will remain strictly confidential. No individual here tonight will be identified by name in the final report. Instead, all responses will be attributed to the group as a unit. The recording equipment that you see in front of you, i.e. camera and tape recorder, are being used in case I miss any of your very important comments. It is necessary for me to hear everything that is said tonight and this equipment will help me. Therefore, it is very important that only one person talks at a time so that I can hear everything that is being said and we don't miss any important comments.

OK, now we are ready to start. Does everybody understand everything I've just said? Are there any questions or anything you would like to be explained a bit more? If not, perhaps I could ask anybody that has a mobile phone to turn it off now. This discussion will last approximately one hour.

### **Icebreaker**

To get us started, perhaps everybody could briefly introduce him or herself, tell us where you are from and also what your hobbies are.

**(1 minute)**

### **Opening Question**

To begin, I'd like to ask how physically active, in general, you think people your own age are?

- How physically active do you think you are in comparison to your own age group?

**(4 minutes)**

### **Question 1**

What do you think of when I say the words "physical activity"?

- At what times of the day would you consider yourself to be physically active?

(Prompt if required)

**(7 minutes)**

### **Question 2**

What do you think are the benefits, if any, of being physically active?

**(4 minutes)**

### **Question 3**

How active do you think a person needs to be to achieve some of these benefits?

- Psychological
- Physiological

**(4 minutes)**

Brief synopsis of discussion to date. Opportunity for group to add further thoughts or clarify points already made.

### **Question 4**

What do you understand by the words "moderate intensity"?

- Can you give me some examples of activities you would perform at a moderate intensity, during the course of your normal day?

**(7 minutes)**

### **Question 5**

What physical symptoms do you think a person performing moderate physical activity would experience?

**(4 minutes)**

Brief synopsis of discussion to date. Opportunity for group to add further thoughts or clarify points already made.

**Question 6**

What do you understand by the term “high intensity”?

- Can you give me some examples of activities you would perform at a high intensity, during the course of your normal day?
- How do they make you feel?

**(7 minutes)**

**Question 7**

Think of any activity you did over the past 7 days. Can you tell me:

What it is? When you did this activity? Would you rate it as light, moderate or high intensity?

- Ease of recall
- Action? Thought? Time & Location? Location? Time?
- Motivation to recall

**(6 minutes)**

**Question 8**

Would you consider yourself to be more physically active during the week or at the weekend?

- Why is that? What encourages you to be more active (during the week /at the weekend) than at (the weekend/during the week)?

**(4 minutes)**

**Summary by Assistant Moderator**

**(2 minutes)**

**Invited comments from group**

**(2 minutes)**

**Summary by Moderator**

**(2 minutes)**

**Invited comments from group**

**(2 minutes)**



### APPENDIX THREE – ADDITIONAL FOCUS GROUP QUOTES

Table 3.3. *Full quotes from the raw data that detail properties of physical activity while commuting*

| No | Quote  |
|----|--|
| 3  | "Well, I would feel because I don't have a car, that I, that's probably the only...I...I cycle everywhere..." [FG1; F; 42; SOC 3]  |
| 4  | "If you hadn't got the car and you had to cycle or walk. More often than not though, you know...and that ties in with time as well, if you had time to cycle to somewhere you'd do it with the car because it's quicker as well. Most people take that option so...I reckon most transport and it's the same with kids as well, they get dropped here, there and everywhere rather than cycle to places" [FG7; M; 25; SOC 5] |
| 5  | "Cycle instead of getting the bus" [FG2; M; 31; SOC 4; Car]<br>"Unless they decided to walk to work, like we do" [FG2; M; 29; SOC 3; Car]  |

Table 3.4. *Full quotes from the raw data that detail properties of physical activity while doing sports or exercise*

| No. | Quote   |
|-----|---|
| 1   | [F.G. 1]<br>"Running", "Exercise"   |
|     | [F.G. 2]<br>"Sport", "Outdoor sports", "Football"   |
|     | [F.G. 3]<br>"Walking", "Gym", "Playing football", "Sport in general", "Dancing", "Running"  |
|     | [F.G. 5]<br>"...team sports", "...competition"  |
|     | [F.G. 6]<br>"We've got exercise...", "Exercise...and swimming", "Walk"  |
|     | [F.G. 7]<br>"Swimming and then training, team training" "Walking... a bit of football",<br>"We have sport, fitness, running...", "Gym, workout, walking and swimming as we<br>"Exercise, fitness..."  |
|     | [F.G. 8]<br>"Ok the first one is the gym, the first word that came to mind"<br>"Ok, the first one we had was sport"<br>"Ok, team sports was the first word"<br>"The first thing that came to mind was moving weights, the second thing was socialis<br>and the next thing we came up with was sport and the next thing then was club, a spor<br>in tennis or camogie or whatever" |

Table 3.5. *Full quotes from the raw data that detail properties of physical activity while doing leisure*

| No. | Quote   |
|-----|---|
| 2   | "Just for your own leisure". [F; 39; SOC5]<br>"Just a nice pace, like a walk around town or...for leisure like. It's not really, you're not doing it for a purpose, it's just pure leisure". [F; 19; SOC5]  |
| 3   | [F.G. 1]<br>"Does anybody...I want to ask a question...does anybody go nightclubbing at the weekends?" [F; 29; SOC 3]<br><br>"Are you having a laugh there?" [F; 42; SOC 3]<br><br>"I'd say we go dancing at the weekends, yeah". [F; 22; SOC 2]<br><br>"I don't dance as much as I used to" [F; 32; SOC 4]<br><br>"Yeah, I dance yeah" [F; 42; SOC 3]<br><br>"That's very tiring..." [F; 31; SOC 5]<br><br>"Oh, you're telling me..." [F; 42; SOC 3]<br><br>"Oh the next day, you're all..." [F; 31; SOC 5]<br><br>"...all here kills you..." [F; 32; SOC 4] |

Table 3.6. *Full quotes from the raw data that detail properties of physical activity while doing domestic activities.*

| No. | Quote  |
|-----|--|
| 1   | "I better get the house done and go". [FG5; F; 19; SOC 5]  |
| 2   | "It just depends on what part of the gardening chore or domestic chore you're doing". [FG3; F; 41; SOC 5]<br>"Well I personally think of it as in the garden because I think of the garden as very physical work. There is a lot of work in gardening" [FG7; F; 42; SOC 1]<br>"Well my father is only after coming home from hospital so...I have to do extra work around the house" [FG5; F; 19; SOC 5] |
| 3   | [FG5]<br>"Cleaning the windows", "Washing and ironing and delph", "Need to sort clothes out", "Mow the lawn and just do everything out in the garden", "Cooking dinner", "Doing a bit of gardening...like if the grass needed to be cut", "Cooking the kids breakfast...just general cleaning over the kitchen and after that making the beds before I went to work", "Sweeping the floor, washing       |

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the delph, cleaning the windows", "Cooking dinners, cleaning, ironing, bring washing out to the line, hoovering".

[F.G. 8]

"Sweeping the floor", "Weeding the garden", "Doing things around the house, getting kids dressed, getting the dinner...doing laundry..."

[F.G. 4]

"Cleaning the house", "Hoovering and em, gardening, that kind of thing", "I'd tidy the house everyday...but I'd clean the house once a week..."

[F.G. 1]

"Doing the washing up, even things in your house, ironing or whatever....", "Making dinner...em...cooking chicken, taking it out of the oven"

[F.G. 7]

"Rubbing and cleaning and cooking", "Doing all that tidying up", "Doing things all day long, be it ironing...mopping the floors or whatever else"

[F.G. 3]

"I suppose hoovering and washing dishes and things like that, you know", "Hoovering", "Making a pot of soup", "Mowing the lawn", "Cleaning", "Like washing a window", "Like digging or lifting or raking, [moving] the mower around"

[F.G. 2]

"Hoovering the stairs and cleaning", "Tidying my room...putting clothes away", "Yeah, folding clothes and putting them away"

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Table 3.7. *Full quotes from the raw data that detail properties of physical activity while doing occupational activities.*

| No. | Quote   |
|-----|---|
| 1   | "It depends on what your job is. Like what I used to do was steel work with my dad and that was basically 8 to 10 or maybe 14 hours a day carrying girders around the place, humping lumps of steel. But now at the moment I'm working in an office and I basically walk around a plant, monitor things, do things which to me is not very physically active" [FG4; M; 29; SOC 5] |
| 2   | "Nursing is quite physically active as well and I do sports massage therapy as well and that's very physical" [FG4; F; 33; SOC 5]   |
| 4   | "It could be a quiet day and you wouldn't have anything to do really, you know, to be physically active. But there's days when you're just walking a lot...fast and doing a lot of lifting...it's part of the day" . [FG4;F; 31; SOC5]  |
|     | "What I was going to say is that I'm not into sport or anything but the building and the farming we'll say, is about the same type of work...you know it's the same physical work" . [FG6;M;42; SOC 3]  |

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Table 3.8. *Full quotes from the raw data that detail properties of physical activity while doing family activities.*

| No. | Quote  |
|-----|--|
| 1   | "...I would say around 10 o'clock my kids would go to bed...the day is gone and it was just constant, constant, constant going all of the time" . [FG7; F;36; SOC 4] |

Table 3.10. *Full quotes from the raw data that detail properties of moderate intensity physical affect*

Table 3.11. *Full quotes from the raw data that detail properties of moderate intensity psychological affect*

No Quote

No. Quote

- 1 "I think typically that doesn't have you out of breath"  
"Breathing a bit faster. I know it's related to your heart rate but your lungs are opening up as well"  
"Your breathing would be increased as well" [FG4]  
  
"Breathless"[ FG6]  
  
"Taking deeper breaths and stuff like that...but not breathless" [FG3]  
  
"Breath deeper"  
"Breathless" [FG2]  
  
"Out of breath" [FG5]
- 4 "Skin dampens" [FG8; F; 30; SOC 5]  
"Start sweating" [FG8; F; 27; SOC 5]  
"Light sweat" [FG8; M; 29; SOC 5]  
"Breaking a sweat" [FG4; M; 29; SOC 5]  
"Breaking a sweat" [FG4; F; 33; SOC 5]  
"Sweating slightly" [FG4; F; 20; SOC 5]  
"Perspiration" [FG1; F; 42; SOC 3]  
"A light perspiration" [FG7; M; 42; SOC 2]  
"Slightly sweaty" [FG2; M; 29; SOC 3]
- 5 [FG3]  
"I think that moderate intensity is before you feel any pain in the muscle" [M; 20; SOC 5]  
  
"Before, yeah" [F; 30; SOC 2]  
"I just meant like when it's painful, then it's not moderate anymore" [M; 20; SOC 5]
- 6 "I think the walk home kind of stretches the muscles a bit more and I feel better actually after walking home" [FG2; F; 32; SOC 3]  
  
"...you can feel your body stretching and your muscles like...loosening" [FG2; M; 20; SOC 3]
- 7 "After Christmas I took up walking and for the first couple of weeks it'd stiffen you up well, do you know what I mean?" [FG6; M; 42; SOC 3]

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- 1 [FG4]  
"More awake, aware and alert" [F; 23; SOC 3]  
"...concentrating more" [F; 20; SOC 5]  
"...you focus on, OK the sport, the activity, the enjoyment part of it as you are more likely to acknowledge those, aren't you" [F; 28; SOC 3]
- 2 [F.G. 6]  
"Your mental focus changing" [F; 54; SOC 3]  
"It's the focus you have in doing something" [M; 34; SOC 5]
- [F.G. 3]  
"Knowing that you are exercising without it being a workout as such" [F; 37; SOC 3]  
"Knowing that you are exercising" [F; 53; SOC 2]  
"Conscious that you're doing something, do you know?" [F; 37; SOC 3]
- [F.G. 2]  
"Become more focussed, I think become more aware of your body...your body actually knows what's happening." [M; 29; SOC 3]  
"You would get into focus basically...you would look like you were in purpose" [M; 20; SOC 3]  
"...I would consider that bordering on moderate because you're putting the mental effort into doing it" [M; 31; SOC 4]
- 4 "I suppose something that you'd be enjoying as well, you know, part of exercise" [FG7; F; 42; SOC 1]
- 5 "For moderate, we would actually enjoy it if we kind of...we'd be that much warmer, you'd be a bit more uplifted, you know...you'd enjoy what you were doing for moderate. " [FG7; F; 36; SOC 4]  
"Sorry Mandy, when you say uplifted, what do you mean?" [Moderator]  
"Your mood. You're getting the rush."
- 10 [FG7]  
"There is a big link between mental activity and physical activity because if you are mentally tired, you are going to be physically tired and so a lot of it might be that if you were to do it without being mentally tired, it'd be just ordinary activity, it would be just light activity but because you are mentally under strain, it becomes a moderate activity." [M; 25; SOC 5]  
"It becomes hard work, doesn't it?" [Kathleen; 46; SOC 3]  
"Oh definitely, it depends on whether you're in good form or in bad form. You'd do more if you were in good form" [F; 37; SOC 5]  
"For example in the classroom now, if you've had a tough day in the class room, even though you've only walked the same amount as...you've only done the same amount of physical exercise, you're still a lot more tired when you get home, physically like you know. So, it does take it out of you physically" [M; 25; SOC 5]  
"And it depends on what you enjoy doing as well. Sometimes I feel I could be up at 7, go into work, come home and be shattered from doing absolutely nothing and then I could be up at 7, get a great days work done and not feel a bit tired. So,
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- 11 I think it has a lot to do with mental..." [F; 37; SOC 5]  
 [FG2]  
 "I mean I think it's...psychological as well because somedays you can, I don't know, like not feel...you could be going at the same pace, you could get there in the same amount of time but you're not...you're mentally not into it" [F; 31; SOC 4]  
 "Absolutely not it's a mental thing totally" [M; 31; SOC 4]  
 "Yeah" [F; 31; SOC 4]  
 "By eh, how much effort you're exerting" [M; 31; SOC 4]
- 12 [F.G. 7]  
 "It'd be different for everybody, depending upon your fitness" [F;21;SOC 5]  
 "...I mean it would depend on the weight of the person" [F; 37; SOC 5]  
 "Exactly" [M; 55; SOC 5]  
 "Everyone is different" [F; 37; SOC 5]  
 "It all depends on your personal fitness. I mean you might get a 40 year old who might run 3 miles a lot quicker than some 21 year old" [F; 21; SOC 5]
- [F.G. 8]  
 "I presume it depends on your fitness level" [F; 45; SOC 5]  
 "Everyone is different because everyone has a different fitness level. I mean I could go walking with someone and I could be walking ahead of them and they wouldn't be able to keep up with me. Well, they'd be pushing themselves to walk that way, you know so it depends on their fitness level" [F; 49; SOC 3]
- 13 "I was walking with a friend...we walked the same distance, we said we'd walk 3 miles around a circle, right? I was fine walking and we were talking and I knew she was finding it a struggle to keep up with me but she did. But by the time she got back, she was just completely sweating, a high colour, red and I was just normal. And she kept up with me and we did the very same walk...but she was just completely...like water running off her face, a high colour" [FG8; F; 49; SOC 3]
- "Also as well, like if you're used to doing a sport, like you might be used to running 10 or 20k or cycling 20 miles a day and it wouldn't take anything out of you, but if you clean the house and you spend 2 or 3 hours cleaning the house and you're wrecked after it. It's just not the same kind of measurable physical activity and you know something like that would be moderate..." [FG4; F; 20; SOC 5]
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Table 3.12. Full quotes from the raw data that detail examples of high intensity activities



| No. | Quote  |
|-----|--|
| 1   | "I think high intensity is really going for the top...in the Sonia O'Sullivan league. They go for mental, physical health...the whole lot" [FG6; M; 34; SOC 5]   |
| 3   | [FG8]<br>"During the week I was running on a treadmill and I suppose it was at a fairly high grade but it would have been intense for me" [M; 29; SOC 5]<br>"I did running today and I did it at a high intensity" [F; 19; SOC 5]<br>"Gym yesterday, it was high alright, I was wrecked after it" [F; 30; SOC 5]   |
| 4   | "As a highly intensive...eh, high intensity, I would easily swim lengths all day but putting in a faster time would be a high endurance or high intensity. [It would] be calm and be OK to swim 50 or 60 times in 3 minutes a length is no problem, but to do it in 2 minutes that would be pushing myself" [FG1; M; 24; SOC 3]<br>"The weekend is the time I like to run longer runs so...I put in very high intensity activity as well over the weekends" [FG1; M; 50; SOC 5]                                    |
| 5   | "Yeah whatever, I'm using you as a warm-up before I go into the higher and I try to attack the 3 <sup>rd</sup> and 4 <sup>th</sup> Dans, because I'm only a 1 <sup>st</sup> Dan...a 1 <sup>st</sup> Dan black and I'll be attacking the 4 <sup>th</sup> Dans" [FG4; M; 29; SOC 5]<br>"It's like with the martial arts that I do, we do a warm-up...just to get your body warmed up, but then we would do light stretches to get our legs and our bodies ready for say high intensity sparring" [FG2; M; 20; SOC 3] |
| 6   | "You'd see some people up there and it's punishment! I don't believe in kind of like where you'd be wringing your t-shirt out...that is such, you know...I'm a bad person!" [FG3; F; 37; SOC 3]<br>"Gym yesterday. It was high alright, I was wrecked after it" [FG8; F; 30; SOC 5]<br>"Say with the aerobics type thing, when you reach the burnout stage" [FG6; F; 52; SOC 3]  |
| 7   | [F.G. 3]<br>"If a kid tries to get you to play with them, I don't know, like I was at a party...and the kids were all playing games and involved in running around and that and you couldn't keep it up for long. I couldn't keep it up for long! You know, whereas they can play all afternoon. So, it could actually be moderate" [F; 41; SOC 5]<br>"Hitting on intense" [F; 29; SOC 5]<br>"Maybe even intense if you tried to keep up with them!" [F; 41; SOC 5]  |
| 8   | "Running for a meeting" [FG3; F; 53; SOC 2]<br>"Bursts of high intensity, maybe hurrying for an appointment or a connection or...a train connection or something like that" [FG3; F; 41; SOC 5]  |
| 11  | [F.G. 4]<br>"I would actually...housework...I would actually tidy the house everyday, but I would actually clean the house... once a week. It's like, move the furniture and everything else and I do that in a frenzy because I hate doing it and it's like by the time you're finished...the sweat is pouring off you and..." [F; 37; SOC 5]<br>"You're pure wrecked" [F; 29; SOC 2]<br>"...you're absolutely wrecked but you look back and the smell of the house and   |

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|    |  |
|----|--|
|    | the look of the house and that's pure satisfaction and you're talking 2 hard hours of just cleaning and it's, that's not just moderate, that's killing yourself! But that's only once a week" [F; 37; SOC 5]   |
| 13 | [FG7]<br>"Well I personally think of it [high intensity] as in the garden because I think of the garden as very physical work. There is a lot of work in the gardening, because it does take a lot of time and I find that the next day, that my muscles and my bones...I feel like an old woman sometimes" [F; 42; SOC 1]<br>"But what intensity is that if you are feeling changes like that?" [Moderator]<br>"That would be high intensity" [F; 46; SOC 3]<br>"Yeah, it would be a high intensity" [F; 42; SOC 1] |

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Table 3.13. *Full quotes from the raw data that detail properties of high intensity physical affect*

| No | Quote  |
|----|--|
| 1  | "[I was at the] gym yesterday, it was high alright. I was wrecked after it" [FG8; F; 30; SOC 5]<br>"You're pure wrecked" [FG4; F; 29; SOC 2]<br>"I'd call it intense because I'd be wrecked" [FG7; F; 21; SOC 5]   |
| 2  | "If you try to start at a level that is too high, too intense and it's uncomfortable, you're not going to push that hard for too long" [FG8; F; 45; SOC 5]<br>"It's probably going beyond your own level, beyond what you can normally achieve" [FG6; F; 34; SOC 5]<br>"Heavy intensity then would be bringing yourself to your limit, whatever your fitness level is" [FG6; F; 52; SOC 5]<br>"High intensity would be, I would say would be pushing yourself to your limits" [FG2; F; 35; SOC 3]<br>"...to me high intensity, you're...ready to collapse" [FG2; F; 23; SOC 5] |
| 3  | "The higher is going to be more stressful, more taxing on the body" [FG7; M; 55; SOC 5]<br>"Well, I would feel dreadful for the first 20 minutes. I definitely feel sort of, if I haven't been...now tonight I know I'm going to feel sick in the first 10 minutes, I'm going to feel waves of nausea..." [FG3; F; 37; SOC 3]<br>"Well, I just felt like when it gets painful, then it's not moderate anymore" [FG3; M; 20; SOC 5]   |
| 4  | "The fitter I get, the more I can do, the more intense I can make my programmes" [FG7; F; 21; SOC 5]<br>"So I suppose I must be maintaining a level of fitness" [FG3; F; 42; SOC 5]  |

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Table 3.14. *Full quotes from the raw data that detail properties of high intensity psychological affect*

| No | Quote  |
|----|--|
| 1  | <p>“More intense stuff, you’re really watching or...physically concentrating on what you’re actually doing” [FG4; M; 30; SOC 5]</p> <p>“Yeah...this absolute haze of intensive exercise, you know that’s all your focussing on” [FG1; F; 32; SOC 2]</p>  |
| 3  | <p>“I would be dying when I’m doing it, saying oh God! I wish...I hate this so much but it’s the idea that I’ve done my hour in the gym and I deliberately don’t spend any more than an hour. When the hour is up, that’s it, I’m sorry but if you haven’t done your 27 press ups, you don’t do that then” [FG3; F; 37; SOC 3]</p> |

#### APPENDIX FOUR — INFORMED CONSENT

**Dublin City University**

**RESEARCH INFORMED CONSENT FORM FOR ADULTS (STUDY ONE)**

**I. Project Title:**

The development and validation of the Physical Activity Recall Questionnaire (PARQ).

**II. Introduction to this study:**

Regular physical activity has been shown to reduce the risk for developing heart disease, diabetes, high blood pressure and some forms of cancers. At the present time there is no valid tool to assess physical activity levels among Irish men and women. Physical activity questionnaires/interviews are the most commonly used method to determine the activity levels of a large number of people. The purpose of this study is to develop a questionnaire that can measure the activity levels of Irish people.

**III. I am being asked to take part in this research study. The study has the following purposes:**

1. To develop a questionnaire that will measure the previous week's physical activity,
2. To develop a questionnaire that records how ready an individual is to change his or her exercise behaviour.
3. To develop a questionnaire that would be practical for use with a large number of people and could be administered by interview or by post.

**IV. This research study will take place at Dublin City University, and will last for 30 weeks.**

**V. This is what will happen during the research study:**

I will attend a focus group discussion at the Centre for Sport Science and Health in Dublin City University (DCU). This will involve a semi-structured discussion led by a member of the DCU research staff. I will be one of up to 10 individuals asked to take part. The focus group will last approximately 90 minutes and there will be light refreshments provided for me during this time. I will receive a sum of £15.00 to cover my travel expenses.

**Of the item(s) listed above, none are experimental**

**VI. There will be no direct benefit to me from participating in the study.**

**VII. My confidentiality will be guarded.**

Dublin City University will protect all the information about me and my part in this study. However, because this is a research study The Health Research Board, in Ireland, may look at the records of the research.

- VIII. Dublin City University will not pay medical expenses or pay for pain and suffering, lost wages or other indirect costs of taking part in this project.
- IX. If I have questions about the research in general, I can call Professor Conor Long, Dean of Research, at 7008000
- X. If I have questions about the research project, I am free to call Dr. Catherine Woods 7008808.
- XI **Taking part in this study is my decision.** If I do agree to take part, I may stop at any point without penalty although I will not be reimbursed for my time and travel as discussed above.
- XII **Signature:**

I have read and understood the information in this form. My questions and concerns have been answered by the researchers, and I have a copy of this consent form. Therefore, I consent to take part in this research project entitled "The development and validation of an Irish Physical Activity Questionnaire (IPAQ) on Adults".

Signed: \_\_\_\_\_

\_\_\_\_\_  
Relationship if not self

Date: \_\_\_\_\_

Witness: \_\_\_\_\_  
Signature

Witness: \_\_\_\_\_  
Printed name

**Dublin City University**

**RESEARCH INFORMED CONSENT FORM FOR ADULTS (STUDY 2)**

**I. Project Title:**

The development and validation of the Physical Activity Recall Questionnaire (PARQ).

**II. Introduction to this study:**

Regular physical activity has been shown to reduce the risk for developing heart disease, diabetes, high blood pressure and some forms of cancers. At the present time there is no valid tool to assess physical activity levels among Irish men and women. Physical activity questionnaires/interviews are the most commonly used method to determine the activity levels of a large number of people. The purpose of this study is to develop a questionnaire that can measure the activity levels of Irish people.

**III. I am being asked to take part in this research study. The study has the following purposes:**

1. To develop a questionnaire that will measure the previous week's physical activity,
2. To develop a questionnaire that records how ready an individual is to change his or her exercise behaviour.
3. To develop a questionnaire that would be practical for use with a large number of people and could be administered by interview or by post.

**IV. This research study will take place at Dublin City University, and will last for 30 weeks.**

**V. This is what will happen during the research study:**

I will attend a one-on-one interview at the Centre for Sport Science and Health, DCU. During this interview with the researcher, I will give my opinion on the draft version of the PARQ. I will be expected to have completed the PARQ prior to attending the interview. This interview will last approximately 60 minutes; light refreshments will be provided and I will also receive £15.00 to cover my expenses.

**Of the item(s) listed above, none are experimental**

**VI. There will be no direct benefit to me from participating in the study.**

**VII. My confidentiality will be guarded.**

Dublin City University will protect all the information about me and my part in this study. However, because this is a research study The Health Research Board, in Ireland, may look at the records of the research.

**VIII. Dublin City University will not pay medical expenses or pay for pain and suffering, lost wages or other indirect costs of taking part in this project.**

- IX. If I have questions about the research in general, I can call Professor Conor Long, Dean of Research, at 7008000**
- X. If I have questions about the research project, I am free to call Dr. Catherine Woods 7008808.**
- XI Taking part in this study is my decision.** If I do agree to take part, I may stop at any point without penalty although I will not be reimbursed for my time and travel as discussed above.

**XII Signature:**

I have read and understood the information in this form. My questions and concerns have been answered by the researchers, and I have a copy of this consent form. Therefore, I consent to take part in this research project entitled "The development and validation of an Irish Physical Activity Questionnaire (IPAQ) on Adults".

Signed: \_\_\_\_\_

\_\_\_\_\_  
Relationship if not self

Date: \_\_\_\_\_

Witness: \_\_\_\_\_  
Signature

Witness: \_\_\_\_\_  
Printed name



## **Dublin City University**

### **RESEARCH INFORMED CONSENT FORM FOR ADULTS (STUDY 3)**

**I. Project Title:**

The development and validation of the Physical Activity Recall Questionnaire (PARQ).

**II. Introduction to this study:**

Regular physical activity has been shown to reduce the risk for developing heart disease, diabetes, high blood pressure and some forms of cancers. At the present time there is no valid tool to assess physical activity levels among Irish men and women. Physical activity questionnaires/interviews are the most commonly used method to determine the activity levels of a large number of people. The purpose of this study is to develop a questionnaire that can measure the activity levels of Irish people.

**III. I am being asked to take part in this research study. The study has the following purposes:**

1. To develop a questionnaire that will measure the previous week's physical activity,
2. To develop a questionnaire that records how ready an individual is to change his or her exercise behaviour.
3. To develop a questionnaire that would be practical for use with a large number of people and could be administered by interview or by post.

**IV. This research study will take place at Dublin City University, and will last for 30 weeks.**

**V. This is what will happen during the research study:**

I will complete the finalised version of the PARQ at two separate time points over a seven-day period.

**Of the item(s) listed above, none are experimental**

**VI. There will be no direct benefit to me from participating in the study.**

**VII. My confidentiality will be guarded.**

Dublin City University will protect all the information about me and my part in this study. However, because this is a research study The Health Research Board, in Ireland, may look at the records of the research.

**VIII. Dublin City University will not pay medical expenses or pay for pain and suffering, lost wages or other indirect costs of taking part in this project.**

**IX. If I have questions about the research in general, I can call Professor Conor Long, Dean of Research, at 7008000**

**X. If I have questions about the research project, I am free to call Dr. Catherine Woods 7008008.**

**XI Taking part in this study is my decision.** If I do agree to take part, I may stop at any point without penalty although I will not be reimbursed for my time and travel as discussed above.

**XII Signature:**

I have read and understood the information in this form. My questions and concerns have been answered by the researchers, and I have a copy of this consent form. Therefore, I consent to take part in this research project entitled "The development and validation of an Irish Physical Activity Questionnaire (IPAQ) on Adults".

Signed: \_\_\_\_\_

**Dublin City University**

**RESEARCH INFORMED CONSENT FORM FOR ADULTS (STUDY 4)**

**I. Project Title:**

The development and validation of the Physical Activity Recall Questionnaire (PARQ).

**II. Introduction to this study:**

Regular physical activity has been shown to reduce the risk for developing heart disease, diabetes, high blood pressure and some forms of cancers. At the present time there is no valid tool to assess physical activity levels among Irish men and women. Physical activity questionnaires/interviews are the most commonly used method to determine the activity levels of a large number of people. The purpose of this study is to develop a questionnaire that can measure the activity levels of Irish people.

**III. I am being asked to take part in this research study. The study has the following purposes:**

1. To develop a questionnaire that will measure the previous week's physical activity,
2. To develop a questionnaire that records how ready an individual is to change his or her exercise behaviour.
3. To develop a questionnaire that would be practical for use with a large number of people and could be administered by interview or by post.

**IV. This research study will take place at Dublin City University, and will last for 30 weeks.**

**V. This is what will happen during the research study:**

This will involve attending the CSSH, DCU on two separate occasions. I will receive a total of £20.00 to cover my traveling expenses.

On the first visit, I will be instructed in how to use a Motion Sensor device and a heart rate monitor. These devices require relatively little time and effort on my part to operate; they are small and unobtrusive so do not affect my participation in physical activity. I will be asked to wear a Motion Sensor device for four consecutive days. This motion sensor is able to estimate my total kilocalorie expenditure during the period it is worn. After 5 days I will be asked to complete the PARQ. It will therefore be possible to make a comparison between the activity kilocalories and the minutes of self-report physical activity.

On my second visit to CSSH, DCU I will undergo an exercise test on the treadmill. During this visit I will walk on a treadmill for 20 minutes. I will not eat for 6 hours before any of the tests. This visit to the Exercise Physiology Laboratory will last approximately 1 hour. In order to measure how much oxygen I consume, a nose clip will be attached to my nose and a rubber mouthpiece attached to a headset will be placed in my mouth for the duration of the exercise test. During each test medical personnel will closely monitor me with an electrocardiogram.

- VI. Sometimes there are side effects after exercise testing. These side effects are called risks, and for this project, the risks are:

Exercise testing carries with it a very small risk of abnormal heart rhythms, heart attack or death in less than one in 30,000 individuals. Because I will be asked to give a maximum effort, I may experience some muscle soreness in my arms and legs following the test.

- VII. There may be benefits from participation in this research.

I will receive a copy of my personal body fat and fitness measurements after the study as well as a summary of the overall results. There are no other direct benefits to me.

- VII. My confidentiality will be guarded.

Dublin City University will protect all the information about me and my part in this study. However, because this is a research study The Health Research Board, in Ireland, may look at the records of the research.

- VIII. Dublin City University will not pay medical expenses or pay for pain and suffering, lost wages or other indirect costs of taking part in this project.

- IX. If I have questions about the research in general, I can call Professor Conor Long, Dean of Research, at 7008000

- X. If I have questions about the research project, I am free to call Dr. Catherine Woods 7008008.

- XI. Taking part in this study is my decision. If I do agree to take part, I may stop at any point without penalty although I will not be reimbursed for my time and travel as discussed above.

**XII Signature:**

I have read and understood the information in this form. My questions and concerns have been answered by the researchers, and I have a copy of this consent form. Therefore, I consent to take part in this research project entitled "The development and validation of an Irish Physical Activity Questionnaire (IPAQ) on Adults".

Signed: \_\_\_\_\_

Date: \_\_\_\_\_

Relationship if not self

Witness: \_\_\_\_\_

Signature

Witness: \_\_\_\_\_

Date: \_\_\_\_\_

Printed name

APPENDIX FIVE – FIRST DRAFT OF PARQ

# Irish Lifestyle Physical Activity Questionnaire

## For Adults

- This questionnaire provides a way of measuring how much day-to-day activity that you have done over the past 7 days
- This can provide important information about your general health and well-being

- For this reason, it is VERY important to answer all questions as **accurately** and as **honestly** as you can
- All of your answers will be treated in strict confidence
- This questionnaire is easy to complete and will take about \_\_\_\_\_ minutes
- Thank you for taking the time to complete this questionnaire!

Personal Calendar

| <u>MONDAY</u> | <u>TUESDAY</u> | <u>WEDNESDAY</u> | <u>THURSDAY</u> |
|---------------|----------------|------------------|-----------------|
|               |                |                  |                 |

To help you remember what you did in your past 7 days;

- Please look at the boxes above. In the box that correspond to **yesterday**, write in one thing that stands out in you memory about yesterday

For example:  
Something you did – went shopping, dancing, met friends, wen to the cinema etc.

**OR** Something that happened to you – late for work, felt ill, go paid, brought children to class

**OR** Something from the news, sport or television

- Now, please write something in **each** box that you remember about **each** of the **last 7** days
- If you are currently in a job, please also write **"Day Off"** in the boxes of the days that you did not work
- An example is provided below

|  |   |   |   |
|--|---|---|---|
| <u>MONDAY</u><br>Met Ann for lunch<br>Watched Man. Utd.<br>match on TV | <u>TUESDAY</u><br>Raining all day<br>DAY OFF                | <u>WEDNESDAY</u><br>Worked evening shift,<br>off late | <u>THURSDAY</u><br>Brought children<br>swimming |
| <u>FRIDAY</u><br>Did the messages, saw<br>Coronation St.               | <u>SATURDAY</u><br>Went to town, DAY OFF<br>Went to the pub | <u>SUNDAY</u><br>Went for a walk                      |   |

**Lifestyle physical activity** is any body movement that is done during any part of a person's usual day. For example, lifestyle physical activity can occur at home, at work, during sport and exercise, looking after children or while travelling.

Lifestyle physical activities can be done at different **intensities**. Each intensity has a different **physical and mental effect** on the person.

The following questions will ask you about the **different types** of physical activity that you have done at **different intensities** over the **past 7 days**.

Please take your time and try to count as accurately as you can the amount of minutes you spent doing activities at each intensity during the past 7 days.



1. The following questions relate to physical activities of a **high intensity**. Please look at the description of a high intensity activity and how it might affect you.

**High Intensity** – This is activity at a maximum level. It is very tiring and cannot usually be continued for long periods. It requires near to 100% effort.

- Your heart rate is very fast and you have to breathe deeply
- You sweat a lot
- You are fully concentrating on what you are doing
- You feel “wrecked”

With the help of your personal calendar above, please **calculate** how many **minutes** you spent on **each** of the past **7** days doing high intensity activities. Please also give an example of the activity you did most in that category. An example is given:

**Family Physical Activity**

| <u>MON</u>   | <u>TUES</u>  | <u>WED</u>   | <u>THURS</u> | <u>FRI</u>   | <u>SAT</u>    | <u>SUN</u>   |
|--------------|--------------|--------------|--------------|--------------|---------------|--------------|
| 3<br>Minutes | 7<br>Minutes | 0<br>Minutes | 0<br>Minutes | 0<br>Minutes | 15<br>Minutes | 7<br>Minutes |

What activity did you do most of: Playing football with my son

## Housework And Gardening Physical Activity

Examples: lifting furniture, hard cleaning, digging, scrubbing

**Remember** only include activities that made you **feel** like the ways described for **high** intensity activities.

| <u>MON</u> | <u>TUES</u> | <u>WED</u> | <u>THURS</u> | <u>FRI</u> | <u>SAT</u> | <u>SUN</u> |
|------------|-------------|------------|--------------|------------|------------|------------|
| Minutes    | Minutes     | Minutes    | Minutes      | Minutes    | Minutes    | Minutes    |

What activity did **you** do most of?: \_\_\_\_\_

|                     |                 |             |
|---------------------|-----------------|-------------|
| BREATHE VERY DEEPLY | FAST HEART RATE | SWEAT A LOT |
| CONCENTRATING HARD  | FEELING WRECKED |             |

## Sport and Exercise Physical Activity

Examples: high impact aerobics, sprinting, playing a match, fast swimming

**Remember** only include activities that made you **feel** like the ways described for **high** intensity activities.

| <u>MON</u> | <u>TUES</u> | <u>WED</u> | <u>THURS</u> | <u>FRI</u> | <u>SAT</u> | <u>SUN</u> |
|------------|-------------|------------|--------------|------------|------------|------------|
| Minutes    | Minutes     | Minutes    | Minutes      | Minutes    | Minutes    | Minutes    |

What activity did **you** do most of?: \_\_\_\_\_

## Family Physical Activity

Examples: playing with children

**Remember** only include activities that made you **feel** like the ways described for **high** intensity activities.

| <u>MON</u> | <u>TUES</u> | <u>WED</u> | <u>THURS</u> | <u>FRI</u> | <u>SAT</u> | <u>SUN</u> |
|------------|-------------|------------|--------------|------------|------------|------------|
| Minutes    | Minutes     | Minutes    | Minutes      | Minutes    | Minutes    | Minutes    |

What activity did **you** do most of?: \_\_\_\_\_

|                     |                 |             |
|---------------------|-----------------|-------------|
| BREATHE VERY DEEPLY | FAST HEART RATE | SWEAT A LOT |
| CONCENTRATING HARD  | FEELING WRECKED |             |

## Leisure Physical Activity

Examples: hill walking, fast dancing/walking, cycling up a hill

**Remember** only include activities that made you **feel** like the ways described for **high** intensity activities.

| <u>MON</u> | <u>TUES</u> | <u>WED</u> | <u>THURS</u> | <u>FRI</u> | <u>SAT</u> | <u>SUN</u> |
|------------|-------------|------------|--------------|------------|------------|------------|
| Minutes    | Minutes     | Minutes    | Minutes      | Minutes    | Minutes    | Minutes    |

What activity did **you** do most of?: \_\_\_\_\_

## Occupational Physical Activity

Examples: heavy lifting or carrying

**Remember** only include activities that made you **feel** like the ways described for **high** intensity activities.

| <u>MON</u> | <u>TUES</u> | <u>WED</u> | <u>THURS</u> | <u>FRI</u> | <u>SAT</u> | <u>SUN</u> |
|------------|-------------|------------|--------------|------------|------------|------------|
| Minutes    | Minutes     | Minutes    | Minutes      | Minutes    | Minutes    | Minutes    |

What activity did **you** do most of?: \_\_\_\_\_

|                     |                 |             |
|---------------------|-----------------|-------------|
| BREATHE VERY DEEPLY | FAST HEART RATE | SWEAT A LOT |
| CONCENTRATING HARD  | FEELING WRECKED |             |

## Other Physical Activity

Examples: running up stairs, late for an appointment/work/college

**Remember** only include activities that made you **feel** like the ways described for **high** intensity activities.

| <u>MON</u> | <u>TUES</u> | <u>WED</u> | <u>THURS</u> | <u>FRI</u> | <u>SAT</u> | <u>SUN</u> |
|------------|-------------|------------|--------------|------------|------------|------------|
| Minutes    | Minutes     | Minutes    | Minutes      | Minutes    | Minutes    | Minutes    |

What activity did **you** do most of?: \_\_\_\_\_

2. The following questions relate to physical activities of a **moderate intensity**. Please look at the description of a high intensity activity and how it might affect you.

**Moderate Intensity** – This is activity at a steady, constant level. You're aware that you are active, but it's not too tiring. You are making an effort (maybe 50%), working against a resistance.

- You take deeper breaths and your heart rate is increased
- You are slightly sweating and slightly flushed
- You're muscle feels tense or stretched
- You feel comfortable
- You are slightly focussed on the activity
- You may have a "feel good" sense of well-being

With the help of your personal calendar above, please **calculate** how many **minutes** you spent on **each** of the past **7** days doing **moderate** intensity activities. Please also give an example of the activity you did most in that category.



## Housework And Gardening Physical Activity

Examples: carrying shopping, vacuuming carpets, pushing a lawn mower

**Remember** only include activities that made you **feel** like the ways described for **moderate** intensity activities.

| <u>MON</u> | <u>TUES</u> | <u>WED</u> | <u>THURS</u> | <u>FRI</u> | <u>SAT</u> | <u>SUN</u> |
|------------|-------------|------------|--------------|------------|------------|------------|
| Minutes    | Minutes     | Minutes    | Minutes      | Minutes    | Minutes    | Minutes    |

What activity did **you** do most of?: \_\_\_\_\_

|              |                      |                        |          |
|--------------|----------------------|------------------------|----------|
| FLUSHED FACE | INCREASED HEART RATE | FEEL GOOD              | FOCUSSED |
| SLIGHT SWEAT | COMFORTABLE PACE     | SLIGHTLY OUT OF BREATH |          |

## Sport and Exercise Physical Activity

Examples: usual gym workout, team training, dance/ aerobic classes

**Remember** only include activities that made you **feel** like the ways described for **moderate** intensity activities.

| <u>MON</u> | <u>TUES</u> | <u>WED</u> | <u>THURS</u> | <u>FRI</u> | <u>SAT</u> | <u>SUN</u> |
|------------|-------------|------------|--------------|------------|------------|------------|
| Minutes    | Minutes     | Minutes    | Minutes      | Minutes    | Minutes    | Minutes    |

What activity did **you** do most of?: \_\_\_\_\_

## Family Physical Activity

Examples: looking after children or sick relatives, lifting or carrying them

**Remember** only include activities that made you **feel** like the ways described for **moderate** intensity activities.

| <u>MON</u> | <u>TUES</u> | <u>WED</u> | <u>THURS</u> | <u>FRI</u> | <u>SAT</u> | <u>SUN</u> |
|------------|-------------|------------|--------------|------------|------------|------------|
| Minutes    | Minutes     | Minutes    | Minutes      | Minutes    | Minutes    | Minutes    |

What activity did **you** do most of?: \_\_\_\_\_

|              |                      |                        |          |
|--------------|----------------------|------------------------|----------|
| FLUSHED FACE | INCREASED HEART RATE | FEEL GOOD              | FOCUSSED |
| SLIGHT SWEAT | COMFORTABLE PACE     | SLIGHTLY OUT OF BREATH |          |

## Leisure Physical Activity

Examples: nightclub dancing, power walking, leisure cycling, swimming

**Remember** only include activities that made you **feel** like the ways described for **moderate** intensity activities.

| <u>MON</u> | <u>TUES</u> | <u>WED</u> | <u>THURS</u> | <u>FRI</u> | <u>SAT</u> | <u>SUN</u> |
|------------|-------------|------------|--------------|------------|------------|------------|
| Minutes    | Minutes     | Minutes    | Minutes      | Minutes    | Minutes    | Minutes    |

What activity did **you** do most of?: \_\_\_\_\_

## Commuting Physical Activity

Examples: walking or cycling to work, college, an appointment

**Remember** only include activities that made you **feel** like the ways described for **moderate** intensity activities.

| <u>MON</u> | <u>TUES</u> | <u>WED</u> | <u>THURS</u> | <u>FRI</u> | <u>SAT</u> | <u>SUN</u> |
|------------|-------------|------------|--------------|------------|------------|------------|
| Minutes    | Minutes     | Minutes    | Minutes      | Minutes    | Minutes    | Minutes    |

What activity did **you** do most of?: \_\_\_\_\_

|              |                      |                        |          |
|--------------|----------------------|------------------------|----------|
| FLUSHED FACE | INCREASED HEART RATE | FEEL GOOD              | FOCUSSED |
| SLIGHT SWEAT | COMFORTABLE PACE     | SLIGHTLY OUT OF BREATH |          |

## Occupational Physical Activity

Examples: going up and down stairs at work, lifting and carrying small things at

**Remember** only include activities that made you **feel** like the ways described for **moderate** intensity activities.

| <u>MON</u> | <u>TUES</u> | <u>WED</u> | <u>THURS</u> | <u>FRI</u> | <u>SAT</u> | <u>SUN</u> |
|------------|-------------|------------|--------------|------------|------------|------------|
| Minutes    | Minutes     | Minutes    | Minutes      | Minutes    | Minutes    | Minutes    |

What activity did **you** do most of?: \_\_\_\_\_



3. The following question relates **only** to **walking** that you have done over the past 7 days. Please look at your personal calendar and try to remember what days and for how many minutes you did some walking at a **moderate** or **high** intensity.

### **Walking Physical Activity**

(Examples: walking to work or college etc., power walking, hill walking)

**Remember** only include walking that made you **feel** like the ways described for **high** and **moderate** intensity activities.

| <u>MON</u> | <u>TUES</u> | <u>WED</u> | <u>THURS</u> | <u>FRI</u> | <u>SAT</u> | <u>SUN</u> |
|------------|-------------|------------|--------------|------------|------------|------------|
| Minutes    | Minutes     | Minutes    | Minutes      | Minutes    | Minutes    | Minutes    |

What type of walking did **you** do most of? \_\_\_\_\_

**4.** The following question relates to how many hours **sleep** you had over the past 7 nights. Please look at your personal calendar and try to calculate how many hours sleep you had each night.

## Sleep

[illegible]

**5.** The following questions relate to the times in the last 7 days when you did activities with no intensity, i.e. when you were **sedentary**. Please look at your personal calendar and try to remember what days and for how many minutes you did the following activities.

## Watching Television or Using the Computer (out of work)

[illegible]

### Reading Books, Magazines or Newspapers

| <u>MON</u> | <u>TUES</u> | <u>WED</u> | <u>THURS</u> | <u>FRI</u> | <u>SAT</u> | <u>SUN</u> |
|------------|-------------|------------|--------------|------------|------------|------------|
| Minutes    | Minutes     | Minutes    | Minutes      | Minutes    | Minutes    | Minutes    |

### At the pub, cinema, theatre

| <u>MON</u> | <u>TUES</u> | <u>WED</u> | <u>THURS</u> | <u>FRI</u> | <u>SAT</u> | <u>SUN</u> |
|------------|-------------|------------|--------------|------------|------------|------------|
| Minutes    | Minutes     | Minutes    | Minutes      | Minutes    | Minutes    | Minutes    |

### Time spent sitting at work or study

| <u>MON</u> | <u>TUES</u> | <u>WED</u> | <u>THURS</u> | <u>FRI</u> | <u>SAT</u> | <u>SUN</u> |
|------------|-------------|------------|--------------|------------|------------|------------|
| Minutes    | Minutes     | Minutes    | Minutes      | Minutes    | Minutes    | Minutes    |

6. Was the physical activity you did in the last 7 days **typical** of the amount that you would **normally** do?

Please tick one box

Yes ☐ No, I usually do more ☐ No, I usually do less ☐

| <u>FRIDAY</u> | <u>SATURDAY</u> | <u>SUNDAY</u> |
|---------------|-----------------|---------------|
|               |                 |               |

7. Please read the following statement:

**Regular physical activity** means building up at least **30 minutes** of moderate activity like lifting, cleaning, jogging, brisk walking on at least **5 days** a week.

Please read the following and answer the question at the end:

- A.** I do not do regular physical activity and do not intend to do so in the next 6 months
- B.** I do not do regular physical activity but am thinking about starting in the next 6 months
- C.** I do some regular physical activity, but not as much as in the description above
- D.** I am regularly physically active but only began in the last 6 months
- E.** I am regularly physically active and have been so for longer than 6 months

Please circle one letter

Which sentence above best describes **you**?   A  B  C  D  E

**8. PERSONAL INFORMATION** (All information will be held in strict confidence)

Name (Block Capitals): \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_

Telephone Number: \_\_\_\_\_

Date of Birth (dd/mm/yy): \_\_\_\_\_

Male/ Female: \_\_\_\_\_

Height: \_\_\_\_\_ Weight: \_\_\_\_\_

**THANK YOU FOR COMPLETING THIS QUESTIONNAIRE**

## APPENDIX SIX – COGNITIVE INTERVIEW SCRIPT

---

# Physical Activity Recall Questionnaire *for Adults*

**This questionnaire provides a way of measuring how much energy you have used while doing lifestyle physical activity over the past 7 days.**

**Lifestyle physical activity is any body movement that is done during any part of a person's usual day. It can occur at home, at work, looking after children, doing sport and exercise or while travelling.**

| <u>MONDAY</u>  | <u>TUESDAY</u>                      | <u>WEDNESDAY</u>                              |
|--|-------------------------------------|---|
| <p>Examples: _____</p> <p><i>Met Ann for coffee.</i></p> | <p>_____</p> <p><i>Day Off.</i></p> | <p>_____</p> <p><i>Worked late shift.</i></p> |

## START HERE

### STEP 1

Place a circle around the day that corresponds to **yesterday**.

### STEP 2

Please write **one thing** (anything at all) in each day above you remember about the **past 7 days**. This could be something you did or something that happened to you that you particularly remember about each day. Start with yesterday.

### STEP 3

Don't forget! Use the **Personal Calendar** to help you answer the **questionnaire**.



## ***NOW READ THIS***

The **First Set** of questions will ask you to **count how many minutes** of physical activity you did at **High Intensity** over the past 7 days.

### ***HIGH INTENSITY***

This is activity at a maximum level. It is very tiring and cannot usually be continued for long periods. It requires 70 - 100% effort and you may feel wrecked.

The **Second Set** of questions will ask you **count how many minutes** physical activity you did at **Moderate Intensity** over the past 7 days.

### ***MODERATE INTENSITY***

This is activity at a steady, constant level. You're aware that you are active, but it's not too tiring. You are making an effort (40-60%), working against a slight resistance.

This is activity at a maximum level. It is very tiring and cannot u

## **BREATHE VERY DEEPLY** **VER** **CONCENTRATING HARI**

Please answer **all** questions, i.e. put a number in **every box**. This is very **important**.  
For sections that do not apply to you, please write "**0 minutes**" into that box.  
See example across: .....

### **Over the past 7 Days:**

**1.1**      **How many minutes of Housework and Gardening Activity did you do that made you feel like the description above?**

**Examples:** lifting furniture, hard cleaning, digging, other...

**1.2**      **How many minutes of Sport and Free-Time Activity did you do that made you feel like the description above?**

**Examples:** high aerobics, playing a match, fast swimming, dancing classes, power walking

**1.3**      **How many minutes of Family Activity did you do that made you feel like the description above?**

**Example:** playing with children, caring for older relatives, other...

**1.4**      **How many minutes of Occupational Activity did you do that made you feel like the description above?**

**Examples:** lifting or carrying heavy items at work, other...

**1.5**      **How many minutes of Commuting Activity did you do that made you feel like the description above?**

**Examples:** walking, running or cycling to/from somewhere in a hurry, other...

ued for long periods. It requires 70 - 100% effort.

# ART RATE SWEAT A LOT FEELING WRECKED

## E: Commuting Activity

| Day | Tuesday      | Wednesday     | Thursday     | Friday       | Saturday      | Sunday       |
|-----|--------------|---------------|--------------|--------------|---------------|--------------|
| es. | 7<br>Minutes | 15<br>Minutes | 0<br>Minutes | 0<br>Minutes | 15<br>Minutes | 7<br>Minutes |

at activity did you do most of?: *Walking to work*

DON'T  
forget  
these

| TUES    | WED     | THURS   | FRI     | SAT     | SUN     |
|---------|---------|---------|---------|---------|---------|
| Minutes | Minutes | Minutes | Minutes | Minutes | Minutes |

activity did you do most of?:

| TUES    | WED     | THURS   | FRI     | SAT     | SUN     |
|---------|---------|---------|---------|---------|---------|
| Minutes | Minutes | Minutes | Minutes | Minutes | Minutes |

activity did you do most of?:

| TUES    | WED     | THURS   | FRI     | SAT     | SUN     |
|---------|---------|---------|---------|---------|---------|
| Minutes | Minutes | Minutes | Minutes | Minutes | Minutes |

activity did you do most of?:

| TUES    | WED     | THURS   | FRI     | SAT     | SUN     |
|---------|---------|---------|---------|---------|---------|
| Minutes | Minutes | Minutes | Minutes | Minutes | Minutes |

activity did you do most of?:

| TUES    | WED     | THURS   | FRI     | SAT     | SUN     |
|---------|---------|---------|---------|---------|---------|
| Minutes | Minutes | Minutes | Minutes | Minutes | Minutes |

activity did you do most of?:

This is activity at a steady, constant level.  
You are making an effort (4

## **SLIGHT INCREASE IN HEART RATE**

### **SLIGHTLY CONCENTRATING**

Count how many minutes you spent doing each of the following. Only count  
Use your **Personal Calendar** to help you remember what you did each day.

#### **Over the past 7 Days:**

**2.1 How many minutes of Housework and Gardening Activity did that made you feel like the description above?**

**Examples:** carrying shopping, vacuuming carpets, pushing a lawn mower, other...

**2.2 How many minutes of Sport and Free-Time Activity did you made you feel like the description above?**

**Examples:** gym, recreational walking, training, dance/aerobic classes, nightclub dancing

**2.3 How many minutes of Family Activity did you do that made feel like the description above?**

**Example:** looking after children or sick relatives, lifting or carrying them, other...

**2.4 How many minutes of Occupational Activity did you do that you feel like the description above?**

**Examples:** walking up and down stairs at work, lifting small things at work, other...

**2.5 How many minutes of Commuting Activity did you do that made you feel like the description above?**

**Examples:** brisk walking or cycling to/from somewhere, other...

that you are active, but it's not too tiring.  
ing against a slight resistance.

**DEEPER BREATHS**      **FEEL GOOD**  
**BLE PACE**      **SLIGHT SWEAT**

you feel like those in the box (above).

DON'T  
forget  
these

|                               | <u>TUES</u> | <u>WED</u> | <u>THURS</u> | <u>FRI</u> | <u>SAT</u> | <u>SUN</u> |
|-------------------------------|-------------|------------|--------------|------------|------------|------------|
| es                            | Minutes     | Minutes    | Minutes      | Minutes    | Minutes    | Minutes    |
| activity did you do most of?: |             |            |              |            |            |            |

|                               | <u>TUES</u> | <u>WED</u> | <u>THURS</u> | <u>FRI</u> | <u>SAT</u> | <u>SUN</u> |
|-------------------------------|-------------|------------|--------------|------------|------------|------------|
| es                            | Minutes     | Minutes    | Minutes      | Minutes    | Minutes    | Minutes    |
| activity did you do most of?: |             |            |              |            |            |            |

|                               | <u>TUES</u> | <u>WED</u> | <u>THURS</u> | <u>FRI</u> | <u>SAT</u> | <u>SUN</u> |
|-------------------------------|-------------|------------|--------------|------------|------------|------------|
| es                            | Minutes     | Minutes    | Minutes      | Minutes    | Minutes    | Minutes    |
| activity did you do most of?: |             |            |              |            |            |            |

|                               | <u>TUES</u> | <u>WED</u> | <u>THURS</u> | <u>FRI</u> | <u>SAT</u> | <u>SUN</u> |
|-------------------------------|-------------|------------|--------------|------------|------------|------------|
| es                            | Minutes     | Minutes    | Minutes      | Minutes    | Minutes    | Minutes    |
| activity did you do most of?: |             |            |              |            |            |            |

|                               | <u>TUES</u> | <u>WED</u> | <u>THURS</u> | <u>FRI</u> | <u>SAT</u> | <u>SUN</u> |
|-------------------------------|-------------|------------|--------------|------------|------------|------------|
| es                            | Minutes     | Minutes    | Minutes      | Minutes    | Minutes    | Minutes    |
| activity did you do most of?: |             |            |              |            |            |            |

|   |     |    |
|---|-----|----|
| Did you have usually done more moderate intensity activities in a week? | Yes | No |
|---|-----|----|

**3.** The following questions relate to the times in the last 7 days when you did activities with no intensity, i.e. when you were **inactive (sedentary)**. Use your **Personal Calendar** to help you remember.

Count how many **minutes** you did the following:



### 3.1 Watching television or using the computer (out of work)

[illegible]

### 3.2 Reading books, magazines or newspapers (out of work)

[illegible]

### 3.3 Sitting at the pub, cinema, theatre or restaurant

[illegible]

### 3.4 Sitting in the car, bus or train, other travel

[illegible]

unt how many **hours** you did the following:



**Time spent sitting at work or study**

| <b>MON</b> | <b>TUES</b> | <b>WED</b> | <b>THURS</b> | <b>FRI</b> | <b>SAT</b> | <b>SUN</b> |
|------------|-------------|------------|--------------|------------|------------|------------|
| Hours      | Hours       | Hours      | Hours        | Hours      | Hours      | Hours      |

**Sleep**



| <b>MON</b> | <b>TUES</b> | <b>WED</b> | <b>THURS</b> | <b>FRI</b> | <b>SAT</b> | <b>SUN</b> |
|------------|-------------|------------|--------------|------------|------------|------------|
| Hours      | Hours       | Hours      | Hours        | Hours      | Hours      | Hours      |

**KEEP GOING. . . .**  
**YOU'RE NEARLY FINISHED !**

4. Looking back on all of your answers, was the amount of physical activity you did in the last 7 days **typical** of the amount that you would **normally** do?

**Please tick one box**

Yes ☐

No, I usually do more ☐

No, I usually do less ☐

If no, why was this week unusual? \_\_\_\_\_

5. Please read the following and answer the question at the end:

**Regular physical activity means accumulating at least 30 minutes of at least moderate intensity activity like lifting, cleaning, jogging, brisk walking or playing sport on at least 5 days a week.**

- A. I do not do regular physical activity and do not intend to do so in the next 6 months
- B. I do not do regular physical activity but am thinking about starting in the next 6 months
- C. I do some physical activity, but not as much as in the description above. I intend to start doing more within the next 30 days
- D. I am regularly physically active but only began in the last 6 months
- E. I am regularly physically active and have been so for longer than 6 months

**Please circle one letter**

**Which sentence above best describes you?    A    B    C    D    E**



| <u>FRIDAY</u>       | <u>SATURDAY</u>    | <u>SUNDAY</u>          |
|---------------------|--------------------|------------------------|
| <i>Did shopping</i> | <i>Went to pub</i> | <i>Went for a walk</i> |

***This is the end of the questionnaire.***

***Please look back and make sure  
that you have answered all questions.***

*Thank you for  
completing this  
questionnaire*

*This questionnaire was developed by the School of Health and Human Performance at Dublin City University, with financial assistance from the Health Research Board.*



DCU

## Physical Activity Recall Questionnaire (PARQ) for Adults.

Cognitive Interview Protocol – Round One

Note: R = Respondent

### Page 1: Information page

**Observation:** Does R read all of page or skip?

*(To test whether placement of information on this page is worthwhile and whether R appears to **comprehend** the instructions)*

### Page 2: Personal Calendar (PC)

**Observation:** Does R read the instruction and start with yesterday?

Which order does R recall data?

Does R fill in “day off”?

*(To test how well R follows the instructions and to assess the natural direction of recall)*

**Probe:** When R finishes reading PC instructions: **Paraphrase:** In the section about the PC, can you tell me in your own words what you’ve been asked to do? (Has R included today or the day from previous week?)

*(To test how well R **comprehends** the context of the instructions)*

### Page 3: Definition page

**Observation:** Does R read through the entire page? Note any hesitations and undue delays in reading.

**Probe:** In your own words, can you tell me the difference between high and moderate intensity physical activity? Ask for examples of activities at both intensities?

**Observation:** Does R find the example?

*(To test how well R **comprehends** the general layout of the questionnaire and the context of the questions to follow)*

### Pages 4 & 5: High Intensity Question

**Observation:** Does R read all of the instructions on page 4? **Probe** if R seems confused.

Does R fill in all boxes?

Does R fill in “0” for boxes that do not apply?

Does R find the “activity you do most of?” question?

**Probe:** If no to any of above, ask “Why did you leave that box empty?”

*(To determine **comprehension (understanding)** of the question)*

**Observation:** Does R refer to the PC when thinking of answers?

**Probe:** Can you tell me what you understand by the word “(e.g. leisure)” in this question?

*(To determine **comprehension** of a particular term/word)*

When R finishes the high intensity section, **Probe:** Can you tell me what you were thinking when you calculated your answers for [X]? (Ask about a category that has some figures other than zero in it).

*(To assess **recall strategy** used to calculate answer)*

**Probe:** On a scale of 1-10, how confident are you that your answers are accurate, if 1= not confident and 10= very confident?

*(To determine overall confidence in **judgement** in providing an accurate answer)*

### **Pages 6 & 7: Moderate Intensity Question**

**Observation:** Does R read through all instructions?

Does R read through the yellow “affect” box?

Does R start with yesterday?

**Probe:** Can you talk out loud as you are going through the “housework and gardening” physical activity question and tell me what you are thinking?

Note the use of listed examples, reference to affect box and use of PC when calculating answers.

*(To assess the **comprehension** of the term and to determine whether the **recall strategy** involves estimating or using exact tally's)*

**Probe:** How are you calculating your figures for [X] category? Probe for information about frequency and duration. Listen for types of activities R considers relevant.

*(To assess **comprehension** of question (has R included relevant types of activities for this category) and to assess specific **recall strategies** for the duration and frequency of different activities)*

**Observation:** Does R fill in all boxes?

Does R find “activity you do most of?” question?

**Probe:** On a scale of 1-10, how easy did you find those answers to calculate, if 1= not easy and 10= very easy?

*(To determine the level of difficulty of **retrieving** information and to assess **judgement/** decision difficulties)*

### **Page 8: Walking Question**

**Observation:** Does R read through the instructions?

Does R hesitate or re-read? If so, **probe** for reason

Does R look back to high and moderate sections to calculate figures?

**Probe:** Can you tell me in your own words what you have been asked to do in this question?

*(To assess R's **comprehension** of the question)*

**Observation:** Does R complete all boxes? Does R find the "activity you do most of?" question?

### **Debriefing Interview:**

1. **Interviewer:** I want you to look back on your answers and on the questionnaire as a whole. Can you give me a rating, from 1 to 10, for each of the following categories:

- A. User-friendly, where 1 = not user friendly at all and 10 = extremely user-friendly
- B. Confidence in accuracy, 1 = not confident at all and 10 = extremely confident
- C. Ease of recall, 1 = not easy to recall and 10 = very easy to recall

2. **Interviewer:** If this questionnaire was posted to you with a cover letter from a health agency, for example, explaining the purpose of their research and asking you to complete the questionnaire and post it back to them. Would you complete it?

3. **Interviewer:** Have you any general comments or questions that you'd like to ask? Were there any difficulties that you had that I haven't asked about?

## APPENDIX SEVEN – QUESTIONNAIRE FOR COGNITIVE INTERVIEWS

# Irish Lifestyle Physical Activity Questionnaire

## For Adults

- **This questionnaire provides a way of measuring how many calories you have used while doing lifestyle physical activity over the past 7 days.**
- **Lifestyle physical activity is any body movement that is done during any part of a person's usual day. It can occur at home, at work, looking after children, doing sport and exercise or while travelling.**

**4.** The following questions relate to the times in the last 7 days when you did activities with no intensity, i.e. when you were **inactive (sedentary)**. Use your **Personal Calendar** to help you remember.

Count how many **minutes** you did the following:

**4.1 Watching Television or Using the Computer (out of work)**

| <b>MON</b> | <b>TUES</b> | <b>WED</b> | <b>THURS</b> | <b>FRI</b> | <b>SAT</b> | <b>SUN</b> |
|------------|-------------|------------|--------------|------------|------------|------------|
| Minutes    | Minutes     | Minutes    | Minutes      | Minutes    | Minutes    | Minutes    |

**4.2 Reading Books, Magazines or Newspapers (out of work)**

| <b>MON</b> | <b>TUES</b> | <b>WED</b> | <b>THURS</b> | <b>FRI</b> | <b>SAT</b> | <b>SUN</b> |
|------------|-------------|------------|--------------|------------|------------|------------|
| Minutes    | Minutes     | Minutes    | Minutes      | Minutes    | Minutes    | Minutes    |

**4.3 At the pub, cinema, theatre, restaurant**

| <b>MON</b> | <b>TUES</b> | <b>WED</b> | <b>THURS</b> | <b>FRI</b> | <b>SAT</b> | <b>SUN</b> |
|------------|-------------|------------|--------------|------------|------------|------------|
| Minutes    | Minutes     | Minutes    | Minutes      | Minutes    | Minutes    | Minutes    |

**4.4 Sitting in the car, bus or train**

| <b>MON</b> | <b>TUES</b> | <b>WED</b> | <b>THURS</b> | <b>FRI</b> | <b>SAT</b> | <b>SUN</b> |
|------------|-------------|------------|--------------|------------|------------|------------|
| Minutes    | Minutes     | Minutes    | Minutes      | Minutes    | Minutes    | Minutes    |

Count how many **hours** you did the following:

**4.5 Time spent sitting at work or study**

| <b>MON</b> | <b>TUES</b> | <b>WED</b> | <b>THURS</b> | <b>FRI</b> | <b>SAT</b> | <b>SUN</b> |
|------------|-------------|------------|--------------|------------|------------|------------|
| Hours      | Hours       | Hours      | Hours        | Hours      | Hours      | Hours      |

**4.6 Sleep**

| <b>MON</b> | <b>TUES</b> | <b>WED</b> | <b>THURS</b> | <b>FRI</b> | <b>SAT</b> | <b>SUN</b> |
|------------|-------------|------------|--------------|------------|------------|------------|
| Hours      | Hours       | Hours      | Hours        | Hours      | Hours      | Hours      |



| <u>FRIDAY</u>             | <u>SATURDAY</u>                                     | <u>SUNDAY</u>                |
|---------------------------|---|------------------------------|
| <hr/> <i>Did shopping</i> | <hr/> <i>DAY OFF. Went to town.<br/>Went to pub</i> | <hr/> <i>Went for a walk</i> |

Count how many minutes you spent doing each of the following. Only count activities that made you feel like those in the green box (across). Use your **personal calendar** to help you remember what you did each day.

| <u>MON</u> | <u>TUES</u> | <u>WED</u> | <u>THURS</u> | <u>FRI</u> | <u>SAT</u> | <u>SUN</u> |
|------------|-------------|------------|--------------|------------|------------|------------|
| Minutes    | Minutes     | Minutes    | Minutes      | Minutes    | Minutes    | Minutes    |

Q. What activity did **you** do most of?: \_\_\_\_\_

| <u>MON</u> | <u>TUES</u> | <u>WED</u> | <u>THURS</u> | <u>FRI</u> | <u>SAT</u> | <u>SUN</u> |
|------------|-------------|------------|--------------|------------|------------|------------|
| Minutes    | Minutes     | Minutes    | Minutes      | Minutes    | Minutes    | Minutes    |

Q. What activity did **you** do most of?: \_\_\_\_\_

| <u>MON</u> | <u>TUES</u> | <u>WED</u> | <u>THURS</u> | <u>FRI</u> | <u>SAT</u> | <u>SUN</u> |
|------------|-------------|------------|--------------|------------|------------|------------|
| Minutes    | Minutes     | Minutes    | Minutes      | Minutes    | Minutes    | Minutes    |

Q. What activity did **you** do most of?: \_\_\_\_\_

| <u>MON</u> | <u>TUES</u> | <u>WED</u> | <u>THURS</u> | <u>FRI</u> | <u>SAT</u> | <u>SUN</u> |
|------------|-------------|------------|--------------|------------|------------|------------|
| Minutes    | Minutes     | Minutes    | Minutes      | Minutes    | Minutes    | Minutes    |

Q. What activity did **you** do most of?: \_\_\_\_\_

| <u>MON</u> | <u>TUES</u> | <u>WED</u> | <u>THURS</u> | <u>FRI</u> | <u>SAT</u> | <u>SUN</u> |
|------------|-------------|------------|--------------|------------|------------|------------|
| Minutes    | Minutes     | Minutes    | Minutes      | Minutes    | Minutes    | Minutes    |

Q. What activity did **you** do most of?: \_\_\_\_\_

Q. Would you have usually done more moderate intensity activities in a week?

**2. Moderate intensity** activities will usually make you feel like this:

This is activity at a steady, constant level. You're aware that you are active, but it's not too tiring. You are making an effort (50-70%), working against a resistance.

SLIGHT SWEAT

SLIGHT INCREASE IN HEART RATE

FEEL GOOD

COMFORTABLE PACE

DEEPER BREATHS

SLIGHTLY CONCENTRATING

**2.1 Housework And Gardening Activity that made you feel like description above**

**Examples:** carrying shopping, vacuuming carpets, pushing a lawn mower, other...

**2.2 Sport and Free-Time Activity that made you feel like description above**

**Examples:** gym workout, team training, dance/ aerobic classes, nightclub dancing

**2.3 Family Activity that made you feel like description above**

**Examples:** looking after children or sick relatives, lifting or carrying them, other...

**2.4 Occupational Activity that made you feel like description above**

**Examples:** walking up and down stairs at work, lifting small things at work, other...

**2.4 Commuting Activity that made you feel like description above**

**Examples:** walking or cycling to work, college, an appointment, other...

Please answer **all** questions, i.e. put a number in **every box**. This is very **important**. For sections that do not apply to you, please write "**0 minutes**" into that box. See example below:

**EXAMPLE: Commuting Physical Activity**

| <u>Mon</u>   | <u>Tues</u>  | <u>Wed</u>    | <u>Thurs</u> | <u>Fri</u>   | <u>Sat</u>    | <u>Sun</u>   |
|--------------|--------------|---------------|--------------|--------------|---------------|--------------|
| 7<br>Minutes | 7<br>Minutes | 15<br>Minutes | 0<br>Minutes | 0<br>Minutes | 15<br>Minutes | 7<br>Minutes |

Q. What activity did you do most of?: Walking to work

| <u>MON</u> | <u>TUES</u> | <u>WED</u> | <u>THURS</u> | <u>FRI</u> | <u>SAT</u> | <u>SUN</u> |
|------------|-------------|------------|--------------|------------|------------|------------|
| Minutes    | Minutes     | Minutes    | Minutes      | Minutes    | Minutes    | Minutes    |

Q. What activity did **you** do most of?: \_\_\_\_\_

| <u>MON</u> | <u>TUES</u> | <u>WED</u> | <u>THURS</u> | <u>FRI</u> | <u>SAT</u> | <u>SUN</u> |
|------------|-------------|------------|--------------|------------|------------|------------|
| Minutes    | Minutes     | Minutes    | Minutes      | Minutes    | Minutes    | Minutes    |

Q. What activity did **you** do most of?: \_\_\_\_\_

| <u>MON</u> | <u>TUES</u> | <u>WED</u> | <u>THURS</u> | <u>FRI</u> | <u>SAT</u> | <u>SUN</u> |
|------------|-------------|------------|--------------|------------|------------|------------|
| Minutes    | Minutes     | Minutes    | Minutes      | Minutes    | Minutes    | Minutes    |

Q. What activity did **you** do most of?: \_\_\_\_\_

| <u>MON</u> | <u>TUES</u> | <u>WED</u> | <u>THURS</u> | <u>FRI</u> | <u>SAT</u> | <u>SUN</u> |
|------------|-------------|------------|--------------|------------|------------|------------|
| Minutes    | Minutes     | Minutes    | Minutes      | Minutes    | Minutes    | Minutes    |

Q. What activity did **you** do most of?: \_\_\_\_\_

| <u>MON</u> | <u>TUES</u> | <u>WED</u> | <u>THURS</u> | <u>FRI</u> | <u>SAT</u> | <u>SUN</u> |
|------------|-------------|------------|--------------|------------|------------|------------|
| Minutes    | Minutes     | Minutes    | Minutes      | Minutes    | Minutes    | Minutes    |

Q. What activity did **you** do most of?: \_\_\_\_\_

☐ Would you have usually done more high intensity activities in a week?

**1. High Intensity** activities usually make you feel like this:

This is activity at a maximum level. It is very tiring and cannot usually be continued for long periods. It requires near to 100% effort.

BREATHE VERY DEEPLY

VERY FAST HEART RATE

SWEAT A LOT

CONCENTRATING HARD

FEELING WRECKED

**1.1 Housework And Gardening Activity that made you feel like description above**

**Examples:** lifting furniture, hard cleaning, digging, other...

**1.2 Sport and Free-Time Activity that made you feel like description above**

**Examples:** high aerobics, playing a match, fast swimming, dancing classes, other...

**1.3 Family Activity that made you feel like description above**

**Example:** playing with children, other...

**1.4 Occupational Activity that made you feel like description above**

**Examples:** lifting or carrying heavy items at work, other...

**1.5 Commuting Activity that made you feel like description above**

**Examples:** walking, running or cycling to somewhere in a hurry, other...

- The following questions will ask you to **count how many minutes** you spent doing lifestyle physical activities at **high and moderate** intensities over **the past 7 days** (not including today).

### **High Intensity**

This is activity at a maximum level. It is very tiring and cannot usually be continued for long periods. It requires near to 100% effort and you may feel wrecked.

### **Moderate Intensity**

This is activity at a steady, constant level. You're aware that you are active, but it's not too tiring. You are making an effort (50-70%), working against a slight resistance.

The first questions ask about activities you did at a **high intensity**.

Then you will be asked about the same activities at a **moderate intensity**.

---



## Personal Calendar

| <u>MONDAY</u>   | <u>TUESDAY</u>                           | <u>WEDNESDAY</u>                             | <u>THURSDAY</u>                            |
|---|--|--|--|
| <b>Examples:</b><br><i>Met Ann for lunch.</i><br><i>Man Utd on TV</i> | <i>Raining all day</i><br><i>DAY OFF</i> | <i>Worked late shift,</i><br><i>off late</i> | <i>Brought children</i><br><i>swimming</i> |

- Place a circle around the day that corresponds to yesterday.
- Please write **one thing** in each box above that stands out in your memory about each of the **past 7 days**, starting with yesterday.
- This could be something you did or something that happened to you that you particularly remember about each day.
- **The purpose of this personal calendar is to help you remember what you did over the past 7 days.**
- **Use it to help you answer the following questions.**

**5.** Looking back on all of your answers, was the amount of physical activity you did in the last 7 days **typical** of the amount that you would **normally** do?

**Please tick one box**

Yes ☐ No, I usually do more ☐ No, I usually do less ☐

If no, why was this week unusual? \_\_\_\_\_

**6. Please read the following and answer the question at the end:**

**Regular physical activity** means doing at least **30 minutes** of moderate intensity activity like lifting, cleaning, jogging, brisk walking or playing sport on at least **5 days** a week.

**A.** I do not do regular physical activity and do not intend to do so in the next 6 months

**B.** I do not do regular physical activity but am thinking about starting in the next 6 months

**C.** I do some physical activity, but not as much as in the description above. I intend to start doing more within the next 30 days.

**D.** I am regularly physically active but only began in the last 6 months

**E.** I am regularly physically active and have been so for longer than 6 months

**Please circle one letter**

**Which sentence above best describes you?**   A     B     C     D     E  

**7. PERSONAL INFORMATION** (All information will be held in the strictest confidence)

Name (Block Capitals): \_\_\_\_\_

Date of Birth (dd/mm/yy): \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_ Male/Female \_\_\_\_\_

Are you in paid employment? Yes \_\_\_\_\_ No \_\_\_\_\_

If Yes, what is your occupation? \_\_\_\_\_

Height: \_\_\_\_\_ Weight: \_\_\_\_\_

What date is it today? (dd/mm/yy): \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_

**This is the end of the questionnaire. Please look back and make sure that you have answered all questions.**

## APPENDIX EIGHT – SUMMARY OF ROUNDS TWO AND THREE



#### 4.8.2. Round Two

##### Page One (Front Cover)

*Problems associated with the Encoding process:*

All participants read this page. The time spent reading this page varied and no hesitations or confused expressions were apparent. This indicated that participants understood what they read.

*Amendments to address Encoding:*

None required.

##### Pages Two and Three (Personal Calendar)

*Problems associated with the Encoding process:*

One participant merely agreed or disagreed with the example given in the personal calendar, i.e., he did not understand the instructions given and did not write in his own examples [Male; age 55; SOC 5]. This is an *encoding* issue as it indicated that the participant did not understand the purpose of the personal calendar.

One participant wrote something into the boxes corresponding to yesterday and today only [Female; age 28; SOC 5]. This is an *encoding* issue as she did not seem to understand that she needed to complete all boxes in the personal calendar.

*Amendments to address Encoding issues:*

The purpose of the personal calendar was misunderstood and was given as the reason for wrongly filling in the boxes, "I didn't know what it was for", [Male; age 55; SOC 5]. As this was the only time (out of a total of 12 interviews) that this problem had occurred, it was decided that no amendment would be made unless it arose again in future interviews.

The participant that had completed only two of the seven boxes in the personal calendar stated, after further probing, that she had just not read the instructions. Once she read them, she understood what needed to be done and why. Therefore, no amendment was required.

*Problems associated with the Recall process:*

Two participants expressed difficulty with their own short-term memories, stating that remembering something that happened for each day of the week would be difficult [Female; age 47; SOC 3] and [Male; age 42; SOC 5]. This is a *recall* issue as the cognitive burden of remembering something from up to seven days ago appeared to have affected the ability to recall for these participants. One participant could not remember anything for the two days furthest back [Female; age 47; SOC 3].

*Amendments to address Recall issues:*

Both participants felt that on reflection they could probably think of something but that it would probably take a long time. After reading the instruction, the female participant instinctively says “I don’t think I could even tell you what I did last Tuesday”, but then follows up with “well yeah, actually I could”. Overall, the placement of the instruction for the personal calendar, hidden at the top of the page, does not convey its relative importance as a primary recall aid to the participant. The one sentence feature does not provide ample assistance in helping participants to recall the information. Neither does it encourage them to understand the significance in taking the time to fill in the boxes completely (within the context of the whole questionnaire). The instructions will be amended so that the instruction will be decomposed into five separate sentences and stated clearly and alone on page two. Three sentences will act as individual recall cues and two sentences will emphasise the contextual importance of completing the entire personal calendar.

*Problems associated with the Judgement process:*

One participant [Female; age 47; SOC 3] stated that the reason she filled in only two days was because “...I just didn’t read it properly. Sometimes I’m inclined to just race in and actually not think about it or maybe I’m just a bit tired now”. First impressions may lead one to assume that non-completion of the PC was due to a misunderstanding (i.e. an encoding problem). Further probing however revealed that it was a lack of attention by the participant when reading, indicating poor motivation. This is a *judgement* issue.

*Amendments to address Judgement issues:*

This indicated a motivational issue (judgement stage) rather than solely a possible recall difficulty. Similarly, another participant (Male; age 45; SOC 5) had spent a while trying to remember something about Monday and Tuesday, eventually deciding that he couldn’t

remember and stated "...if something unusual had happened, it would have stuck out in my memory". Participants therefore require further encouragement to recall specific memories. The amendments that address the "recall issues" above, should help to reduce the cognitive workload on memory and indirectly improve motivation to answer.

#### Pages Four and Five (High Intensity Question)

##### *Problems associated with the Encoding process:*

Two participants forgot to relate their answers to the yellow physiological and psychological affect box. One participant [Male; age 55; SOC 5] thought he was to tick off the symptoms he agreed with in the box, instead of using them to refer to as a recall cue. This is an *encoding* issue as he clearly did not understand the purpose of the box.

One participant asked if the same question would be asked of moderate intensity activities, despite a previous instruction indicating this to be the case [Female; age 22; SOC 3]. This shows a lack of understanding and is therefore an *encoding* issue.

The word "example" was misunderstood by two participants [Male; age 55; SOC 5; and Female; age 47; SOC 3]. Both assumed it to mean "these activities only", instead of "any activity along these lines", as was intended. This is an *encoding* issue as it indicated that the participants did not understand the context of the word example.

Category titles were problematic for two participants [Male; age 55; SOC 5; and Female; age 47; SOC 3]. One participant read each category as "Housework and gardening AND physical activity", "Occupational AND physical activity". In other words, the phrase "physical activity" was interpreted to mean "exercise" and was considered to be a separate entity to be calculated in addition to the intended category title. The male participant thought that "Sport and Leisure" were "...an unusual marrying of categories. This participant stated that he believed this combination of words "...suggests voluntary physical activity, probably confined to a structured form of activity". This definition does not account for unstructured, free time activities. This is an *encoding* issue as it showed a lack of understanding of the phrases.

#### *Amendments to address Encoding issues:*

The affect box was made bigger and laid out across the page in a landscape format, matching the layout of the questions. Also, the words “that made you feel like the description above” were added to the activity category titles in each box. The word “Physical” was removed from the category title to avoid any ambiguity. This was an encoding issue that had occurred in both rounds one and two. The category titles now read, e.g., “Occupational activity that made you feel like the description above”.

The word “Leisure” in the context of “Sport and Leisure Physical Activity” was repeatedly misinterpreted among various participants of the first two rounds. The intended meaning of “free time, pleasurable pursuit” was merged with other interpretations such as “going to the gym” [Male; age 34; SOC 5] and “Exercise that’s not sport”, [Female; age 29; SOC 3]. In order to emphasise the leisureable properties and remove the impression of a structured format like sport, the word “leisure” was replaced with words “free time”. This category title now read “Sport and Free-time activity that made you feel like the description above”.

The context of the questionnaire and the questions within it needed further clarification. A short description of the properties of high and moderate intensity was presented on the page preceding the questions. This page also included an explanation of the format of the questionnaire, indicating that the first set of questions would ask about minutes spent in activities at a high intensity, followed by questions about the same activities at a moderate intensity.

To reduce the tendency of participants to restrict their answers to the examples given and to encourage them to think of their own situation, the words “and other” was added to the list of examples in each category box for both high and moderate intensity questions. This was to encourage participants to think of their own activities that applied to this category.

#### *Problems associated with the Layout:*

The “what activity do you do most of?” question was missed by two of the participants. They both stated they just did not see it. This is a *layout* issue.

*Amendments to address Layout issues:*

The “what activity did you do most of?” question needed to be visibly emphasised by separating it from the preceding grid box. Using a different colour or placing a space between the two questions may achieve this.

Pages Six and Seven (Moderate Intensity Question).

*Problems associated with the Encoding process:*

Two participants were not sure where to put in information about recreational walking that they have done. Both felt it should be in the sport and leisure category but it was not listed as an example. When probed further as to how they would define the word “example”, one participant [Male; age 55; SOC 5] stated, “Activities listed as examples would be types of activities that the researcher would be interested in finding out about. About the time spent by the participant in these activities and the logical way to find out would be to list them...it would logically appear to me that they’re the ones they want to find out about and only those ones”. This is an *encoding* issue as the participant misunderstood the intended meaning of the word “example”, which is “activities similar to those listed”.

One participant [Female; age 22; SOC 3] stated at the end that she had not attended to the descriptions in the yellow affect box when she was answering the moderate intensity questions. This is an *encoding* issue as the participant had not fully understood the context of the question, i.e., that she should only answer how many minutes she spent doing a particular activity that made her feel like the description given.

*Amendments to address Encoding issues:*

Each of these issues have previously arisen in the high intensity question. Amendments will therefore be the same as those referred to for high intensity above.

*Problems associated with the Judgement process:*

One participant double checks that she was to fill zero in to the boxes where she had done no activity. She re-read the instructions and then stated out loudly, “I’ll fill out the zero because I really don’t feel that I have been at that intensity”, [Female; age 47; SOC 3]. This is a *judgement* issue because the participant initially appeared unsure as to whether to fill in zero as instructed.

*Amendments to address Judgement issues:*

This issue has been raised in the high intensity question. The amendments for this question will be the same as those referred to in the high intensity question above.

*Problems associated with the Layout:*

One participant [Female; age 22; SOC 3] sees the “what activity did you do most of?” questions only when she has finished the entire moderate intensity section and then goes back to fill them in. This is clearly a *layout* issue as the participant did not see the question.

*Amendments to address Layout issues:*

The “what activity did you do most of?” question needed to be visibly emphasised by separating it from the preceding grid box. Using a different colour or placing a space between the two questions may achieve this.

Page Eight (Walking Question)

*Problems associated with the Encoding process:*

Two participants did not understand that they were to limit their answers to only moderate and high intensity walking. The category cue “walking while at work” was the source of confusion for one participant who thought it meant, “ I should include all walking I did at work”, [Male; age 42; SOC 5]. He did not understand from the instruction that he should limit his answer to the higher intensities. This is an *encoding* issue as the participant clearly did not understand the context of the question.

One participant had to read through the question four times before verbalising that he did not know what was asked of him. He stated that he was confused with the layout, particularly the listing of the categories and examples. He also said that he was not sure how these tied in with the question about minutes spent per day doing high and moderate intensity walking. These problems represent issues with the *encoding stage and also with the layout* of the questionnaire.

*Amendments to address Encoding and Layout issues:*

The list of categories and examples were removed. This was expected to remove any ambiguity attached to the question. The volume of text on the page was also reduced, thus

reducing the cognitive burden on the participant and clarifying the purpose of the question. In this way, the instruction to the participant to isolate the minutes spent walking at high and moderate intensity only should be highlighted. Two separate questions were included to ask about the type and intensity of walking done. These were phrased as follows: “ What type of walking did you do most of?” and “At what intensity did you do this walking?”. The second question was in the form of a tick box option, where the participant was asked to select either moderate or high intensity.

#### 4.8.3. Round Three

##### Page One (Front Cover)

*Problems associated with the Encoding process:*

All participants took time to read this page. No undue delays were apparent.

*Amendments to address Encoding issues:*

None required.

##### Page Two (Personal Calendar)

*Problems associated with the Judgement process:*

Two participants hesitated after reading the instructions for filling out the personal calendar. When probed to find out the reason for their hesitation, both stated that they were just working out whether to include memories about physical activity specifically or general memories. After re-reading the sentence, they both decided to include the most outstanding general memory. This appears to be related to *judgement* issues as the participants were unsure which memory type to include until they re-read the sentence and clarified the question demand.

*Amendments to address Judgement issues:*

It appears that both participants may have read the instruction too fast because having read the instruction again, there were no apparent misunderstandings. However, the sentence “please see examples above” will be added, to diminish the opportunity of misinterpretation and to enhance contextual comprehension.

### Page Three (Definitions)

#### *Problems associated with the Encoding process:*

All participants gave appropriate responses to the probe, "In your own words, can you tell me what you think this questionnaire is going to ask of you?". All participants indicated an awareness that they would be asked questions about how much activity they did at a high intensity and then asked about activity they did at a moderate intensity. All indicated a good understanding of the difference between each intensity and were also aware that they would be expected to "go back through the past seven days that have just been brought to my mind from completing the personal calendar", [Female; age 31; SOC 4].

#### *Amendments to address Encoding issues:*

None required

### Pages Four and Five (High Intensity Question)

#### *Problems associated with the Encoding process:*

One participant sought to clarify whether she should put a zero into the boxes where she did no activity [Female; age 28; SOC 2]. This is an *encoding* issue as she did not seem to understand the instruction. However, she realised her own mistake and corrected it, stating "I should have read through the category headings before starting...I mean I wasn't confused or ...I just hadn't read it properly". No amendment required.

Two participants filled in the "what activity did you do most of?" question even though they had filled in zero minutes of activity for everyday. This is an *encoding* issue as the participants did not appear to understand the context of the question.

#### *Amendments to address Encoding issues:*

The participant was asked to re-read the instruction at the top of the page and proceeded to fill in zero minutes without further hesitation. Therefore, no amendment was required.

Although completing this question is inappropriate if the participant has stated that they have done no activity, it does not affect the overall outcome of the questionnaire. Therefore, no additional instructions or text were inserted in case it caused unnecessary confusion in a question that was not previously problematic.



Pages Six and Seven (Moderate Intensity Question)

No problems identified.

Page Eight (Walking Question)

*Problems associated with the Encoding process:*

Four participants had difficulty understanding what information the “What type of activity did you do most of?” question was looking for. This is an *encoding* issue as the participants did not understand what information was being sought.

One participant was confused by the use of bold typing for the word “you” in this sentence. This is an *encoding* issue as the participant did not understand that this was done for emphasis.

*Amendments to address Encoding issues:*

The number and variety of problems associated with this question in all three rounds suggest that it is not a question that is ready for use within this questionnaire. As it is the only question consistently causing problems, it has been removed.

APPENDIX NINE – FINAL DRAFT OF PARQ

## APPENDIX TEN – BLAND AND ALTMAN'S COEFFICIENT OF REPEATABILITY

#### Method for calculating the Limits of Agreement (Bland & Altman 1986, 1995)

The method of establishing the limits of agreement is outlined by Bland and Altman (1986, 1995) and is briefly described here:

1. Obtain the mean and standard deviation of the difference between the two administrations of the questionnaire.
2. Perform a one sample t-test to ensure that the mean difference is not significantly different than zero. It should not be as the same measurement tool was used.
3. Plot the mean differences between test-retest results against the average of the test-retest results, for each participant.
4. Calculate the limits of agreement – According to the British Standards Institution (1979), a normal distribution can be assumed if 95% of the differences are within two standard deviations of the mean difference. These are referred to as the “Limits of Agreement” by Bland & Altman (1986, 1995).
5. Calculate the confidence intervals of the limits of agreement - As the Limits of Agreement are only estimates and may not apply should another sample of the population be tested, it is important to test the precision of these estimates. Confidence intervals are calculated for the upper and lower limits of agreement from the standard error (SE) of the mean difference  $\pm 2SD$ 's. According to Bland & Altman (1986, 1995) this is also the same as calculating the square root of three times the squared standard deviation, divided by the sample size, i.e.  $\sqrt{3 \cdot SD^2 / N}$ . Specifically, “...the confidence intervals are calculated by finding the appropriate point of the t-distribution with n-1 degrees of freedom...the confidence interval will be from the observed value minus t standard errors to the observed value plus t standard errors”, (Bland & Altman, 1986, p. 308).

## APPENDIX ELEVEN – WRITTEN INSTRUCTIONS TO PARTICIPANTS (VALIDITY STUDY)

## Heart Rate Monitor

### **DO:**

- Wet the electrodes (i.e. the ridged panels on back of strap) before placing around chest
- Ensure that both clips are secured tightly
- Ensure that the strap is adequately fitted – it should be comfortable, but not so tight that it constricts or hurts you and not too loose in case it loses contact with your heart rate.
- Place the strap so that the central “Polar” piece is situated in the centre of your chest and the strap is placed at the level of the sternum or breastbone.
- Please ensure that you hear a beeping sound about 15 seconds after you place the strap on. This means that the equipment has begun monitoring your heart rate. If you do not hear a beeping sound, please readjust the strap or wet the electrodes again.

### **DO NOT:**

- Wear the heart rate monitor while showering or swimming.
- Forget to complete the “Time on” and “Time off” sheet overleaf, every day.

## ACCELEROMETER

### **DO:**

- Place the accelerometer on your right hip, to the side.
- Place it on the secure waistband of a pair of trousers or jeans or belt. It is important that the item of clothing that the accelerometer is attached to fits well so that the accelerometer is not moving around excessively.
- On Thursday morning, press the large button to begin recording. This is the only time you’ll need to press any buttons on the accelerometer.

### **DO NOT:**

- Forget to complete the “Time on” and “Time off” sheet overleaf, every day.
- Wear the accelerometer while showering or swimming
- Once the accelerometer has begun recording, do not press the large button **at any other time**

If there are ANY problems or you have any questions, please ring me at ANY time –

**085 7245658 or 01 700 8470/ 700 8847**