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Technology as a Mediator of Physical Activity Consumption Practices Among Disadvantaged Young Women

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Title and Summary

Technology as a Mediator of Physical Activity Consumption Practices Among Disadvantaged Young Women

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Summary

Advancements in technology and increased mechanisation of everyday tasks, as well as increasing opportunities for sedentary forms of leisure have contributed to a ‘pandemic’ of physical inactivity. Thus, increasing levels of physical activity has become a global health priority for the World Health Organisation (WHO). Despite the increasing focus on promoting physical activity participation, statistics show that large portions of society are not sufficiently active, and this is more pronounced in certain groups including young women from disadvantaged areas, framed as the ‘double jeopardy’ (StreetGames, 2017). This paper outlines the empirical findings from a research study that examines this phenomenon through a practice theory lens. Specifically, it describes how a qualitative methodology uncovered the mediating role of technology in physical activity consumption among girls. Technology was shown to be a significant anchor of practice.

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Technology and Sedentary Behaviour

Developing technology and digitalisation, in addition to widespread accessibility to this technology, has transformed the manner in which we understand and partake in leisure time (Bryce, 2001). There are increased opportunities to undertake sedentary forms of leisure, such as watching television, gaming, browsing the internet and travelling to locations as passive passengers. The rapid expansion of technology to all realms of life has resulted in competition with and in many cases, displacement, of physical activity in employment, domestic and leisure roles, contributing to increased levels of sedentary behaviour and physical inactivity (Woessner et al., 2021; Kumareswaran, 2023). However, despite the established associations between increased use of technology and sedentary and inactive behaviour (Vandelanotte et al., 2009; Sisson et al., 2011), technology has also been shown to have facilitative effects in supporting individuals to become more active. For example, studies by King et al. (2008), Connelly et al. (2013) and Bond et al. (2014) demonstrate the positive influence technology can have in increasing physical activity consumption. This suggests that, used effectively, the incorporation of technology can have advantageous intervention effects, as well as in generally facilitating physical activity participation. It is crucial therefore, to understand how young people consume and would like to consume technology, to manage provision in the most effective way.

Practice Theory and Physical Activity

A significant body of work has been undertaken in the field of physical activity participation, with researchers adopting both exploratory and intervention-based approaches. Exploratory studies have sought to identify barriers to engagement, with studies frequently targeted towards specific populations. For example, Whitehead and Biddle (2008) grouped barriers to participation for adolescent females into seven key themes. These surrounded perceptions of femininity, changing priorities, self-presentational concerns, lack of motivation and appreciation of benefits, parental support, desirable structures of physical activity and

enjoyment. Studies targeting disadvantaged groups meanwhile have identified self-esteem, support networks, income and time constraints among other barriers (Collins and Kay, 2014; Craike et al., 2018).

Intervention-based studies have frequently sought to increase engagement by combatting specific barriers, with many interventions relying either implicitly or explicitly on behaviour change models such as the Transtheoretical Model (TTM) or ABC framework. Despite the widespread use and investment in such behaviour change frameworks, evaluations indicate that the success of such processes in transforming physical activity consumption is at best partial (Camacho-Minano, LaVoi and Barr-Anderson, 2011). This research argues that the reason for the only moderate successes is the framing of change within the realm of static relationships between structures and agents. The limited focus on the mediation between the two has therefore resulted in an over-emphasised model of agency, which insufficiently accounts for the dynamic social processes of everyday life and the ‘social, affective, material and interrelational features of human activity’ (Cohn, 2014). In order to advance research into increasing physical activity participation and account for the aforementioned blind spots, a more sophisticated account of the social world is required, where the basic domain of enquiry is ‘neither the experience of the individual actor, nor the existence of any social totality, but social practices ordered across space and time’ (Giddens, 1984, p.2). Subsequently, this research adopted practice theory as its theoretical lens.

In contrast to traditional sociological and philosophical theories which focus on either norm-orientated or purpose-orientated action, practice theory seeks to bridge the gap between structure and agency by understanding social order as embedded in collective symbolic, cognitive and practical structures incorporated by individuals (King, 2004; Hopkins et al., 2020). Practice theory exists as a family of shared concepts and principles, with no one universal *modus operandi*. According to Schatzki (2001), the field of practices represents the total nexus of interconnected human practices, including knowledge, meaning, power, human activity, social institutions and historical transformation. Practices are understood as ‘embodied, materially mediated arrays of human activity centrally organised around shared practical understanding’ (p.11). Practice is thus the site, nexus and interface between the individual and the social and consequently the unit of analysis when studying the social world.

Reckwitz (2002, p.249) defines a practice as:

‘a routinised type of behaviour which consists of several elements, interconnected to one another: forms of bodily activities, forms of mental activities, ‘things’ and their use, a background knowledge in the form of understanding, know-how, states of emotion and motivational knowledge.’

Importantly, the existence of a practice depends on the co-existence and interconnectedness of multiple elements, and in another move away from traditional sociological, psychological and philosophical theories, elements of practice are understood as properties of the practice itself and not the individual performing them. Individuals instead act as carriers of practice, and thus the patterns of bodily behaviour and routinised ways of knowing, understanding and desiring. The continued existence of certain practices therefore relies on consistent incitement and re-enactment by carriers of practice.

This research specifically adopted Shove, Pantzar and Watson’s (2012) conception of practice theory, whereby practice consists of interdependent relations between materials, meanings and competencies, representing objects, tools, infrastructure and the body itself, mental activities, emotion and motivational knowledge, and skill, understanding and mental and practical know-how respectively. For Shove et al. (2012), practices emerge, shift, persist and disappear when links between elements are made, sustained or broken. This framework is thus useful for identifying the granular elements of everyday life that can have both facilitative or inhibiting effects on physical activity consumption, and thus identifying the most valuable areas for intervention. The findings outlined in this paper specifically surround the impact of technology as a mediator of physical activity participation among young, disadvantaged women.

Exploring Practice: A Qualitative Research Methodology

The overall purpose of the research was to critically examine the relationship between physical activity and girls from socially disadvantaged backgrounds via a practice theory lens. The research question explored in this paper specifically, however, is the nature with which technology can mediate engagement for girls with varying commitment to physical activity. This includes both its facilitative and inhibitive effects, in an attempt to understand how technology can be used to promote engagement in physical activity in inactive or semi-active populations. To address the research problem, a qualitative research methodology was adopted

owing to its ability to discover ‘what is significant from the viewpoints and actions of the people who experience it in relation to time, place, context, situation – and people’ (Sparkes and Smith, 2014, p.14). Participant observation was utilised to examine collective practice among young, disadvantaged women in three community settings throughout the South Wales Valleys region. Each setting varied in their commitment to provide physical activity and indeed the level of consumption from participants. Included was a gymnastics club representing the committed group, an after-school Couch to 5K (C25K; progressive running) club representing the semi-committed sample, and a youth club representing more inactive populations. The researcher spent a period of five months observing practice in these settings, with key commonalities and differences between practice emerging in each setting.

Following observations, 11 interviews with young women who attended the clubs to understand how and why practices were carried across space and time and how they influenced their physical activity consumption, including how practices such as using smartphones ordered or *anchored* participation (Swidler, 2001). In addition to querying practice among the target population, community providers at the clubs, as well as directors of their governing organisations (including British Gymnastics, StreetGames and Sport Wales) were also interviewed to identify both agreements and conflicts in the desired nature of physical activity provision. The objective here, to identify the most fruitful areas for intervention; one of which being the incorporation of technology. Observations were written up and interviews transcribed verbatim. These were subsequently coded using thematic analysis via ATLAS.ti software (Braun and Clarke, 2006), with a number of key themes emerging.

Technology as an Anchoring Practice

The foci of this paper surrounds the significance of technology as an anchor of practice (Swidler, 2001) and consumption among young people. Across each field setting technology, and particularly smartphones, were consistently present and governed day-to-day activity, whether that was socialising, seeking information or participating in physical activity. Technology and smartphones were utilised in a number of ways to mediate participation, including as tools for performance analysis and coaching, to monitor lifestyle behaviours such as daily steps, to socialise and craft identities online and to capture media content for social media and personal use (one example being illustrations of pre- and post-exercise physical transformations). The key difference between settings (and the nature of commitment to

exercise in each setting) was the degree to which girls would allow technology to anchor their participation in physical activity.

For instance, participants in the gymnastics club and regular attendees at the C25K club would mostly use their smartphones as tools to enhance participation and performance, by filming and analysing skill execution, using the C25K app to progress their running and to monitor daily steps to reach activity recommendations. Meanwhile, despite being in active environments (such as in the gym, on a running route or playing football on the youth club's AstroTurf court), the less engaged C25K participants and a large majority of the youth club participants would frequently be seen scrolling social media, taking photographs or using their smartphones more generally, to such a degree that little to no exercise was occurring. In this way, technology was anchoring practice to more inactive forms of consumption compared to the active participants, who were anchored by the exercise and merely used technology as a facilitative tool.

Interviews revealed that the emerging connection to technology was something club leaders and policymakers were acutely aware of, and there was an appreciation that it would be more beneficial to adopt it rather than fight it. The issue, however, was determining how to utilise technology in the most effective way to get young people sufficiently active. Analysis highlighted the positive impact of Covid-19 on organisations' use of technology, with both providers and policymakers forced to quickly adapt to digital provision and communication. The participants maintained, however, that there was still work to be done in terms of combatting digital inequalities, safeguarding young people online, upskilling staff competency, upgrading organisational resources and maximising the reach of social media via the use of physical activity influencers.

The Contribution

Given the significant levels of inactivity reported in contemporary society and the global focus on increasing engagement to improve population health (Khunti et al., 2007; van Sluijs, Page, Ommundsen and Griffin, 2010; Carson et al. 2016; Pratt et al., 2020), it is vital that providers both understand and utilise technology in the most efficient way to maximise its potential as a facilitator of participation, whilst simultaneously limiting its power as an overall anchor of sedentary practice.

Development Paper Discussion

The discussion will focus on how practice theory offers a novel approach to researching the wicked issue of physical inactivity. A key area of interest is to consider the role of technology in leisure consumption and consider how providers might adapt to ensure its use facilitates active practice and consumption in young, disadvantaged women as well as considering its application and relevance to wider society.

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