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# “Standing out like a sore thumb”: exploring socio-cultural influences on adherence to cardiac rehabilitation

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## ABSTRACT

Exercise-based rehabilitation forms a key part of the UK National Health Service patient-care pathway for cardiac rehabilitation (CR). Only around half of all eligible patients attend core CR, however, with social inequalities affecting participation. Few qualitative studies have explored in-depth the key factors influencing engagement with CR, specifically from a sociological theoretical, and ethnographic perspective. Utilising an ethnographic approach allowed us to get a sense of the embodied experiences of 10 participants attending or declining core CR, together with a further seven family members/significant others. This provided in-depth appreciation of participants' lifeworld contexts as key influences on CR participation. The article draws on these qualitative data and focuses on 1) participants' initial thoughts about CR; and 2) navigating the field of CR, analysed via thematic analysis. We utilise a Bourdieusian theoretical perspective to theorise the findings, including salient socio-cultural factors influencing attendance/non-attendance and (non)adherence. The article findings highlight how perceptions of CR and the ability to navigate the field are strongly influenced by habitus and capital, and how personal biographies and socio-material conditions affect adherence to CR programmes. The study provides original insights into embodied experiences of exercise-based CR, and novel understandings of the reasons for drop-out/poor adherence, theorised from a Bourdieusian perspective.

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Cardiac rehabilitation; socio-cultural factors; exercise rehabilitation; adherence; Bourdieu

## Introduction

Every year in the UK thousands of people experience myocardial infarctions, surgical procedures, and heart failure diagnoses, collectively known as cardiac events falling under the category of Coronary Heart Disease (CHD). Increasing numbers survive these events, and it is currently estimated that 2.3 million people are living with CHD in the UK (BHF 2023). Cardiac Rehabilitation (CR) is one of the ways the National Health Service (NHS) seeks to manage CHD. CR is typically phased, with the early and core stages provided by the NHS. The long-term maintenance stage is provided outside the NHS, with variable provision. Exercise is introduced at the core stage and forms the main constituent of long-term maintenance programmes. CR operates as part of a medicalised patient care pathway and the British Association for Cardiovascular Prevention and Rehabilitation (BACPR) advocates a multidisciplinary team for CR delivery, recognising that CR involves more than just exercise and can include lifestyle risk-factor management and health behaviour change and education (BACPR 2023). Organised as

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a therapeutic intervention, CR can be considered a means of promoting exercise as medicine, which has been widely critiqued (see Special Issue of this journal 2018), including for placing blame for poor uptake and engagement with the individual (Malcolm 2014, Williams and Gibson 2018).

Evidence highlights the benefits of CR in reducing mortality post-cardiac event (Anderson et al. 2016; Aragam et al. 2015) and preventing secondary events (Anderson et al. 2016; Taylor et al. 2007). Notably, improved long-term survival has been linked to early exercise engagement (Chan et al. 2008), but benefits of CR depend on engagement and adherence to the activities for the duration of the programme. Despite evidence of effectiveness and safety, only around 50% of eligible individuals participate in the core stage of CR; engagement is even lower in women, those of lower socio-economic status, people from minority ethnic backgrounds, and those experiencing multimorbidity (BHF 2022b; Chan et al. 2008; Menezes et al. 2014). Adherence (i.e. sustaining engagement) to CR programmes also varies (Ruano-Ravina et al. 2016), with the National Audit for CR (NACR; data from England, Northern Ireland, and Wales) indicating that in 2019, 40% of participants starting CR did not complete a post-CR assessment, suggesting non-completion of the programme (BHF 2019). Moreover, a recent BHF report on participant perspectives of CR found many participants did not receive their preferred mode of care (e.g. face-to-face assessment/education/exercise), 65% indicated being unable to change mode after starting, with a further 17% unsure whether such change was possible BHF (2022a). Modes of CR delivery have previously remained largely unchanged for over 15 years (since NACR began), with 75% provided as group-based, face-to-face sessions (BHF 2020). Significantly, the COVID-19 pandemic provided a pause to programming and the necessity for new approaches in CR (Babu et al. 2020). This led to home-based programmes becoming more prominent BHF (2022b). Yet there are continuing challenges, for example, CR staff numbers have not returned to pre-pandemic levels. Both the report (BHF 2022a) and most recent NACR data (BHF 2022b) suggest that more significant actions than programme tweaking are required if CR is to achieve the 85% attendance target set out in the NHS long-term plan (NHS 2019). Moreover, disparities in participation are not new, and the pandemic has only exacerbated inequalities.

Quantitative research predominates in studies of CR, yet research suggests public health interventions would be greatly enhanced by utilising different types of data (Victora et al. 2004). Furthermore, whilst links between factors such as social class, gender, and ethnicity and CHD patient behaviour modification have been made evident (e.g. Chan et al. 2008; Gaalema et al. 2017; Vanzella et al. 2021), the literature highlights potential presuppositions without exploring these in depth. To this end, qualitative and sociological studies are beginning to generate data on participants' subjective and embodied experiences. For example, Angus et al. (2018) used Bourdieu's concepts to explore the complexity of gender issues in diabetes, whilst Evans and Crust (2015) highlighted via a sociological figurational perspective the relevance of ageing experiences in post-cardiac event recovery, including CR engagement. In an ethnographic study, Meredith et al. (2019) examined psychosocial impacts of a cardiac event and found the need for emotional support in CR. We contribute to a qualitative sociological corpus that investigates lived experience of CR via an ethnographic approach and we theorise this through Bourdieu's theoretical framework. We also address a relative paucity of qualitative research that sociologically explores factors influencing participants who decline or drop-out of CR. Our research is also novel in investigating sociologically how participants' significant others influence adherence to CR; the relevance of such individuals to healthcare decision making and recovery is well-documented (Birtwistle et al. 2022; Kärner et al. 2004; Rosland et al. 2012). Despite a body of qualitative research that explores some of the complexities of gender, multi-morbidity, ageing, and emotional recovery in relation to CR, there is a need to investigate further some of the social-structural issues with uptake and adherence to CR. Employing sociological theory to explore some of these complexities could provide important new insights relevant to health professionals, managers, and policy makers.

The rationale for our research is to add fresh insights to the research literature on embodied experiences and knowledge of the cardiac patient journey via researching patients who complete, drop-out of, or decline CR, as well as their significant others. For this purpose, an ethnographic

approach was well-suited to investigating and exploring participants' own embodied experiences and social worlds, as observed in specific social-group interactional contexts relating to CR and recounted by participants in their own words. Part-way through data collection and analysis, the research team began to discuss potential theoretical perspectives. After considerable discussion, Bourdieu's theoretical framework was selected as providing a powerful means of investigating and theorising the ethnographic data relating to the social-structural aspects and complexities of cardiac patient journeys, as experienced by participants and shaped by their own biographies and socio-economic contexts. This theoretical perspective is next portrayed, before the research itself is described. We then proceed to an amalgamated findings and discussion section, together with a brief consideration of potential practical implications.

## Theoretical framework

Pierre Bourdieu (1989) identified his theoretical perspective as 'structuralist-constructivism', which considers humans as active social agents, able to generate knowledge and meaning from their own experiences. His structuralist position considers the structure of society and the often-subconscious influences this can have on humans (Kauppi 2003). Bourdieu (1968) portrayed his theory as constituting 'a system of signs organized to represent, through their own relations, the relations among the objects is a translation or, better, a symbol linked to what it symbolizes by a law of analogy' (689). Bourdieu's concepts can be considered a system of relational elements therefore, and comprehending people's actions requires understanding that these actions, practices, and behaviours are both material and interpersonal, involving the interplay between subject and object, structure, and agency.

Bourdieu harnessed the concepts of habitus, capital, and field, to assist in bridging any putative structure-agency dichotomy. *Habitus* involves a system of durable dispositions (inclinations, tendencies), with social structure and individual agency mutually influencing each other (Maton 2014). Thus, following a cardiac event, the habitus will guide, but not determine, an individual's actions. *Capital* relates to resources held and contested by individuals or groups, which have social value that can be deployed, exchanged, and transformed within *fields* (Bourdieu 2006). Specifically, Bourdieu (1978) discussed cultural, social, economic, and symbolic species of capital, considering physical capital a subset of cultural capital. He (Bourdieu 1994, 197) described a *field* as a social space with: 'objective relations between individuals or institutions who are competing for the same stake'. Fields often overlap, for example, the fields of healthcare and CR. Field theory assists in understanding the interconnections between habitus and capital (Watson and Grenfell 2016).

The interplay between the three above concepts produces specific forms of *practice*, involving the mix of structure and agency in shaping what people do. Several sub-concepts intertwine within this framework. These include *doxa*, relating to an individual's taken-for-granted beliefs about the social world, and *illusio*, referring to one's belief in and knowledge of the significance of the game (e.g. the significance of what CR could offer to recovery). *Nomos* relates to the rules of the game, such as those overtly or tacitly found in CR (e.g. duration of exercise or suitable clothing), and *hexis* refers to durable bodily displays developed through time (e.g. posture, ways of moving, accent). Continued utilisation of an *illusio* and the ability to work within the *nomos* of fields can influence adherence to CR. The requirements of the field may, however, feel incompatible with a person's habitus. Bourdieu and Wacquant (1992) term such disjuncture between habitus and the *nomos*, laws, and practices of unfamiliar fields, *hysteresis*. Hysteresis can sometimes be overcome through an individual's reflexivity and adaptation of the habitus, but rarely without challenges.

Having set out these tenets of our Bourdieusian theoretical framework, we now portray the research project itself.

## The research

The aim of the PhD research project was to garner rich, in-depth accounts of cardiac patient experiences whether people attended exercise-based CR or not, or if they dropped out. Additionally, the accounts of significant others provided a further, much-needed dimension. As highlighted above, there exists some qualitative, sociological research in this domain, but further research is needed to enhance and update this knowledge-base so that health professionals, managers, and policy makers are well-informed at a time when CR is in need of reform. The research team comprised Joanna, the first author and doctoral student, and three other team-members (Jacquelyn, Adam, and Hannah) who were all fully and equally involved as doctoral supervisors, and then subsequently as co-authors. The original ethnographic research design involved Joanna's full immersion in the environments of participants, via participant observation for a period of six months, along with in-depth repeated semi-structured interviews, and Joanna's reflexive journaling. Following ethical approval from the requisite UK Health Research Authority and Research Ethics Committee (reference: 19/YH/0183), any adult referred to the CR service in the specific NHS Trust studied was eligible to participate. Approval was granted for Joanna to undertake participant observation at CR programme sites and also in participants' community and home environments. Participants who did not attend CR were observed and interviewed in community and/or home environments. All participants attending CR were observed during their programme attendance, and some also opted to meet the researcher in community and/or home environments, according to participant preference and ethical considerations. Significant others were observed and interviewed, typically in community or home environments; there were also instances where they attended CR with the patient, and in these cases some data were collected at the CR venues. As has been noted, undertaking research in personal spaces involves ethical considerations for both participant and researcher (Bashir 2018), including personal safety. Prior risk assessment was undertaken by Joanna for each location (eight sites in total) with dynamic risk assessment continuing throughout each visit. Visits were always prearranged with the participant, consideration was given to the frequency and length of visits, and Joanna took care in striking a balance between data-collection needs and demands upon participants (and others) in each setting.

Two recruitment approaches were employed: (1) the CR team gave brief details during their introductory conversation with the patient and gained consent to pass on contact details to Joanna;

**Table 1.** Participant characteristics.

| Pseudonym | Age         | Gender | Social class         | Ethnicity         | CR Uptake | CR adherence | Significant other |
|-----------|-------------|--------|----------------------|-------------------|-----------|--------------|-------------------|
| Mark      | 74          | Male   | Middle class         | White British     | Yes       | Yes          | No                |
| Pam       | 74          | Female | Middle class         | White British     | No        | No           | Yes               |
| Tom       | 43          | Male   | Working class        | White<br>Scottish | Yes       | Yes          | No                |
| Simon     | 73          | Male   | Middle class         | White British     | Yes       | Yes          | No                |
| Neil      | 56          | Male   | Working class        | White British     | Yes       | Yes          | No                |
| Peter     | 53          | Male   | Working class        | White British     | No        | No           | Yes               |
| Gordon*   | Unknown     | Male   | Unknown              | Unknown           | N/A       | N/A          | No                |
| Jane*     | Unknown     | Female | Unknown              | Unknown           | No        | No           | Yes               |
| Robert    | 58          | Male   | Working/middle class | White British     | Yes       | Yes          | No                |
| Sarah     | 58          | Female | Working/middle class | White British     | No        | No           | Yes               |
| Elizabeth | 69          | Female | Working class        | White British     | No        | No           | No                |
| Debbie    | Undisclosed | Female | Working class        | White British     | No        | No           | Yes               |
| Adam      | 40          | Male   | Unknown              | White Other       | Yes       | Yes          | No                |
| Valerie   | 39          | Female | Unknown              | White Other       | No        | No           | Yes               |
| Paul      | 72          | Male   | Middle class         | White British     | Yes       | Yes          | No                |
| Petra     | 73          | Female | Middle class         | White British     | No        | No           | Yes               |
| Sandra    | 58          | Female | Working class        | White British     | Yes       | No           | No                |

\*Prior to his first interview Gordon was readmitted to hospital and then died; thus, there are no interview data from Gordon or his significant other, Jane.

and (2) Joanna attended CR clinics gaining consent from patients for her attendance during their appointment. Joanna provided a participant information sheet during each clinic appointment. Ten patient-participants (see Table 1) were purposively recruited to vary in gender, age, and CR uptake status. Patient-participants were then invited to consider the recruitment of at least one person they considered a significant other (i.e. person of significance in their life); seven relatives or close friends of patient-participants were subsequently recruited (see Table 1). From our sociological perspective, as CR (and indeed health and illness more generally) are conceptualised as socio-culturally framed and 'lived', the recruitment of significant others helped explore the influence of others on patients' experience of CR; the latter being a gap identified in the extant literature. Full, written informed consent was obtained from all participants.

The study was conducted over six months, and could be considered a 'non-traditional' ethnography, primarily due to COVID-19 pandemic restrictions in the UK during data collection; half-way through this period, virtual rather than in-person methods were employed (as detailed below). As Lane and Lingel (2022) portray in a special issue of *Qualitative Sociology* on digital and other 'non-traditional' forms of ethnography, these newer forms of ethnography can produce vibrant, complex accounts of people and practices, which is precisely what we sought vis-à-vis people's experiences of CR. Rather than the 'full' ethnography originally envisaged, therefore, the research is perhaps better characterised as employing certain ethnographic methods to gain an understanding of the socio-cultural context under study.

Bourdieu considered reflexivity to be epistemically linked to the research process (Bourdieu and Wacquant 1992), and thus, reflexivity was an important consideration. As primary researcher, Joanna's positionality was salient, including her professional background. She had formerly worked in health improvement, with specialist exercise instructor qualifications, including holding a CR instructor qualification and having delivered CR several years prior to the commencement of the study. This background had the potential for the projection of what Bourdieu would term Joanna's own norms of construction. She therefore used a reflexive diary (described below) to identify (as much as possible) and analyse her influence on the research.

### Data collection

Joanna utilised multiple methods to gain in-depth understanding of the social environment and the study participants in the field sites. Participant observations, repeated semi-structured interviews, and reflexive journaling were all used. Familiarisation between participant and researcher took place prior to commencing data collection (involving between one and three separate interactions), aiding rapport-building with participants, CR staff, and their environments. Participant observations continued throughout the study (the length and number were variable according to the participant), although these were shaped by the switch to virtual methods after 3 months, caused by the first COVID-19 UK lockdown. These observations helped inform the first semi-structured interviews by drawing on issues identified by J as of interest, such as if participants seemed keen to leave CR immediately post-session without socialising, and their topics of conversation. Both observations and first interviews then informed the second round of interviews, which all took place virtually due to COVID-19 restrictions. Observations, recorded via field notes (see below), focused on ethnographic details such as where individuals positioned themselves within an exercise class, the clothing worn when attending CR, and sensory displays such as pleasure or pain. The interview approach was the same for patient-participants and significant others, with the significant other asked to reflect on thoughts and feelings in relation to the cardiac event and the patient-participant. Interviews were conducted one-to-one with each participant, and on some occasions observations took place with both the patient-participant and significant other present, by agreement.

Interviews were semi-structured, allowing some freedom in participants' responses and for the researcher to be responsive to the participant's account. In his own research, Bourdieu (1996) sought an in-depth understanding of participants' life circumstances, to help situate habitus, field, and capital positioning. In our study, participants were asked to reflect on the social and biographical

context of their illness, to help ascertain how their experiences had been shaped by the structural aspects of social positioning. An example of the semi-structured interview guide is provided as supplementary material. Repeat interviews provided an opportunity to revisit, revise and refine accounts. Interview recordings were transcribed verbatim by Joanna. Jottings (shorthand notes) and voice notes were made in the field, with more detailed notes recorded as practicable subsequently. Three field diaries were used, one each for the two CR programme locations and one as a reflexive journal.

The reflexive journal constituted an important element and was used to record daily processes, methodological decisions, and personal reflections (see also McGrath 2021). Entries were made in the same way as field notes, with initial jottings made by Joanna in the field. Detailed entries were then subsequently made, often using the journey home as an ideal time for reflection. As part of these detailed notes, Joanna's positionality was considered. Due to her professional background, having previously worked as a CR exercise instructor then managing other CR instructors, Joanna had partial insider status and shared cultural grounding and familiarity with programme design and terminology, for example. This facilitated good working relations and rapport with CR staff, volunteers, participants and their significant others, and access to interactions and conversations. Nevertheless, we were cognisant of different degrees of 'insiderness' (Allen-Collinson 2013) at play, and that such 'insiderness' is always fluid, mutable and context dependent.

### **Data analysis**

The approach to data analysis was informed by Braun and Clarke's (2019, 2021) reflexive thematic analysis (RTA), in that the analytic process was organic and also recursive, moving forwards and backwards through data familiarisation, coding, developing themes, and then writing-up. After transcribing her recordings, Joanna familiarised herself with the transcripts and field diary entries, reading and re-reading these as part of her data-immersion. Including reflexive diary entries in this process provided context and enhanced understanding of the circumstances and influences surrounding fieldwork, providing another layer of data (see Trainor and Bundon 2021). Working with patient-participant data in conjunction with the relevant data from significant others provided both useful context and richer data. Joanna used both inductive and deductive coding to interpret meaningful segments of data concerning socio-cultural influences as described by participants, and to generate initial codes. For example, the extract, 'it was only after I'd rang 'em to tell 'em I'd changed me mind and reminded them that they hadn't sent anything out that they actually sent some information out' was labelled as 'feeling ill-informed about CR'. After initial code development, Joanna thoroughly reviewed codes, and began to construct themes. For instance, the codes 'feeling ill-informed' and 'not being taken seriously by health professionals' contributed to the theme 'relationships with health professionals'. Codes and themes were subsequently discussed with all research-team members, as 'critical friends' (Smith and McGannon 2018) who sought to debate and challenge (constructively) Joanna's initial interpretations, and also suggest alternatives, in order to ensure codes and themes were as tight and focused as possible. This process generated fresh interpretations and insights, to help strengthen the analytic process.

In relation to evaluation criteria (Sparkes 2020; Tracy and Hinrichs 2017), we adopted flexible criteria relevant to our Bourdieusian structural constructivist epistemological approach: worthy topic (as identified from both the literature review and in discussion with healthcare professionals), analytic rigour (as described above), Joanna's researcher sincerity through honesty and transparency, reflexivity (as portrayed above, including via Joanna's reflexive diary), robust ethical considerations (reviewed and refined via the stringent participant-protection requirements of the relevant Health Research Authority and Research Ethics Committee and considered dynamically throughout research design, data collection, and presentation of data), expression of participants' reality (recounting participants' lived experiences in their own words), and transferability as relevant to theoretical generalisability (see Smith 2018). These aspects of data quality followed through from research design to the reporting of findings, to which we now turn. It should be noted that the

Bourdieuian terminology was not employed by participants themselves but has been applied following the intense interpretative work undertaken primarily by Joanna, with support from the research/authoring team.

## Results and discussion

### *Early reflections on cardiac rehabilitation – ‘standing out like a sore thumb’*

In this section, we portray how participants’ preconceptions of CR were particularly salient in assessing whether their habitus was compatible with the field of CR, and how other interrelated fields (e.g. work and/or domestic responsibilities), were negotiated (see also Angus et al. 2018). Bourdieu’s concept of *illusio* was found to resonate very strongly with participants’ accounts. Being able to fit in with the CR group, for example, was reported as a concern by several participants, including Tom (43 at time of his cardiac event):

I guess my only real concern was standing out like sore thumb, ‘cause I mean being 20 years younger than the next person there, you do kinda stand out!

Similarly, Sandra, aged 58, had made assumptions about the kind of person most likely to attend CR, and was surprised when her suppositions were proved incorrect:

I was surprised there was so many men, yeh, I don’t know why I thought it would have been more female orientated, ‘cause I suppose on the media you hear men don’t really ya know [access healthcare]. I was nearly a younger age bracket and then following that there’d been a few more gentlemen and another lady that appeared and I thought actually they are much younger than me, or they look younger or whatever, so I was quite surprised at that.

These doxic assumptions about the field of CR, such as rehabilitation being aimed at unfit and/or older people, have also been identified in the literature as influencing the decision to attend and/or adhere to CR (e.g. Evans and Crust 2015). Our findings also align with those of Clark et al. (2004) in relation to CR programmes being perceived as most likely to be attended by those deemed old.

A lack of clarity about what CR might comprise was notable in many participant accounts. Sandra described her initial anxiety, for example:

It suddenly hit [me that] it wasn’t just like an ordinary [exercise class]... Suddenly I was here and there was a reason why I was there. I’d had this procedure and there was all these other people as well. So that first session I was very nervous, very worried they’d make me do something that would cause me to have a heart episode of whatever kind. ... [I] thought I was going to do an exercise class bit like normal exercise like aerobics.

Relatedly, the information provided by health professionals about CR has been identified as salient to participants in deciding whether to engage in (and adhere to) CR (see Bäck, Öberg, and Krevers 2017). The importance of CR communication has been highlighted in systematic reviews on CR engagement (e.g. McHale et al. 2020), and was also identified as important from Joanna’s observations. Information-giving typically comprised just a short verbal explanation, towards the end of a long appointment lasting 60–90 minutes. Some patient-participants received only a letter or short phone call, with little detail, whereas others felt overloaded with information. Elizabeth, a patient-participant, noted feelings of information-overload, and questioned the relevance of CR ‘keep fit’ for her:

She [CR nurse] explained things, she gave me a load of booklets and ya know things, and she explained some of the things they do. I think there was something about keep fit ... I don’t think I was taking everything on board that she said ‘cause I was thinking that I wouldn’t go to that on me [my] own anyway and I wouldn’t do that.

There might be several reasons for Elizabeth’s feelings: first, as she suggests, she might subconsciously have already decided CR was something incommensurate with her habitus, and so paid scant attention to the information being given. Second, her previous lack of engagement with physical activity might mean she had insufficient cultural capital to understand what was being



offered. Relatedly, the term 'keep-fit' was utilised by several participants ( $n = 3$ ), perhaps reflecting their assumptions about the suitability of the activity vis-à-vis age, social class, and gender appropriateness. Elizabeth's previous lack of engagement in physical activity would indicate an incompatible dispositional schema in Bourdieusian terms. Thirdly, the information offered by the CR nurse might have been presented in an inappropriate manner, presuming Elizabeth's understanding of the terminology used. The importance of providing the type of information suitable for a patient to make an informed choice has also been identified in other research (e.g. Kaltoft et al. 2015). As communication mode is typically determined by health professionals, if delivered inappropriately a level of symbolic violence can be experienced (Galasiński and Opaliński 2012), potentially impacting patient uptake/adherence (Taylor-Smith and Dumas 2019).

Our research findings indicate that when CR is offered, an individual's material conditions and personal biography can inter-relate to influence how a person processes what is being offered. Not only is this important from a power relations perspective (between patient and health professional) but also because the patient's habitus provides the potential for adapting to new practices in different contexts (Costa and Murphy 2015). Cultural capital may assist in supporting health literacy to make appropriate health decisions (National Library of Medicine 2023 Health Literacy section). Furthermore, age, class, and gender intersect with lifestyles and norms. Bourdieu (1978) argued that working-class individuals partake in physical activity for different reasons to those of other social classes, or are less inclined to do so, often due to the perceived responsibilities of adulthood (Williams 1995). However, it is important for health professionals not to assume homogeneity in the beliefs and assumptions of particular social groups and their understanding of a healthy lifestyle. How a participant manages to navigate the field of CR is another factor relevant to sustained engagement with CR, as next discussed.

### *Navigating the field of cardiac rehabilitation – 'I was happy with my surroundings'*

Whilst our data revealed how initial assumptions about CR can affect the decision to accept/decline entry to CR, finding value in the CR programme itself can also facilitate adherence – as confirmation of the *illusio*, in Bourdieu's terms. A field is a social space involving rules and conventions (Webb et al. 2002), which Bourdieu (1994) likened to a game, with rules, laws, and norms (or *nomos*). Here, individuals jostle for position, utilising the capital with which they enter the field, and also attempting to gain more capital. The capital forms (especially cultural, physical, social, and symbolic), along with the habitus and shared *doxa*, come together in the field to generate possibilities for action (Veenstra and Burnett 2014). Our data indicated that participants' desire to accumulate further capital served as a motivating factor for adherence to CR (see also Angus et al. 2018). For those previously living sedentary and/or unhealthy lifestyles, we found that entry to CR offered potential for secondary habitus development. Cultural, physical, and social capital can be accrued directly through the education and exercise provided, and the opportunity to build social relationships. Economic capital can be re-established through the capability to return to work resulting from engagement in CR. With reference to capital accumulation, at the time of Robert's first interview he had been attending CR for just a few weeks, but seemed already to have begun to accumulate physical and cultural capital:

I was happy with my surroundings, familiar with one or two faces, spoken to one or two people, spoken to the nurses and yourself so you know ... yeh, after that I'm more comfortable now [around others, performing the exercises], having done some sessions where you are in a group, I feel less embarrassed.

Additionally, a dispositional shift was evident in Robert, as his enhanced physical capital inspired more physical activity at home, as noted by his significant other, Sarah:

He tells me about what he's been doing [at CR] ... he's seeing his heart rate go up and he knows he can cope with it. I think there has been a bit of a lightbulb moment that's made him think he is ok. We went out last

Sunday doing quick walking between telegraph poles, that sort of makes you aware that it's doing something more than just your normally plodding around ... it was his idea.

Robert himself explicitly indicated his corporeal investment in CR (which he had initially felt would not be of benefit):

I'm committed to doing the nine weeks ... at this point I can't see any reason why I shall stop coming.

Our data also indicated how capital accumulated within the field of CR helped participants gain a shared perspective regarding ill-health, together with knowledge about and confidence in their abilities, thus facilitating adherence to CR; patient-participant Sandra explained:

Once you spoke to people you found you weren't alone in thinking that they were worried about maybe going for a long walk or taking up exercise, or what they should be eating or what if it happens again or ya know, so yeh just that shared experience with other [people]. ... Even though I've had a heart event and I know I should exercise more, without the cardiac rehab I don't think on my own I'd have had the confidence to embark on anything. Because it's that knowledge of knowing what you are able to do safely. So, I think I would've avoided it rather than trying to do something, obviously I've learnt the exercises that they've given wouldn't have necessarily been exercises that I would've done.

From a Bourdieusian perspective, it takes time and repeated engagement to feel at ease in a new field, to develop doxa, and confirm *illusio* (Palmer et al. 2021). This is especially pertinent in group situations, where the repeated practice of dispositions, for example via repeated engagement in CR exercise with others, fosters a sense of 'collective belief' (Bourdieu 1977, 167) and can in time generate group habitus. For participants, this then led to the affirmation of discourses surrounding exercise, healthcare, and CR, promoting temporary reactions (such as using a leisure centre), or even lasting dispositions significant to CR adherence and also longer-term lifestyle change.

Despite the importance of gaining new capital, the confirmation of *illusio*, and the potential for development of a reignited primary habitus or a newly developed secondary habitus, external factors could still render CR attendance a challenging prospect when participants' lifeworld demands collided with such attendance. For example, when one CR programme moved location to another leisure centre across town, it meant that a number of participants felt unable to sustain engagement, and thus had to drop out of the programme, to their disappointment. Sandra explained that the additional time needed to travel to the new venue meant she would have had to take time off (paid) work, which was not a feasible option:

... just wasn't ya know feasible with me being able to have time off work and obviously getting to the venue and back again, erm, so yeh, which was a shame, so I was quite disappointed with that.

Sandra – and other patients in a similar position – were then unable to complete their CR programmes, demonstrating the importance of participants having confidence in the practicality and consistency of provision, factors also found salient in other research on adherence to exercise programmes (Allen-Collinson et al. 2011).

Self-management constitutes an important part of the NHS CR model, with programmes aiming to provide the resources (i.e. capital) to assist in commencing the recovery journey. Some participants had decided they already had the required resources, however. Even those attending CR did not necessarily accumulate additional capital, although opportunities for developing social capital were available. During observations, it was noted, for example, that Robert was always one of the first to check-out at the end of session and leave immediately afterwards. When asked about this, he indicated this was because of the distance to travel home and lack of time, perhaps because social capital was not a priority for him. However, interestingly, Robert himself identified the lack of social interaction as surprising:

We didn't have a lot of talk time between the group. So never really got to know anybody too closely. We probably had small conversations about why they were there or what had led them to having to go to it, and

almost health questions, but never really got to know the person so . . . I probably got the impression that would happen more, ya know, with people [CR nurses] saying when you come to group, you'll be able to talk and . . . it never really happened.

A lack of social interaction was also noted in the observations of patient-participant Adam, who attended a different CR venue but, like Robert, tended to situate himself away from others in the education room, exercised independently with little social engagement, and left swiftly at the end of session. In Bourdieusian terms, there had been little opportunity to accumulate social capital. Whilst Adam's and Robert's habitus could be contributing factors, spatial arrangements in one venue were also noted as potentially generating disconnectedness amongst participants, with little space available for informal interaction:

This programme is set within a gym, but the team have use of most of the upper floor space meaning that they have one room for welcoming, waiting, refreshments and education sessions, a further studio space where blood pressure measures and nurse checks are conducted, a second studio space where the warm-up and cool down take place, and then access to the downstairs gym. (Field note entry 12/12/2019)

Accessibility of services was also a key consideration, for both urban and rural participants. As indicated in the literature, physical and symbolic geography can also be important for the accessibility of services (Lewis et al. 2018), influencing behaviour (Popay et al. 2003) and healthcare decision-making (Lewis et al. 2018). In our study, Elizabeth, ascribed her non-attendance at CR as due to rurality, and also her unfamiliarity with the town where CR was situated. As noted earlier, Sandra dropped out of CR when the venue changed. Sarah, a significant other, described her husband's wavering decision to attend CR, noting: 'If it'd been winter or bad weather [when he needed to travel] it would've been a no no'. Resonating with our findings, a recent NACR report (BHF 2022b) identified how allocation of CR programme mode (virtual/in-person) was based largely on location, (urban/rural), and not participant preference, generating problems vis-à-vis personalisation (Dalal et al. 2007) of CR and the need to fit with participants' contexts. Although the choice of a virtual programme was not possible at the time our study was undertaken, the data above demonstrate that participants' perceptions and preferences are highly salient in decision-making regarding CR attendance. Furthermore, CR participant perspectives gathered by the (BHF 2022a) suggest that choice, including hybrid and flexible options, are very important to participants, and opportunities to switch between virtual and in-person attendance and between exercise modes are highly desirable.

Applying Bourdieu's theoretical insights, we found that while conceptualisations of field and capital acknowledge the influence of structural and spatio-environmental forces, habitus plays a central role (Bourdieu 1992). As described above, habitus involves a system of durable dispositions (Bourdieu 1984), and the importance of these dispositions is key to understanding the influences on CR practice. Additionally, reflexivity should also be considered in the navigation of fields, with participants' decisions constrained by access to available options (Telling 2016). Thus, where an individual's social position may constrain these options – such as through gender or social class, for example, they might perceive a limited capacity to take up and/or sustain engagement with CR.

Again, drawing on Bourdieusian theory allowed us to see how the field of CR is subject to nomos, or a normative belief-structure tying the field together as a coherent space of action, including what is deemed acceptable or unacceptable in the field. This was well illustrated in Joanna's field note about patient-participant, Robert, who challenged such nomos at one point:

Robert [patient-participant] seemed very enthusiastic during the exercise session, he said that he had been struggling to get his heart rate into the required zone [mandated by staff], so he wanted to push himself a bit more and was feeling good to do that. He was certainly more buoyant and confident looking in the gym environment than I have seen before. He was able to get into his heart rate zone, which he seemed really pleased about although at one point he was possibly exceeding it and recognised this and eased off a little. There was

one occasion when he started the active rest exercise early but was corrected by staff; he made a comment saying 'Am I getting a telling off?' to which a nurse replied 'Yes you are!'. He pulled a face, half smiling and looking towards me. That seems to be the way, that it's very much a 'do as you are told to do' environment and it is accepted that those in red [the staff, who wore red tops] give the instructions. (field note entry 06/02/2020)

This, and myriad other examples, revealed how staff and volunteers were instrumental in establishing and defining the nomos and held the social power to enforce their definitions. Having presented our key findings above, we now consider how the use of Bourdieu's theory generates specific insights into CR decisions and experiences as shaped by socio-cultural contexts.

## Conclusion and future directions

This research employs a Bourdieusian perspective to analyse key socio-cultural influences on engagement with and adherence to CR, and on participants' embodied experiences. The data presented and discussed here represent only a portion of the breadth of data collected, and other publications (e.g. Blackwell et al. 2023) address different aspects of our findings. Bourdieu's concepts assist in highlighting the importance of both structural and agentic factors in healthcare. Whilst adherence can help achieve well-evidenced benefits of CR, it requires that participants have a compatible habitus, and also the capital to navigate the field of CR. As our data indicated, structural influences on doxic assumptions about exercise and CR can deter participants, making some feel they 'stand out like a sore thumb'. Further, challenges created by a participant's habitus can also have a negative impact on CR engagement and adherence. From a Bourdieusian position, levels of capital are important influences on CR participation; for example, economic capital is often requisite for travelling to venues, and also participants' concerns about loss of existing capital and social position (e.g. not fulfilling occupational or domestic obligations), can problematise attendance.

The use of Bourdieu's social theory to explore some of the socio-cultural influences on CR engagement is a strength of this research, but we fully acknowledge that the small, limited geography and diversity of the participant group are limitations. While generalisability to wider populations was never an aim of this ethnographic project, future research could benefit from investigating different geographical settings and drawing on a larger, more socially diverse group. Both ethnicity and rurality have been identified as key factors influencing inequality of CR opportunity, for example, and although our participant group all resided in one large rural county, the majority ( $n = 13$ ) identified as white British.

In conclusion, via a Bourdieusian theoretical framework, our findings demonstrate how participation in CR could be greatly facilitated if the programme offer is individualised and tailored to the lifeworld of participants, in the context of their own journey, habitus, and capital resources. This includes how a participant might be best supported to adapt their bodily hexis (bodily ways-of-being) and restore or gain new forms of capital following the mind-body disruption often generated by a cardiac event. An understanding of the participant's personal biography and material conditions is important in ensuring that information about CR is presented in a manner appropriate to that participant. In practical terms, it would thus be beneficial for health and CR professionals where possible to take time to get to know participants and personalise their interactions based on what they learn about the participant, such as their background and circumstances. To support the differing needs and circumstances of participants, flexible, menu-based CR and exercise-based CR opportunities are important, to enable choices to be made by participants themselves in conjunction with the appropriate health professionals. As more CR programmes strive to move towards a more personalised approach, qualitative research examining the assimilation of changes to socio-cultural needs will be beneficial to the understanding of fit with a participant lifeworld. Individualised CR could certainly benefit uptake and adherence, and the potential to adapt the habitus, restore and gain new capital and ways of navigating the field might well be beneficial to health practices in the medium to long-term, creating opportunities for longitudinal exploration. Finally, qualitative notions

of generalisability and transferability (e.g. Smith 2018; Tracy 2010) are important here, in seeking resonance with those health professionals and commissioners able to influence planning and delivery of CR, creating the fundamental change required to enhance CR attendance, adherence and longer-term changes to practice.

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