

FIT FOR LIFE?

Qualitative, quantitative & physiological indicators of physical activity amongst heroin users

Professor Jo Neale

Department of Social Work & Public Health

Oxford Brookes University, UK



RESEARCH PROGRAMME IN PROGRESS

- Neale, J., Dawes, H. & Godsiff, D. *Problem drug use & physical activity: a review*
- Neale, J., Nettleton, S. & Pickering, L. *A sociological investigation into the everyday lives of recovering heroin users (Study 1)*
- Neale, J., Dawes, H., Plugge, E., Foster, C. & Wright, N. *Problem drug use & physical activity within the prison setting (Study 2)*
- Neale, J. & Dawes, H. *The role of physical activity in the lives of drug users receiving prescribing interventions for illicit opioid dependence. PhD studentship taken up by Wheeler, C. (Study 3)*

THE CONTEXT

- Social research & service provision have (understandably) focused on the dramatic, dangerous & risky aspects of heroin consumption
- Limited attention has been paid to the more everyday & mundane aspects of heroin users' lives
- Very little research has investigated heroin users' participation in physical activities
- A small number of studies indicate that problem drug users do participate in sport & exercise (Powers et al., 1999; Duterte et al., 2001; Drumm et al., 2005; Neale et al., 2007; Holt & Treloar, 2008)
- There is suggestive evidence that sports & exercise interventions may improve drug treatment outcomes (Burling et al., 1992; Li et al., 2002; Williams, 2003; Williams & Streat, 2004; Weinstock et al., 2008)

DEFINITIONS

- **Physical activity:** any force exerted by skeletal muscle that results in energy expenditure above resting level
- **Exercise:** physical activity that is volitional, planned, structured, repetitive & aimed at improving or maintaining any aspect of fitness or health
- **Sport:** socially & culturally relative, but generally involves structured competitive situations governed by rules

Department of Health (2004)

BENEFITS OF PHYSICAL ACTIVITY

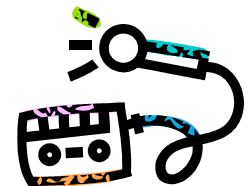
- Amongst the general population, the benefits of regular physical activity to health, longevity & well-being are well established. They include:
 - Reduced risk of physical & mental health problems, opportunities for social contact, improved sense of well-being
- Amongst drug users, physical activity may offer an opportunity to achieve pleasurable states without substances, encourage a healthy lifestyle incompatible with substance misuse, be a first step in engaging with services, & potentially prevent relapse
- Sport can promote social inclusion & community cohesion

LIMITATIONS OF PHYSICAL ACTIVITY

- Sport is not always a level playing field: it can exclude as well as include (costs, social contacts, personal tastes & habits)
- Sporting programmes cannot 'solve' social problems or offer individuals real equality of opportunity
- Participation in sport can reinforce or create inequalities of its own
- Participation can also act as a form of social control & regulation

STUDY 1: THE EVERYDAY LIVES OF RECOVERING HEROIN USERS

- Funded by the UK ESRC
- Broad aim: to explore how heroin users manage routine daily activities as they enter treatment & reduce drug use
- Initial interviews with 40 individuals (21 males & 19 females; ages 24-50 years)
 - 10 x heroin users starting OST
 - 10 x heroin users beginning a detox
 - 10 x heroin users entering rehab
 - 10 x ex-heroin users
- Follow up interviews with 37 individuals after 3 months (20 males & 17 females)
- Digitally recorded, took place in a variety of settings, conducted in an informal & relaxed manner
- Covered a broad range of topics relating to participants' everyday lives: domestic circumstances; drug use; drug treatment; recovery attempts; general health; everyday activities; hopes & aspirations



ANALYSES

- Professional transcription
- Coded using MAXqda2, with physical activity data coded under two headings:
 - Physical activity, sport & exercise (interview 1)
 - Physical activity, sport & exercise (interview 2)
- Data extracts from the 2 codes were retrieved & analysed using Framework (Ritchie & Spencer, 1994)
- All data were systematically reviewed & mapped to identify emergent themes, categories & concepts which were then linked to existing research, public health discourses, & more theoretical literature relating to physical activity, sport & exercise
- Neale, J., Nettleton, S. & Pickering, L. (2012) 'Heroin users' views and experiences of physical activity, sport and exercise', *International Journal of Drug Policy*, 23, 120-7.

EXERCISE BIOGRAPHIES

- Nearly half had routinely participated in sport & exercise as children/teenagers & many had taken sport seriously:
 - “I used to be a proper athlete when I was younger. I used to run for my school, I used to run for *[name of county]*. I’ve done a couple of mini marathons & stuff, used to do a mile in four minutes fifty-eight when I was a teenager.” (OST, Eddie, 30 years)
- As adults, interest in sport/ exercise often continued
- Participation levels tended to curtail dramatically once heavy heroin consumption set in
- However, many continued to be physically active, with walking & cycling a main means of transport

EXERCISE BIOGRAPHIES

“All through my drug habit, I’ve always had to walk. Some days you can walk miles & miles... trying to score & get money & that... In that way, I suppose I’ve always kept quite fit.... Because like the bus fare is quite expensive, ain’t it? And when you’re trying to find money for drugs & stuff, the last thing you want to hang around for is trying to find bus fares & stuff like that so you just walk.” (OST, Annabel, 29 years)

“You’ve got to walk into the shop [*to shoplift*] & then you’ve got to walk miles & go & score & then you got to walk miles home.” (DET, Lauren, 27 years)

EXERCISE AT INTERVIEW 1

- Most had begun to reduce or recently ceased heroin use
- Many were starting to take an interest in sport/ exercise again
- Sport/ exercise participation was facilitated by services:
 - “I wouldn’t have dreamed of going to aerobics... [I] get excited about going to aerobics now. Just that adrenaline of getting that sweat out of you, knowing you’ve actually done a workout... I feel good about myself after I’ve done it, to know that I’ve done some exercise.” (DET, Sorayha, 31 years)
- A relatively small number of participants were exercising or doing sport independently:
 - “I do circuit training on Tuesday, cardio work at the gym, not so much heavy weights these days, I just do light weights, but a lot of road running as well. [I] did a half marathon last year, one the year before that. I’m doing a marathon this year with a friend that I go to circuits with and we’re going to do another half marathon, a few 10K runs as well. I love running.” (EXU, Tom, 35 years)

EXERCISE AT INTERVIEW 2

- Most reported less heroin & other drug use than at interview 1
- Sport/ exercise featured even more prominently in their lives
- More than half reported exercising
- Now a very wide range of activities: badminton, bowling, circuits, cycling, dancing, sit ups & press ups, football, golf, the gym/ lifting weights, running, squash, swimming, tai chi, walking, yoga
- Less participation in activities organised by services, limited participation in organised classes, almost no participation in team sports
- Increasingly individuals were participating in unstructured exercise alone or with one or two others
- Still walking & cycling as transport, plus some had physically active jobs

DESIRE TO PARTICIPATE

- Obviously not for everyone, BUT...
- Clear enjoyment at being physically active: made them 'feel good', 'physically & mentally better', 'good fun', 'a good laugh'
- Other benefits: good to be fit; improved sleeping; less general ill-health; better mental health (less depression/ stress/ anxiety/ anger); opportunity for social contact; opportunity to do something 'normal'; better physical appearance/ to look good; weight management; a distraction from drugs; fills time/ reduces boredom; reduces tobacco smoking; a legal substitute buzz; management of bulimia & self-harming
- Many expressed a desire to do more physical activity: resume old physical activities & try new ones

DESIRE TO PARTICIPATE

“When I go to the gym... I go hard out really, go hard out & it’s alright... I’m enjoying it... I’ve shocked myself that I’m really quite strong & healthy.”
(REH, Frances, 31 years)

“I am still quite active in terms of cycling. If I go, even if it’s going to the chemist, I cycle really fast & cycle really fast back.” (DET, Timothy, 27 years)

“I exercise much more now & I find that really helps with stress & depression, just helps me feel more alive I suppose.” (EXU, Charlie, 31 years)

BARRIERS TO PARTICIPATION

- Reasons for not engaging in, or giving up, activities they previously enjoyed:
 - Heavy drug use
 - Poor health: too tired or weak to exercise, especially if they had other physical health problems such as hepatitis C; being under weight; feeling too too unfit to do sport or exercise; disability or injury
 - Psychological: lack of motivation; lack of confidence; the addictive potential of exercise
 - Other personal factors: not an exercise person; other priorities such as children, work, college, friends
 - Cost
 - Nobody to exercise with
 - Losing contact with services which organised sport/ exercise
 - No local facilities
 - Residential services which discouraged sport/ exercise

BARRIERS TO PARTICIPATION

“I used to cycle everywhere I went, on my bike, & I loved it. But now, with my hearing, I’m just too frightened... Because I can’t hear the traffic noise... I really do miss my cycling.” (OST, Fiona, 49 years)

“I used to like playing football, but I’ve sort of dropped all of that sort of stuff out... Because I’m really unfit & my motivation, I need motivation to actually do it. So I haven’t really got the motivation to get back into it.” (EXU, Freya, 25 years)

“I was cycling twenty, thirty miles a day getting completely off my head on adrenalin, & then boshing myself full of benzos & methadone... I’d cycle so far I’d become manic... So yeah, *[I]* set myself a boundary of five miles a day, maximum.” (DET, Tony, 34 years)

DISCUSSION

- Findings are consistent with existing research which indicates that heroin users are interested in sport & exercise
- By interview 2, more than half were exercising – compares well with general population data (Department of Health, 2010)
- Participants were often physically active even when not engaging in structured forms of exercise – walking, cycling, active jobs or daily routines
- Findings support both generic health & social benefits identified in official discourses, plus possible gains specific to those experiencing drug problems
- Our study cannot assess the extent to which sporting interventions promote social inclusion & community cohesion, but our participants did not seem to be looking for this
- A key benefit was pleasure, enjoyment & temporary relief from their myriad other problems
- Barriers to physical activity, sport & exercise existed but were not insurmountable

STUDY 2: PROBLEM DRUG USE & PHYSICAL ACTIVITY WITHIN THE PRISON

- 4 focus groups: 2 in the community with drug-using offenders & 2 in prison with discipline & health staff
- Plugge, E., Neale, J., Dawes, H., Foster, C. and Wright, N. (2011) 'Drug using offenders' beliefs and preferences about physical activity: implications for future interventions', *International Journal of Prisoner Health*, 7, 18-27.
- 25 class A drug users who were new to prison answered physical activity & drug use questionnaires, took a sub-maximal fitness test, & wore a pedometer for one week.
Tests included:
 - International Physical Activity Questionnaire (IPAQ)
 - Paffenbarger Physical Activity Questionnaire (PPAQ)
 - Physical Activity Readiness Questionnaire (PARQ)
 - Chester Step Test (CST)
- Fischer, J., Butt, C., Dawes, H., Foster, C., Neale, J., Plugge, E., Wheeler, C., Wright, N. (in press) 'Fitness Levels and Physical Activity Amongst Class A Drug Users Entering Prison', *British Journal of Sports Medicine*.

SAMPLE

- All 25 participants self-identified as class A drug users
- On entry to prison, 21 were prescribed methadone, 12 benzodiazepines, 1 buprenorphine, 1 buprenorphine with naloxone
- Mean age 33 (23-47 years)
- 20 x White British; 3 x Pakistani; 1 x Black British; 1 x Mixed Race

PRISONER ACTIVITY & FITNESS LEVELS

- **Before prison**
 - The IPAQ showed a mean of 6,488 MET-minutes/week (+-6,606SD) & the PPAQ showed a mean 5,007 kcal/week (+-3,942SD, n = 24).
 - From the IPAQ, 15 participants had high levels of physical activity, 6 had moderate levels, 4 had low levels.
 - From the PPAQ, 8 participants reported taking part in any regular sports or leisure activity.
 - The IPAQ showed a mean walking time of 1,339 minutes/week (approximately 22 hours/week, +-1,699SD, min 0, max 6,300) which is just over 3 hours walking a day; the PPAQ showed a mean walking distance of 4.67 miles on an average day (+-4.14SD, min 0, max 15, n = 24).
- **On prison entry**
 - From the CST, a mean aerobic capacity of 49 ml₂O₂/kg/min (+-12SD, min 33, max 80, n = 19) was predicted. Compared to the general population, 8 participants' aerobic capacity was excellent, 7 good, 3 average, 1 below average, 0 poor (6 non participants).
- **Within prison**
 - Pedometer readings showed a mean of 25,468 steps over 7 days (+-13,888SD, min 1,249, max 61,561, n = 22). This equates to 1.8 miles/day.

DISCUSSION

- Self-reports of activity prior to entering prison suggest that drug users' fitness levels are primarily influenced by walking, rather than by sports: participants spent a mean of just over 3 hours per day walking [IPAQ], a mean of 4.67 miles [PPAQ]
- The sample was relatively fit on prison entry, with 15 participants classified as having good or excellent aerobic capacity following performance in the CST
- Once participants entered prison, pedometer-reported walking reduced to a mean of approximately 1.8 miles/day

STUDY 3: PHYSICAL ACTIVITY AMONGST DRUG USERS RECEIVING PRESCRIBING INTERVENTIONS

- Data are one part of an on-going PhD study by Carly Wheeler*
- Cross-sectional observational design
- A convenience sample of 100 individuals receiving a prescribing intervention for illicit opioid dependence
- Recruitment through pharmacies in two UK cities
- Data were recorded on paper & entered into SPSS v19
- Questionnaires included:
 - Paffenbarger Physical Activity Questionnaire (PPAQ)
 - The Exercise Barriers/ Benefits Scale
 - The Short Form (36) Health Survey (SF-36)
- A subsample of 24 wore a pedometer for one week

* Only preliminary descriptive data presented here. The study also has a qualitative component

SAMPLE

- 50 recruited from city A; 50 recruited from city B
- 75 males; 25 females
- Mean age = 37 (20-56 years)
- 86 White British (no other ethnic group accounted for more than 3 participants)
- 83 receiving methadone; 16 receiving buprenorphine; 1 receiving buprenorphine & naloxone
- 50 had used a non-prescribed drug in the previous 3 days
- 82 had used a non-prescribed drug in the previous 3 months
- 95 were daily tobacco smokers
- 78 had ever injected; 22 had injected in previous 3 days

ACTIVITY LEVELS

- From the PPAQ: mean (SD) number of miles walked on an average day was 3.3 (2.5)
 - 71 walked 2 or more miles
 - 31 walked 5 or more miles
- From the pedometer, the mean (SD) number of steps walked per day was 12,517 (6,865) = 6.3 miles
- 57 individuals participated in 1 or more types of recreational physical activity a week
- The mean (SD) total amount of time spent on recreational physical activities per week (excluding walking) was 584.9 (735.7) minutes (just under 10 hours a week)
- Aside from walking, the most common regular activity reported was cycling – often for transport (n=25)
- On the Exercise Barriers/ Benefits Scale, the possible score range is 43 to 172. The higher the score, the more positively exercise is perceived. Participants scored a mean of 125
- On the benefits scale, the possible score range is 29 to 116. The higher the score, the more positively exercise is perceived. Participants scored a mean of 87
- On the barriers scale, the possible score range is 14 to 56. The higher the score, the more barriers are perceived. Participants scored a mean of 38

DISCUSSION

- Data suggest that drug users receiving prescribing interventions in the community are physically active
- Participants engaged in high levels of 'lifestyle' physical activity, primarily through walking: 31% reported walking an average 5 miles a day, roughly equal to the 10,000 step recommendation for walking to improve health (NHS, 2012)
- A small number of participants also reported other recreational physical activities: the total amount of time spent on these other activities per week was 584.9 minutes. This exceeds the Government's recommendation of 150 minutes of physical activity per week in order to gain the associated health benefits (Department of Health, 2011)
- Participants were aware that regular physical activity would improve their physical fitness
- Moderate barriers to physical activity were reported

CONCLUSIONS

- Heroin users are interested in physical activity, sport & exercise, & will participate whenever they can
- Cardio-respiratory fitness levels seem relatively high (largely due to walking, cycling & other activities of daily living rather than to organised sport)
- Heroin users frequently encounter personal, social & structural barriers which can hinder participation, but these are not insurmountable
- There appears to be an important role for physical activity, sport & exercise programmes within policy & practice responses to heroin use
- Physical activity may be less about solving social problems & eradicating social inequalities than it is about enabling marginalised groups to relax, have fun & feel good
- Physical activity can also be a pragmatic solution to transport issues
- Sport & exercise will not be embraced by everyone
- There is a need to be creative (but also realistic) in promoting, enabling & engaging heroin users in physical activity
- Any exercise is better than none

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