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The World Health Organization, physical activity and the contradictions of neoliberal health promotion

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ABSTRACT

This article constitutes the first holistic exploration of how neoliberalism permeates and manifests in Physical Activity Health Promotion (PAHP). It synthesises a critical analysis of neoliberalism with the sociological concepts of medicalisation and healthism and draws on three distinct phases and methods of data collection, to more adequately understand the development, prominence and largely uncritical acceptance of this domain of global public health. Specifically, it demonstrates how the World Health Organization's (WHO) initial promotion of PAHP coincided with the organisation's strategic re-alignment with neoliberal principles within a changing geopolitical landscape. Then, deploying a critical discourse analysis of the recent and globally significant WHO (2020) *Guidelines on Physical Activity and Sedentary Behaviour*, it shows how the underlying logics of neoliberalism continue to inform not only the intended policy goals but the inclusion and exclusion of certain types of evidence used to justify and evaluate policy. Subsequently, drawing on qualitative interview data and time-series survey data the article details how neoliberalism fosters the ideology of healthism, how this promotes forms of exercise which diverge from health maximising behaviours, and how this extends differences in physical activity uptake across the population, and therefore embeds the health inequalities PAHP is explicitly claimed to address. Outlining why PAHP, in particular, holds appeal for the WHO, we conclude that neoliberalism has both enabled the rapid development and broad political acceptance of PAHP, but concomitantly leads to outcomes which limit and confound the broader policy goals.

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Introduction

Physical Activity Health Promotion (PAHP) has developed at remarkable speed. The 1988 publication of *Australia's Health* marked the beginning of this movement. The World Health Organization first identified the potential for the sports sector to contribute to public health in 2003 (WHO 2003). This was followed by the publication of *Global Recommendations on Physical Activity for Health* (WHO 2010) and the revised *WHO Guidelines on Physical Activity and Sedentary Behaviour* (WHO 2020). While Waddington (2000) outlined and identified the ubiquity of the 'sport-health-ideology' some time ago, the degree to which this movement had become both universal and largely uncritically

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accepted was exemplified during the COVID-19 pandemic when many national governments ruled that outdoor exercise was a permissible reason to leave home, thus giving it priority status alongside food provision and medical care (Malcolm and Velija 2020).

The speed of this development can be explained with reference to the developing scientific knowledge base. Without doubt, a large body of compelling empirical evidence has been produced to support PAHP. Seminal publications include Naci and Ioannidis (2013) on the public health benefits of exercise (note not physical activity or sport) with 800+ citations, and Pedersen and Saltin's (2015) review of exercise as therapy for 26 chronic conditions (with 2500+ citations). But such a narrow explanation would replicate the tendency to apoliticise health through the reduction of policy to the specifics of content (and evidence) at the expense of interrogating the ideological parameters that shape the way health is politically conceived and managed in contemporary societies (Bambra *et al*. 2005). Thus, for a more adequate understanding, PAHP needs to be contextualised within the broader development of medicine and the politics of global health.

Consequently, this article advances previous critiques of specific PAHP interventions (e.g. Bercovitz 2000, Piggin and Bairner 2016), by drawing on political theory, the sociology of medicine and health, and sociocultural studies of sport. It syntheses three principle concepts – medicalisation, healthism and neoliberalism – and, drawing on three phases and methods of data collection, demonstrates how neoliberalism 'permeates and manifests in' multiple facets of PAHP (Rushton and Williams 2012, p. 165). The article provides the first critical analysis of the globally most significant physical activity policy statement, and argues a) that PAHP has become a priority in global public health policy because it is structured by and aligns with neoliberal ideas, and b) that its relative success/failure is a result of the contradictions within neoliberal theory.

Medicalisation, healthism and neoliberalism

PAHP can be viewed as a form of medicalisation, namely, the process whereby 'more and more of everyday life has come under medical domain, influence and supervision' (Zola 1983, p. 295). Immunisation, health screening, contraception and the mass medication of populations (e.g. use of statins) are some of the more traditionally identified examples (Gray *et al*. 2016), but the broad reach of medicalisation is evident, for instance, in the identification of the social and psychological health benefits of green spaces and interactions with 'nature' such as pet ownership (Brown and Bell 2007). The medicalisation of physical activity received a significant boost via the development of exercise on prescription in the first half of the 20th century (Leunkeu *et al*. 2014), the American Medical Association and American College of Sport Medicine's *Exercise is Medicine* programme (Malcolm 2017), and subsequent moves to define physical *in*activity as a global pandemic (Kohl *et al*. 2012). While medicalisation is a complex social process – with some lay groups actively campaigning for the medical recognition of particular conditions, some medical bodies actively resisting expansion of their practice and growing recognition of the adverse effects of some medical interventions – a frequent outcome of medicalisation is to 'personalise and de-politicise what are essentially social problems' (Gray *et al*. 2016, p. 9).

Medicalisation has developed in conjunction with healthism (Crawford 1980); the process whereby health has become a ubiquitous pre-occupation for Western populations, incorporated into contemporary notions of character, identity and citizenship, and a state which individuals feel they can and *must* seek to achieve. Changing understandings of health and illness have fuelled these twin developments. Medicine is increasingly dependent on epidemiology through which the distribution and determinants of health are explored across populations. Epidemiology reconceptualises health and illness from the absence/presence of a particular bodily experience, to a 'continuum of abnormalities' (Aronowitz 2009, p. 425) such that health-illness increasingly becomes a risk calculation, relational rather than absolute. Through the growth of epidemiology, health screening

and preventative medicine, the experience of being at risk of developing an illness converges with the actual experience of illness.

These developments in medicine and health have fused with the now 'hegemonic theory, ideology, and doctrine of the late 20th and now of the 21st century', namely neoliberalism (Cerny 2020, p. 140). Developed in the 1980s, and most closely associated with President Reagan in the United States and Prime Minister Thatcher in the United Kingdom, neoliberals advocate a commitment to the primacy of competition (Cerny 2020) arguing that individual drives for consumption and social status are most adequately met when state involvement in citizens' lives is 'rolled back' to allow markets to flourish. Neoliberalism thus eschews regulation and stresses self-responsibility and calculated decision-making. A neoliberal conception of social justice is that no particular people or groups should receive preferential treatment. Correlatively, because it is assumed that each individual has equal potential to benefit from a policy, the distribution of social consequences is deemed relatively unimportant (McGregor 2001). In the absence of both state intervention and a conception of society, competition and market efficiency logically drive global convergence (Cerny 2020).

Accordingly, the neoliberalisation of medicine and healthcare entails state provision being replaced by consumers who assess and manage acceptable levels of risk and health costs/benefits through lifestyle behaviours (e.g. physical activity). Those who judiciously choose options which maximise their social productivity are seen to personify successful, self-managing, neoliberal citizenship (Lemke 2012). The resultant psychological and embodied benefits of competitive success provide social distinction to those who are compliant with health-guidance, while those who fail are deemed culpable, weak and personally responsible for making poor choices. Stigmatisation and population segregation commonly occur. Assessing the impact of Thatcher's neoliberal health policies, Scott-Samuel et al. (2014, p. 54) identify how the anticipated increases in socioeconomic and health inequalities both materialised, and were 'actively marginalised or ignored' by a government prioritising managerialism and privatisation.

International bureaucracies like the WHO were evidently antithetical to the emerging neoliberal world order and thus had to adapt to survive. Following crises in authority, funding and legitimacy at the turn of the millennium, Director General Dr Gro Harlem Brundtland led the WHO response, 'adopting a neoliberal-compatible agenda … [that fitted WHO's] organisational interests and considerations' (Chorev 2013, p. 632). This included aligning policies with, and incorporating methodologies and expertise from, the World Bank. For example, cost-effectiveness (rather than simply equity) was adopted as the primary rationale for universal health access. The WHO successfully mobilised free market principles to challenge the protectionism of pharmaceutical companies which threatened global access to AIDs drugs, and cited the exceptionalism of tobacco consumption to advance anti-smoking campaigns while more broadly championing public–private partnerships in health. While neoliberalism broadly structures global health policy, these adaptations illustrate that the outcomes are neither monolithic nor deterministic (Chorev 2013, Rushton and Williams 2012).

Much of the resultant variation stems from the 'discrete but overlapping tensions' between the theory and practice of neoliberalism (Kiely 2018, p. 5). In practice, the boundary between state and market is often unclear, with states increasingly compelled to provide different layers of market regulation. Additionally, there are inherent tensions in a philosophy that promotes individual freedoms in the name of systemic efficiency. Where collective choices of individuals do not aggregate into systemic benefits, neoliberal state intervention is again required. A contradiction of neoliberalism is that it (theoretically) advocates spontaneity of individual action but in practice results in high levels of intervention and social constructivism (Kiely 2018). The tensions and contradictions of neoliberal policy are particularly evident in health which many define as both a public good and a human right, but which constitutes one of the highest areas of state expenditure and thus a central 'problem' for neoliberal governments.

This article argues that, despite its complex and sometimes contradictory outcomes, neoliberalism provides the central paradigm (basic theories and ontological assumptions)

and frames (communicative modes) of PAHP (Rushton and Williams 2012). Neoliberalism informs not just the intended policy goals of PAHP but the inclusion/exclusion criteria for forms of data used to justify and evaluate policy which, in turn, has enabled such rapid development. Furthermore, neoliberalism fosters the development of a social psychology transferable across the lifeworld and thus subsequently shapes policy uptake and outcomes (both successes and failures). This article thus constitutes the first holistic exploration of the impact of neoliberalism on PAHP.

Methods

This article developed through a combination of purposive and serendipitous research collaborations which have enabled the triangulation of data from three semi-independent research projects. These projects utilised critical discourse analysis, semi-structured interviews and population surveys. By combining these different data sets, we comprehensively capture the neoliberal character and consequences of the PAHP movement, enabling us to demonstrate the interdependence of political ideologies, policy development, and the macro-social and micro-individual outcomes of implementation.

First, building on previously published critiques of the development of PAHP in the UK (Malcolm 2017) and *Exercise is Medicine* (Malcolm and Pullen 2018) a critical discourse analysis (Blommaert and Bucean 2000) of the most recent and globally significant policy development was undertaken. Focusing on the WHO *Guidelines on Physical Activity and Sedentary Behaviour* (WHO 2020) and associated documentation (e.g. Bull *et al*. 2020, WHO 2018), this analysis involved examining the content, central actors and methodological underpinnings of the guidelines, as well as the paradigmatic assumptions and the presentational framing of the policy content (Rushton and Williams 2012). Drawing on previous PAHP critiques, a sensitising framework was developed through which challenging or non-supporting data – notably evidential gaps, problematic or counterfactual evidence, and existing critiques and commentaries – was identified. This required purposive searches of sports science journals using databases such as PubMed and Google Scholar. To faithfully capture the dynamics of this field and to mitigate potential claims of selection bias, emphasis was given to systematic literature reviews, normally described as the 'platinum' standard of evidence within medical science (relative to the gold standard of randomised controlled trials). The analysis thus sought evidence that the PAHP research community itself evaluates as most compelling.

Second, in order to assess the micro-level consequences of policy implementation, we drew on a qualitative interview-based study of the social impact of exercise behaviour in the UK. This study deployed purposive sampling techniques to explore the injury experiences of recreational sports participants. Initial contact with local sports club officials resulted in the dissemination of calls for participants, recruitment through personal visits to sports club and snowball sampling. To recruit study participants who engaged in a range of sport and exercise activities on a regular basis ($n = 20$), the study inclusion criteria were open-ended in regard to socio-economic background, gender, type of injury and sport played. Eleven female and nine male participants, aged 20–56 years old, were interviewed for between 20 and 120 minutes. Transcripts were anonymised, pseudonyms assigned and subject to thematic analysis. The sample had a notable middle-class bias, with many possessing higher education qualifications, but this ultimately reflects the well-documented link between physical activity and socio-economic status (Pampel 2012; see Pullen and Malcolm 2018 for further methodological details).

Third, time-series data derived from a single urban context (Zaragoza, Spain) were used to assess the macro-social consequences of policy implementation. This research compared the results of a telephone administered questionnaire conducted by a commercial organisation (2009), with a face-to-face administered questionnaire conducted by university researchers (2015). Aside from the mode of delivery, the two surveys contained significant elements of overlap. Both explored changing trends in sports participation across the population, including respondents' motivations

and beliefs about physical activity. The research designs of the two studies were identical, targeting city residents aged ≥13 years old, deploying a stratified sampling procedure incorporating residential area, sex and age quotas, and recruiting 1200 respondents. The datasets were analysed independently of each other using SPSS21© software (see Marcen and Malcolm 2020 for further details).

The resultant analysis starts with an exploration of the way neoliberal principles manifest in the (WHO 2020) Guidelines. We demonstrate how neoliberal values structure the evidence assembled to justify the medicalisation of physical activity, highlighting gaps between theory and practice and the tensions that arise when neoliberalism and health converge. Subsequently, we delineate in more detail how healthism impacts on exercise behaviour, demonstrating how the contradictions of neoliberalism lead to outcomes which limit and confound the policy goals of the PAHP movement at both the individual and social structural level.

The 2020 WHO physical activity guidelines

The 2020 WHO Guidelines superseded the 2010 iteration and followed publication of *The Global Action Plan on Physical Activity 2018–2030* (WHO 2018). The guidelines were based on the 'most recent advances' in a body of evidence that had 'seen a significant increase' in the prior decade (WHO 2020, p. 15). The work was developed by a Steering Group, a Guideline Development Group (GDG), an external independent review and via an online public consultation.

The 2020 Guidelines extend the medicalisation of social life in three distinct ways. First, the guidelines increase the quantity of activity recommended, requiring citizens to devote an increasing proportion of their lives attending to self-health practices. From 2010 to 2020 recommended levels of weekly physical activity increased from 'at least 150 minutes' to 'at least 150–300 minutes' (WHO 2020, p. 32). Correlatively, a clause specifying 'additional benefits' was changed from a threshold of more than 150 minutes to more than 300 minutes of activity per week. For everyone, it is recommended that some activity is better than no activity, and more is better than less. An implication of this change is to suggest that the exercise levels of some previously compliant individuals have been medically re-classified as sub-optimal and requiring intervention. Second, the guidelines extend the scope of recommendations through blurring the life experiences of symptomatic and non-symptomatic populations (Aronowitz 2009). The recommendation to conduct balance activities three times per week was extended in 2020 from those 65+ *with poor mobility*, to everyone in this age group. The new guidelines also include specific recommendations for 'subpopulations' such as pregnant and postpartum women, and people living with chronic conditions or disabilities, yet effectively conclude that the general recommendations are broadly applicable across these groups, and by inference across the entire population. As the medical management of those deemed both 'ill' and healthy has further merged, so an increasing proportion of the population is subject to this medical proscription. Third, in providing the first recommendations for the limitation of sedentary time, the guidelines move from the management of discrete aspects of social life, to a more comprehensive lifestyle proscription. In so doing guidelines further embed health as a project of continuous self-improvement (Crawford 1980) and represent a remarkable extension of the medical domain. For comparison, while blood pressure screening is estimated to have resulted in daily medication for 13% of the population (Gray *et al*. 2016), compliance with PAHP guidelines potentially structures the entire waking hours of the whole population across the entire lifespan.[1]

The neoliberal orientation of the WHO policy is evident in these guidelines in three distinct ways. First, the GDG consisted primarily of 'experts and stakeholders' from the global neoliberal heartland. Despite explicitly foregrounding geographical diversity in the recruitment strategy, 23 of the 27 group members were from Europe, North America and Australia, with one member each from Saudi Arabia, Kenya, Sri Lanka and South Africa. Second, in a section which explains the move from 'Evidence to Recommendations', the guidelines explicitly invoke the principles of rational, consumer-driven decision-making. Specifically, the report addressed the 'Values and Preferences' of those affected by the guidelines (WHO 2020, p. 67). Notably, the GDG did not

cite evidence from the public consultation here but relied on assumptions about consumer behaviour in a free market, concluding that, 'there was little or no uncertainty about preferences regarding the main outcomes' (i.e. health outcomes) and thus 'the GDG considered the recommendations to be not preferences-sensitive' (WHO 2020, p. 67). Consequently, variations in socioeconomic circumstances of populations spanning the globe were deemed unimportant. Third, the guidelines reproduced neoliberal tensions over the boundary between state regulation and consumer sovereignty. The 2018 Global Action Plan (or GAPPA) stated that progress towards physical activity targets was 'slow, largely due to lack of awareness and investment' (WHO 2018, p. 6), and the 2020 Guidelines attributed differences in activity levels (specifically those related to gender and across countries and regions) to 'access to opportunities' (WHO 2020, p. 15). These explanations are predicated on the logics of consumer choice (i.e. assuming that lack of compliance indicates lack of awareness because being physically active is the only rational choice). The guidelines also evidence the limitations of market intervention in the absence of state involvement without fundamentally questioning the capacity of the market to deliver, just as the WHO previously did in relation both to AIDS drugs and tobacco use (Chorev 2013). The logics of medicalisation and neoliberalism can therefore be seen to be variously manifest within the WHO guidelines and their developmental processes.

The neoliberal research agenda: the evidential limitations of PAHP

Despite the widespread implementation by Western governments, the WHO estimated that 80% of adults and 25% of children were compliant with the 2010 guidelines. Consequently, the WHO's (2018) target to reduce physical inactivity by a further 15% is an explicit acknowledgement of perceived policy failure. In this section, we argue that this relative failure of PAHP both stems from and highlights the tensions between neoliberal theory and practice which manifest in the empirical substantiation for these policies. To be clear, we do not dispute the extensive empirical evidence for the health benefits of physical activity. Rather, we believe it to be partial and, specifically, suggest that a) the evidence for health benefits does not directly align with policy; b) there is a systematic bias in the calculation of economic costs and benefits of exercise; and c) the potential health costs of physical activity are erroneously disregarded. Building on our analysis of the WHO's strategic alignment with neoliberalism, and the manifestation of neoliberal principles within the guidelines, this section illustrates how the inclusion/prioritisation and exclusion/relegation of certain types of evidence stem from the underlying logics of neoliberalism.

What are the health benefits of physical activity?

The 2020 WHO guidelines explicitly foreground physical activity rather than related forms of movement such as exercise and sport. However, in recommending guidelines for policy-makers in government ministries and industry sectors including sport, promoting the benefits of vigorous physical activity, and the graphics used to illustrate vigorous activities (namely silhouettes of people playing football, basketball, running and swimming), there is a *de facto* conflation of physical activity, exercise and sport (PAES) in the framing of PAHP (Rushton and Williams 2012). Indeed, it is characteristic of this field that while researchers mainly produce evidence that relates to physical activity and exercise, politicians primarily refer to exercise and sport when translating scientific knowledge into policy (Weed 2016b). The WHO replicates this elision, incorporating sport and exercise participation in the calculations of compliance and future targets for physical activity expansion.

This conflation is an important element influencing the outcomes of neoliberal PAHP. Specifically, there is limited evidence that the practice of *sport* delivers the health benefits attributed to physical activity. Indeed, Oja *et al*. (2015, p. 434) systematic review concludes that there is only 'conditional evidence' for the health benefits of running and football (for adults), while 'evidence for health

benefits of other sports disciplines was either inconclusive or tenuous'. Weed (2016b, p. 559) is less equivocal, concluding that there is 'no evidence that sport is effective as a public health intervention to improve physical health'.

While some identify a 'physical activity paradox' due to the limited evidence of health benefits from occupation-based physical activity (Coenen *et al*. 2020), others argue that exercise as medicine has been 'caught in the efficacy trap' (Beedie *et al*. 2016, p. 323), in that a wealth of data has been produced evidencing how, under ideal conditions, exercise can invoke the intended benefits (efficacy evidence), but limited evidence that the intended effect can be achieved when implemented in 'normal' settings (effectiveness evidence). Crucially, in an analysis of national guidelines (Australia, UK and US), Weed (2016a) found no evidence for the *effectiveness* of (WHO's 2010) recommendation of 150 minutes, and was thus critical of the lack of consideration of whether a recommendation at a lower but sufficient level of efficacy (e.g. 60 minutes) would be a more effective public health intervention (Weed 2016a). The extension of recommendations in the 2020 Guidelines is not explicitly supported by effectiveness data, but the 'more is better' motif does align with the neoliberal promotion of competition, productivity and continuous health self-improvement (Lemke 2012).

A more recent review shows that these evidential gaps are not simply anomalies but are both embedded and accepted in the field. Hansford *et al*. (2022, p. 692 & 697) systematic review of reporting quality of exercise interventions argues that 'reporting of exercise interventions remains poor and does not appear to have improved over time' and concludes that 'If exercise is medicine, then how it is prescribed and delivered is unclear, potentially limiting its translation from research to practice'. The failure to address these shortcomings could variously lie in the vested professional interests of those participating in the medicalisation of PAES (Malcolm 2017), or a broader commitment to healthism (Crawford 1980) among scientists drawn from the neoliberal societies which inform physical activity policy. But equally, the evidential gap indicates a propensity to evidence the rational choices of consumers at the expense of exploring systemic-level outcomes and thus speaks to neoliberal contradictions (Kiely 2018).

What are the economic costs of physical (in)activity?

Despite concerns about the lack of guideline compliance, the WHO (2020, p. 68) refer to 'substantial health savings' from, and evidence of 'positive returns on investment over 15 years'. Evaluating the success or failure of PAHP in economic terms evidences a neoliberal commitment to cost-effectiveness rather than equity (Chorev 2013) and faith in market competition to deliver satisfactory outcomes. But a further illustration of just how deeply neoliberalism informs PAHP is the gathering and evaluation of empirical data on which judgements about relative economic costs are made. To illustrate, we focus on Ding *et al.* (2016, 2017) systematic review and meta-analysis which provides the most comprehensive overview of the costs of physical inactivity currently available.

Mirroring the geographical bias of the GDG, Ding *et al*. (2016) note that 45% of the eligible studies were derived from the US and Canada, with the majority of the rest situated in other high-income countries. However, Ding *et al*. (2016) predict that the health costs currently experienced in wealthier nations will be replicated in Low- and Middle-Income Countries (LMICs) when the latter become wealthier. This assumption both entails neoliberal reductionism (defining social development solely in terms of economic development) and is problematic because conditions like obesity are differently distributed across social classes in wealthier and poorer nations (Pampel 2012). Ding et al. further note that one consequence of this geographical bias is that no reliable global estimates of sedentary behaviour exist, which questions the quality of evidence supporting the development of the WHO's (2020) recommendations regarding sedentary behaviours. In the absence of empirical evidence, these positions seem ultimately reliant on neoliberal paradigmatic beliefs about the inevitability of global convergence (Cerny 2020).

Ding *et al*. (2017, p. 1406) calculations of the costs of physical inactivity demonstrate the influence of neoliberal principles in two further ways. Their meta-analysis sought to estimate direct health-care costs, productivity losses and disability-adjusted life-years (DALYs). DALYS is a concept developed by the World Bank and adopted by the WHO during its embrace of neoliberalism (Chorev 2013). DALYs foreground cost-effectiveness of interventions over equity and disregard the importance of individual socioeconomic circumstances, as if one could reasonably evaluate the experience of disability in isolation from a person's access to resources. Secondly, the dominance of direct health-care costs in existing research, constituting the sole perspective taken in 27 relevant studies compared to just one study with a 'comprehensive societal perspective' (Ding *et al*. 2017, p. 1396), again reflects the penetration of neoliberal ideas. Ding *et al*. (2016, p. 15) attribute this bias to 'the rationale that the key decision-maker in addressing inactivity is the health sector', further note that existing estimations of cost are fundamentally driven by political interests, and argue that it would be 'impossible to completely standardise methodologies because economic analysis is often conducted to address the needs of specific stakeholders'. While this is a critique that has been posed of epidemiology more widely (e.g. Petersen and Lupton 1996), the analysis suggests that because PAHP is dominated by neoliberal organisations and stakeholders, the methodologies for data collection are guided by neoliberal concepts and principles which prioritise particular outcomes (i.e. reduced state expenditure).

The extent of this neoliberal orientation is further illustrated by what data is absent, namely, temporal and economic costs to the individual. From birth to age 75, an individual complying with the lower end of the UK's adaptation of the WHO's physical activity guidelines would spend 16,822.5 hours exercising (excluding time devoted to strength, balance and flexibility exercises which is difficult to estimate). This would approximately double for those complying with the higher end of the WHO Guidelines (2020) and is indeterminable for those following the 'more is better' guidance. Given that males over 8 years old in the UK have on average 6 hours and 9 minutes of leisure time per day (women have less, at 5 hours 29 minutes),[2] compliance with these recommendations would require a UK citizen to devote between 7.5 years (for a male at the lower end of proscribed activity) and 16.7 years (for a female at the higher end) of leisure time to physical activity.

Similarly, while it is theoretically possible to exercise at low economic cost, *in practice* physical activity – and particularly exercise and sport – is not cost free. For instance, the global sportswear market is estimated to be $379bn (Statista 2022) or between 2.5 and 5 times Ding *et al*. (2016) estimated total global costs of physical inactivity ($67.5bn and $145.2bn). While not all sportswear is bought for the purpose of exercise, neither is sportswear the only potential financial cost. Thus, the widely cited estimate that physical inactivity results in a direct healthcare cost of £0.9bn per annum in the UK (Scarborough et al. 2011) compares unfavourably with estimates that UK citizens spent £5.1bn per year on gyms/fitness facility memberships pre-pandemic (Marcelin 2022).

The temporal and financial costs disregarded by the WHO (plus the less tangible emotional and psychological costs of guideline compliance) are clearly not insignificant. They are also unequally distributed across populations and, intuitively, highly relevant to 'consumer choice' and the uptake of PAHP. While their omission from the relative cost/benefit calculations of physical (in)activity that inform the WHO Guidelines is problematic both from the perspective of paradigmatic bias and effective policy making, exclusion is logical within a neoliberal perspective which sees market-driven solutions as *a priori* preferential (Chorev 2013), and private sector economic activity as inherently good, evidence that neoliberalism 'works', and a measure of successful neoliberal citizenship (McGregor 2001).

What are the health costs of physical activity?

The neoliberal principles which lead to the relative de-prioritisation of economic costs to the individual, are similarly evident in the consideration of the potential health costs of physical activity. A notable feature of the WHO Guidelines is that the GDG 'specifically sought' evidence on leisure

time physical activity harms (WHO 2020, p. 66). However, the commissioned systematic review produced 'limited' insight due – the GDG concluded – to the lack of published evidence focused on injuries among the general public rather than elite/competitive athletes. More accurately, the review found an absence of *particular types* of evidence, for White (2004) and Malcolm (2017) have both previously produced overviews of relevant data (notably the intended publication of this commissioned review has not materialised). Despite this supposed limited insight, the Guidelines concluded that the risk of harm 'was no greater than small' (WHO 2020, p. 66) and far outweighed by the potential health benefits. Similarly, Bull *et al*. (2020, p. 1455) accompanying commentary on the guidelines noted that, 'Any potential harms may be managed by a gradual increase in the amount and intensity of physical activity'. These statements position sports injuries as relatively insignificant and easily avoided if individuals (following neoliberal logic) make judicious lifestyle choices.

While it is *theoretically* possible to exercise and largely mitigate the risk of injury, the available epidemiological evidence suggests that this is not the case in *practice*. Different activities across the PAES spectrum entail different risks of injury but, indicatively, the UK's most extensive population survey to date estimated that were 29.7 million sport-related injuries per year in England and Wales (Nicholl *et al*. 1995). An Australian study further showed that these injuries cannot be assumed to be trivial. Compared to road traffic injuries (RTIs), sports-related injuries result in 3× more years lived with disability, 2.6× higher direct hospital costs; 1.9× the number of hospital bed days (Finch *et al*. 2014). Such injuries also incur significant economic costs. Data from the New Zealand Accident Compensation Corporation (ACC) show that compensation claims for sport and recreation injuries amounted to 25% more than was paid out for RTIs (Caldwell 2017). Over 5 years, the costs of sport and recreation injuries increased by 27% (ACC 2021). While the contact sport of rugby entailed the highest incidence of injury, fitness training/gym injuries were the second most frequently claimed for activities, and mountain-biking and jogging were among the top 10.[3]

The Australian Government's Institute of Health and Welfare (AIHW) report, 'Economics of Sports Injury and Participation – preliminary research' (Australian Institute of Health and Welfare 2022) further questions the WHO's failure to conduct a rigorous cost–benefit analysis. This research estimated the direct (healthcare system) costs of 'managing health conditions due to physical inactivity' to be $968 m, which was compared to an estimated cost of $764 m incurred through the treatment of injuries as a consequence of physical activity (costs incurred in emergency departments and for hospital admissions). Current savings to the health system derived from population physical activity were estimated to be $484 m. While the report warned that data limitations made calculations of the net impact inappropriate, it demonstrates that increased physical activity does not *only* result in healthcare cost reductions.

The omission of data relating to the systemic impact of adverse effects of activity is a particular anomaly because it evidently runs counter to neoliberal interests and increases state health costs. This appears to stem from paradigmatic bias, with Hansford *et al*. (2022) noting that 75% of physical activity intervention studies make no attempt to report adverse effects. That bias is particularly problematic given the evidence that, far from being easily avoided, sport-related injuries remain relatively impervious to prevention policies. For instance, Finch *et al*. (2014) noted that while RTIs in Australia have decreased by 26% (2004–10), sports-related injuries have increased by 29%. Combined, this suggests an ideological commitment to the policy and faith in expectations about the efficacy of judicious health choices made by consumers in a free market.

The impact of neoliberal PAHP on exercise behaviour

Because of the variety of ways in which neoliberalism can influence global public health (Chorev 2013), it is important to consider the 'downstream' impact of policy implementation, for not only do neoliberal principles (consumerism, primacy of the market, reducing state costs) guide policy development *and* the underpinning evidence base, they directly impact upon people's attitudes towards health (Crawford 1980). Consequently, this final section explores the contradictions

between the neoliberal theory of consumerist action and the practical health outcomes of exercise choices, drawing on empirical studies of exercise behaviours and attitudes in neoliberal societies.

How does neoliberal PAHP affect individual exercise behaviours?

Semi-structured interviews with recreational exercisers in the UK revealed how the logics of neoliberalism were 'uncritically reproduced' and imprinted on the exercising behaviours of this population (Pullen and Malcolm 2018, p. 6). Interviewees were not only aware of health-based arguments for promoting physical activity but advocates for its holistic benefits. Interviewees described how, 'I feel good when I train and I think there is a strong link between good physical health and good mental health' (Mike). Many evidenced the extent to which healthism penetrated their lifeworlds. In referring to the importance of 'not letting [themselves] down' (Lucy) by failing to reach self-set standards of performance, or turning into a 'bit of a slob' (Laura) or a 'couch potato' (Daniel) when unable to exercise, they evidenced how the pursuit of health entailed both a sense of social obligation or responsible citizenship and thus shaped their sense of identity. They devoted considerable time and economic resources to the pursuit of exercise and when this was disrupted, e.g. due to injury, the degree to which the pursuit of health through exercise had come to define their lives was evident. As one runner argued, resolution of a current injury would 'let me get my life back' (James).

But it was equally striking that interviewees understood exercise through a neoliberal logic of productivity. Some saw the benefits of exercise expanding into 'general life and work' (Marcus), while others described exercise as a goal in and of itself: 'you feel like you've achieved something in the day' (Amy). Narratives of continual, competitive, self-improvement were evident, with interviewees referring to 'benchmark' times against which they measured their fitness, and the enjoyment of setting a challenge which 'gives you something to aim for' (Danielle).

Interviewees also noted how this commitment inevitably entailed risk of injury. As a volleyballer noted, 'when you train so much you've got to kind of accept that at some point something's going to go wrong' (Amy). Typically, interviewees continued to exercise when they knew they were injured; they over-exerted themselves when rehabilitating from injury, and developed new injuries when adjusting exercise patterns to accommodate the original injury. As one runner described, '[I] thought well if I've done that I can keep going, whack some painkillers down. But no, it caught up with me . . . I was running probably to the point that I was in agony for about a week, week and a half, and then I rested it and . . . [then] back on it again' (Daniel). It was particularly in this respect that the contradictions of the embodiment of the neoliberal principles driving the desires for productivity and competition most explicitly clashed with the pursuit of health. Deprived of social distinction when injury led to exercise cessation, this population experienced a spiral of negative emotions, inactivity and weight gain. Because they became dislocated from both the people and the practices from which they had previously developed self-affirmation, they exhibited an aversion to resting creating a cycle of re-injury.

While reliant on a small and self-selecting sample, these findings accord with similar qualitative studies recreational exercisers (e.g. Bridel 2013) and larger population surveys of sport-related injury which evidence the frequency of recurrent injuries (Nicholl *et al*. 1995), and identifies injury as a major reason for sport cessation (Sport England 2012). This research provides a distinctly different picture of the importance and dynamics of the adverse consequences of physical activity depicted by the WHO (Bull *et al*. 2020), and throws into sharper relief the problematic yet longstanding and routine omission of reporting adverse effects in exercise intervention studies (Hansford *et al*. 2022). It provides a contextual explanation of why sport-related injuries are increasing across the population and resistant to prevention strategies (Finch *et al*. 2014). In *practice,* sports injuries are *not* easily avoided by judicious exercise choices because the same neoliberal principles which drive the PAHP movement encourage citizens to exercise in ways which exacerbate the risk of injury.

How does neoliberalism PAHP affect population-level exercise behaviours?

The time-series survey data further illustrated the outcomes of neoliberal global health policy when implemented at a civic level. As a municipal intervention, the policies represented the blurring of boundaries between state and market and thus the kind of intervention which stems from the tensions within, rather than the idealised conception of, neoliberalism (Kiely 2018). However, in pursuing the joint goals of both increasing individual levels of physical activity and developing greater guideline compliance across the population, the intervention mirrored the perspective of the WHO guidelines (WHO 2020). In seeking public–private partnerships (with sponsors including banks and cycling retailers), it followed neoliberal principles of encouraging market involvement. The importance of this analysis is that it shows how neoliberalism shapes the outcomes of policy implementation, even when state interventions are made to address the limitations of the free market. Specifically, neoliberal ideas permeate the attitudes and motivations of compliant populations, yet the subsequent choices made by market-rational consumers result in differentiated practice rather than the undifferentiated, system-level, outcomes anticipated in neoliberal thinking.

The civic policies evaluated via the Zaragoza survey analysis had in some senses been successful, with those reporting being regularly active increasing from 55.9% to 60.6% and thus above the European average (European Union 2022). Regardless of actual behaviours, almost everybody surveyed (98.4% in 2015) identified the pursuit of health as the primary appeal or benefit of sports participation. The greatest growth in participation was attributable to those undertaking physical activity for health (+14.1% higher in the latter survey). These findings are in line with the most recent Eurobarometer in which the most frequently cited motivation to exercise was 'to improve health' (European Union 2022), but question the WHO's (2018) belief that a lack of awareness explains the lack of uptake of physical activity guidance. Notably, just 56.7% of those currently active viewed sport as pleasurable, and thus the findings also suggest that the medicalisation of physical activity may have had the adverse effect of reducing or removing (presumably) traditional motivations for sports participation.

Other survey responses evidenced the ubiquity of healthism. As with the UK interviewees, beliefs linking exercise with self-discipline and social productivity were widely held. Physical activity was increasingly seen a) in moral terms (with +6.4% of respondents attributing inactivity to laziness); b) as an individual choice driven by (a lack of) education (+9.1%) rather than structural barriers such as access; and c) as a fundamental part of the obligations of citizenship (54.6% viewed participation as a social responsibility and 69.8% viewed it as both pleasurable and a responsibility). Despite the increase in overall activity rates, fewer (−6.3%) thought that the population was sufficiently active, and more people were dissatisfied with their own levels of activity (+8.7% to 50.7% of the population). These findings therefore align with Crawford's (1980) argument that the pursuit of healthism increases rather than relieves health anxieties.

But in particular, the surveys confirmed Schreker's (2016, p. 963) assessment that while neoliberalism does not worsen health outcomes for all, it 'may well' worsen outcomes for the socially disadvantaged. Mirroring Europe-wide data which show that those with lower levels of education (74%) are most likely to abstain from exercise (European Union 2022), in Zaragoza the gap in participation between the highest and lowest educated groups almost doubled. Similarly, between the highest and lowest socioeconomic groups, the gap grew by over 20%. Moreover, there was evidence of a polarisation of participation in *the type* of activity (e.g. walking increased among the lower classes, but decreased among the higher classes) and *style* of practice (for instance, the growth in cycling among the higher social classes was driven by involvement in competitive races, while the growth among the lower classes was linked to a stronger community cycling identity).

The widening (or maintenance) of class differences in sports participation is indeed evident across the global neoliberal heartland: in the US (Stempel 2020), UK (Widdop et al. 2016), Canada (Gemar 2020) and Germany (Klostermann and Nagel 2014). The population segregation and stigmatisation of non-compliant groups evident here have previously been identified as a logical consequence by

many critics of neoliberalism (Scott-Samuel et al. 2014). But from this we can also conclude that the aggregation of individual consumer choices about exercise do not – perhaps cannot – result in the systemic benefits predicted by neoliberal theory (Kiely 2018). The logics of neoliberalism dictate that consumers will – indeed should – seek to distinguish themselves via conspicuous consumption. Where public health aligns with neoliberalism, the most affluent and privileged groups will (be able to) respond with the greatest compliance. In a neoliberal marketplace for sport and exercise participation, fuelled by the advocacy of global public health policies, rational market actors (Cerny 2020) are likely to more effectively engage with the multiple opportunities available in ways that ultimately increase health inequalities. Yet the open-ended nature of the WHO guidelines, which in turn align with neoliberal ideas about continual health self-improvement, also explains why the most privileged social classes, who also undertake the highest levels of physical activity, are also the group most dissatisfied with their existing levels of physical activity.

Conclusion

The first WHO (2003) intervention into PAHP occurred early in its process of neoliberal reform. The above analysis has shown how those neoliberal ideologies infuse the policy proscriptions (WHO 2020), methodological assumptions, empirical justifications and geographical biases underpinning the PAHP movement. The logics of neoliberalism have also been shown to filter down and become manifest in the individual behaviours and collective responses of populations who broadly comply with the policy prescriptions. Flowing from this analysis is a very different and potentially more realistic rationale for the perceived lack of policy success than the WHO (2018) has previously been able to present. Rather, it is only through a critical analysis of the paradigmatic assumptions that set the boundaries of these policy interventions that we can view their outcomes holistically. Before addressing the implications of this analysis for alternative PAHP policy, it is important to reconsider why the WHO has been particularly engaged with PAHP (thus accelerating the development of the empirical evidence base).

We can envisage multiple appeals of the pursuit of health via PAES for the WHO in its attempts to embrace this rising neoliberal order within the organisation's traditional remit and policy interests (Chorev 2013). Physical activity was already significantly implicated in healthism trends (Crawford 1980), and actors in the sport sector and researchers in sport science have welcomed the medicalisation of physical activity as a source of enhanced social status and (potential) additional income (Stuij and Stokvis 2015, Malcolm 2017). However, sport (unlike, e.g. tuberculosis) is also distinctly global, and thus relatable across the member states that ultimately sanction policy through the WHO's democratic processes (Chorev 2013). Popular ideologies of sport also align. Sport participation is widely seen to be divorced from politics, more a subjective individual choice than a contextually structured, socially meaningful, act. This explains why politicians seek to promote sport and exercise despite the evidence that health benefits largely relate to a different set of activities (which unfortunately do not appear to as readily appeal to free market consumers). Similarly, beliefs about the prominence of equalities of opportunity make PAES amenable to a goal of universal access, able to be promoted without the complication of identifying people or groups for preferential treatment, and aligned with the neoliberal belief that all individuals should potentially equally benefit from policy (McGregor 2001). PAES, compared to the health sector at least, is traditionally a domain of relatively low state involvement, with voluntary sectors prominent in many Western nations. Consequently, PAHP would have been seen to have relatively limited implications for neoliberal governments keen to roll back the state (Cerny 2020). Finally, PAHP has the added advantage of aligning the WHO with, rather than in opposition to, the commercial sector. In contrast to the other major targets of public health intervention – diet, tobacco, alcohol and sexually transmitted disease[4] – there are no powerful commercial lobbies whose interests are fundamentally threatened by the WHO's PAHP interventions. While the absence of a wider or more fundamental critique of either the policy or the underpinning evidence base may in part stem from the generally

apolitical nature of health (Bambra *et al*. 2005) and the apoliticising tendencies of medicalisation (Gray *et al*. 2016), the absence of such debates also supports the contention here that PAHP is distinctly (but not uniquely) amenable to a global health governing body seeking to align with and accommodate a broader neoliberal political agenda.

What are the policy implications of this analysis? Concerns about the structural embeddedness of neoliberalism within PAHP can only ultimately be resolved via fundamental reform of the global political order. However, incremental advances can be achieved by addressing the existing evidential gaps and biases highlighted above, in particular: conducting 'comprehensive societal' perspectives (Ding *et al*. 2017); standardising the inclusion of adverse effects in exercise evaluations; embracing the cost burdens to individuals; prioritising effectiveness over efficacy evidence (Weed 2016a). Further progress could be made by more centrally recognising how these policies are experienced in globally diverse contexts, by socially heterogeneous groups in particular, and by a comparison of the relative costs and benefits of more social democratic policy alternatives (Schreker, 2016), such as enabling the economically disadvantaged to engage in PAES which they themselves see as socially meaningful. Future guideline development should be more inclusive, embrace different types of evidence and disciplinary perspectives, and contribute to the ongoing de-colonisation of global public health.

Notes

1. Australian, American and UK national guidelines extend WHO recommendations to encompass everyone from birth. Australian guidelines also include recommendations regarding sleep. See https://health.gov/sites/default/files/2019–09/Physical_Activity_Guidelines_2nd_edition.pdf, https://health.gov/sites/default/files/2019–09/Physical_Activity_Guidelines_2nd_edition.pdf,; https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/832868/uk-chief-medical-officers-physical-activity-guidelines.pdf.
2. See https://www.ons.gov.uk/peoplepopulationandcommunity/wellbeing/articles/britsspend29oftheirleisuretimealone/2018-06-22
3. All the data cited here relates specifically to the general population. Sport-related injuries represent a subset rather than the totality of the injury costs of physical activity.
4. See the earlier discussion of the WHO's challenge to HIV drug companies.

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