GIH THE SWEDISH SCHOOL OF SPORT AND HEALTH SCIENCES

Physical Activity Put Into Context

Interdisciplinary Perspectives on Youth's Physically Active Lives in School

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Ellis, Charlie, and Madison
– my universe begins and ends with you. For that, I am forever grateful.

Abstract

Numerous scholars within sport and health sciences have emphasized the critical role of the school environment in shaping young people's physically active lives. While this PhD project addresses this specific dimension, the inquiry is also situated within wider *academic discourses* (ways of thinking, speaking, and producing knowledge within scholarly communities) concerning adolescents' physical activity in school settings. School contexts are often narrated as 'ideal' for promoting young people's physically active lives, with physical activity research carrying broader assumptions where the goal often is to prescribe movement, to get students to be more active. However, such assumptions rest on a set of foundational commitments: ontological (concerning the nature of reality), epistemological (concerning how we come to know things), and axiological (concerning values). Together, these shape our understanding of what physical activity is, how it should be studied, and why it matters. Similarly, the ways in which school contexts are portrayed – including the roles of students and staff within these spaces – are shaped differently across academic discourses, depending on the underlying commitments of *interventionist*, *pedagogical*, and *critical research* traditions.

As the school context emerges not merely as a backdrop but as a lived and negotiated space, whole-school and comprehensive strategies have gained traction among global agencies and physical activity scholars. These strategies emphasize holistic initiatives that span from individual to systemic levels, integrating curriculum, school culture, policies, student and staff sub-groups, and community engagement. Ecological frameworks and theories are often advocated to guide such strategies, highlighting the interplay between individual actions and broader social and environmental influences. However, the way ecological frameworks are applied varies depending on the academic discourse in which the research is situated, as different discourses engage with them from distinct perspectives. In particular, engagement with the concept of *agency* varies significantly. Despite their widespread use, the frameworks often lack critical perspectives, with issues such as power dynamics and equity rarely being foregrounded. These differences and omissions need to be critically examined for current and future research initiatives, particularly as scholars and agencies increasingly advocate for inter- and transdisciplinary collaborations.

The current PhD project adopts a meta-perspective, analyzing patterns in how *school contexts* are articulated across academic discourses. Four individual articles – each situated within different research paradigms, perspectives, or discourses – serve as illustrations of what can be learned from their juxtaposition, building on prior research. The individual articles are founded on three sub-studies: an ethnographic study combined with a social network survey, a cross-sectional study using data from surveys, accelerometers, and national registries, and a systematic review assessing school context measurements. This methodological combination is both novel and cross-paradigmatic when studying physical activity during the school day for young people in secondary school.

An analysis was conducted to explore how school contexts are constructed in relation to adolescents' physical activity, using the included articles as the basis for inquiry. Through an examination using three analytical components – diverse goals, multiple strategies, and varied interest groups – three rhetorical patterns were generated. The patterns frame school contexts as *(in)effective backdrops*, as *spaces of student and teacher meaning-making*, and as *oppressive and empowering environments*. The articles were further mapped against four complex elements that shape school environments: organizational subgroups, formal structures, sociocultural aspects, and broader networks. The findings suggest that these elements are deeply intertwined across the articles, with varying degrees of emphasis and integration, providing a more nuanced understanding of the rhetorical constructions and contextual dynamics that inform physical activity research within school settings. The three patterns and how the elements are addressed adhere in different ways to interventionist, pedagogical, and critical research.

Concluding with a discussion on the potential spaces for rethinking physical activity research in school contexts, the exploration focused on where boundaries between academic discourses become more permeable – sites where interventionist, pedagogical, and critical research can coexist not through resolution, but in productive tension. Rather than seeking synthesis, the aim was to hold the perspectives in juxtaposition, allowing their distinct logics and values to interact and inform one another. This opens up opportunities for multidimensional thinking, addressing *effectiveness*, *meaningfulness*, and *equity*. The conceptualization of agency and participatory methodologies is central, which are well-established yet increasingly relevant concepts that offer spirited passageways for advancing physical activity research in school contexts. By attending to the relational and spatiotemporal dimensions of agency, and foregrounding the voices of students, staff, and school communities, the thesis is not thought of as a solution. Rather, it is positioned as a strategic entry point for inter- and transdisciplinary collaboration – an invitation to play with and imagine futures shaped through dialogue, reflexivity, and shared inquiry.

The current PhD project is part of the larger project "Physical Activity for Healthy Brain Functions in School Youth," which ran from 2018 to 2023 at the Swedish School of Sport and Health Sciences (GIH), funded by the Knowledge Foundation (grant 20180040).

Included scientific articles

Article 1

Hoy, S., Thedin Jakobsson, B., Lunde, C., & Larsson, H. (2025). Negotiating adolescents' physically active life during the school day. *Frontiers in Sports and Active Living*, *7*. https://doi.org/10.3389/fspor.2025.1505189

Article 2

Hoy, S., Lunde, C., Larsson, H., Ekblom, Ö., Helgadóttir, B., & Nyberg, G. (2025). Matrices of (dis)advantage – school segregation and social inequities in adolescent physical activity from an intersectionality approach. *Sport, Education and Society*, 1–17. https://doi.org/10.1080/13573322.2025.2531381

Article 3

Hoy, S., Norman, Å., Larsson, H. & de la Haye, K. (Submitted manuscript). Combining social network analysis and ethnography to better understand staff and teachers' implementation of daily physical activity in secondary school.

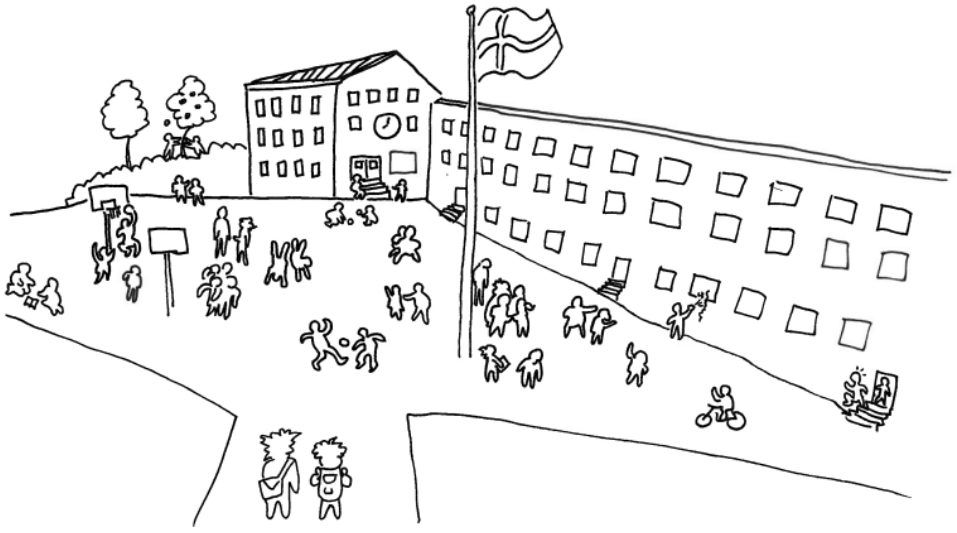
Article 4

Hoy, S., Lunde, C., Ringberg, M., Helgadóttir, B. & Norman, Å. (Manuscript). How to measure context? A systematic review and a psychometric and pragmatic analysis of quantitative measurements for factors influencing implementation in school settings.

Contents

Abbreviations

CFIR	Consolidated Framework for Implementation Research
GIH	Swedish School of Sport and Health Sciences
PA	Physical Activity
PE/H	Physical Education/and Health
MVPA	Moderate to Vigorous Physical Activity
RCT	Randomized Controlled Trial
SDG	United Nations' Sustainable Development Goals
SNAE	Swedish National Agency for Education
WHO	World Health Organization



Introduction

> A boy in grade 8 comes running in [through the school corridor] with a football. I ask if he has been out playing soccer. He says yes. One of the teachers confiscates the football that the boy is kicking in the hallway against the lockers, bouncing near the heads of two other boys from grade 7. The older boy who is kicking the ball is tall and has blond hair that he 'throws to the side a little' and the boys who are sitting are a bit more 'proper and nerdier'. They do not say anything when they are almost hit by the ball, not to the boy who kicked it anyway. *Fieldnote*

The notes above are from my fieldwork, part of the larger ethnographic sub-study at one of four participating schools, although, similar notes could probably have come from any of the schools. I remember sitting there in the corridor, observing the scene unfold, when that one boy suddenly came running in through the door. He was intensely physically active, despite the school's rule against running in the hallway. I found myself thinking about that moment, not just as a rule being broken, but as something more: a spontaneous, embodied expression of movement that stood out in the otherwise rather structured rhythm of the school day. It was a small event, but one that stayed with me, and it speaks to the kinds of everyday moments this thesis seeks to explore – where physical activity, context, and young people's agency intersect in ways that are often overlooked. Had the boy been wearing an accelerometer, a device commonly used in physical activity research to quantify movement, his actions would likely have been recorded as moderate-to-vigorous physical activity (so called MVPA), an operationalized category often associated with health-enhancing benefits. Yet, as I observed the scene unfold, I found myself unsettled. The situation did not appear to contribute positively to the well-being of those involved, particularly not the boys who were nearly struck by the ball. Nor was it clear that the boy who initiated the action was simply engaging in health-promoting behavior; rather, his movement also involved a transgression of school rules and a display of social dynamics that hinted at power relations among peers. This incident prompted critical reflection on the dominant narratives within physical activity and health promotion research, where MVPA is frequently framed as inherently beneficial. Common slogans such as 'all movement is good movement' or 'every minute counts' tend to obscure the contextual and relational dimensions of physical activity. This example, however, illustrates the need to interrogate such assumptions and

consider how physical activity is experienced, narrated, and valued within specific social and institutional settings such as schools.

Another moment from my fieldwork that prompted deeper reflection occurred during a conversation with Marcia, one of the teachers participating in the same ethnographic study. Marcia had over twenty years of teaching experience, and I was consistently impressed by her ability to connect with her students – particularly a lively group of seventh graders whose energy often seemed to spill out into every corner of the school. Despite the challenges, she managed to engage them in their schoolwork with a calm, confident presence, maintaining a warm and caring relationship that seldom felt forced. As we spoke about this research project, she asked, "I don't know if this is… 'normative research', like that you are going to implement or… that the goal of this is that we should have more physical activity in school?" Her question caught me off guard, not because it was unexpected, but because it surfaced a tension I was still trying to articulate myself. I responded by explaining that our study was not 'intervention-based', that we were observing everyday life in schools. But even as I spoke, I found myself grappling with what normative meant in this context. Now, later, I have come to understand normative as referring to something that establishes, relates to, or prescribes a standard or norm, often involving judgments about what is considered right, appropriate, or desirable. This way, Marcia's question that day reflected a broader assumption often found in physical activity research: that the goal is to prescribe movement, to get students to be more active. This assumption carries with it a set of ontological, epistemological, and axiological commitments – about what physical activity is, how it should be studied, and why it matters. The encounter with Marcia made me reflect on how different academic discourses frame physical activity, and how our ways of knowing are shaped by the values and visions we as researchers bring into our research.

These reflections form a key part of the critical lens through which I approach the study of physical activity in school settings throughout the thesis. In the following section, I explore how schools have come to be positioned as ideal settings for physical activity promotion, and how this framing invites both possibilities and tensions. This includes negotiating divides between research traditions, and considering how scholarly positioning shapes the questions we ask, the methodologies we use, and the knowledge we produce. Drawing on theoretical perspectives that foreground relationality, context, and agency, the thesis seeks to reframe physical activity in schools as a socially situated practice, rather than limited to a universally measurable outcome.

School as the ‘ideal’ setting for physical activity promotion

> Schools are settings, in theory, ideally placed to provide children and adolescents with opportunities during, before, and after school hours to meet a substantial part of current international physical activity guidelines, while also giving them the necessary tools to be autonomously active across the lifespan. (García Bengoechea et al., 2024, p. 2)

As illustrated in the citation, school contexts are often advocated for by scientific communities as the ideal setting for physical activity promotion because it ‘gathers all youth’ during approximately at least a third of the day. This is echoed among national and international agencies globally, often using international physical activity guidelines for health as one reason, with lifelong socialization and learning objectives as other reasons. However, as the citation also elucidate – in theory – seems to be of weight to this issue, since many initiatives and research projects have been shown to struggle carrying out this ambition (McHugh et al., 2020; van Sluijs et al., 2021). I recall a day when I returned to one of the schools where I conducted the ethnographic fieldwork. I had been away since November, and it was then March. I had popped into the principal's office to say hello and catch up on things since we last saw each other. When I asked how things were at school, she said that “it’s a lot right now.” I asked if it was more than usual or if it was “just the usual with ‘a lot’ of running a school.” She then said that it felt like more and more was being imposed on them as a school; “everything is the school’s responsibility nowadays.” This made me reflect upon the multiple roles and tasks schools have to juggle. Since I also had, throughout the fieldwork, gotten well aware of how strenuous and hectic a school day entailed to be for both staff and students, it puzzled me how this was perceived as an ideal place to add on physical activity initiatives. At the same time, I also, as a physical activity practitioner and researcher, see the exciting (hypothetical) potential of a place and space where most adolescents spend much of their time in an educational context. In line with my own reflections, current research points to how schools, as potent sites for physical activity promotion and learning, face numerous pressures (Piggin et al., 2024).

The last decades, physical activity research has had a strong focus on ‘evidence-based’ interventions within a traditional biomedical paradigm, which has probably been to the disadvantage of practice-driven solutions and the acknowledgement of varied contexts, environments and cultures (Mclaughlin, McCue, et al., 2025). Recent research within this paradigm has now advised us to rethink how to promote more physical activity in school-settings (García Bengoechea et al., 2024; Jago et al., 2023). This reflects a

growing consensus in recent research that promoting physical activity in schools requires moving beyond uniform, isolated programs toward integrated, context-sensitive strategies that are adaptable to the everyday realities of school environments and responsive to the diverse needs of students. Physical activity promotion is part of an intensified global health and well-being agenda, where school as a health-promoting arena is advocated for by many stakeholders and agencies. To illustrate this, the WHO and UNESCO (2021a) published global standards to support their initiative "Making Every School a Health Promoting School." Physical activity is often a core feature in these health promotive initiatives, described for example in the Global Action Plan on Physical Activity 2018-2030 (World Health Organisation, 2018) as well as in connection to assessing several of the United Nations' Sustainable Development Goals for 2030 (United Nations, 2015). Another example of the priority of physical activity on a public health agenda can be found in The Lancet, one of the world's highest-impact academic journals, which published a Physical Activity Series in 2012, 2016, and 2021 (Ding et al., 2024). This health and well-being agenda is mirrored in Sweden, where the current PhD project is situated (Ministry of Education and Research, 2018; Public Health Agency of Sweden, 2021b).

Whole-school and comprehensive approaches are increasingly promoted by global agencies and physical activity researchers, emphasizing holistic strategies that integrate micro- to macro-level perspectives grounded in systems theory and ecological frameworks (Centers for Disease Control and Prevention, 2013; Kohl & Cook, 2013; Langford et al., 2015; McHugh et al., 2020; Rutter et al., 2019). A whole-school approach refers to a coordinated strategy that engages all aspects of the school – curriculum, culture, policies, staff, students, families, and the wider community – to promote and support students' physical activity, health and well-being. These approaches accentuate a variety of interrelated actors and factors, and the argued benefit of this type of thinking lays in approaching 'the whole' as leading to better solutions (Piggin, 2017). Yet, despite that much of the school-based intervention focused research underscore the importance of school context, few initiatives aim at studying and potentially changing school environments (Larsson & Thedin Jakobsson, 2024). School contexts also serve as arenas where various scientific fields intersect, such as public health, education, and sport science, and where competing interests converge. This highlights questions of how physical activity research in schools, here in a Nordic context, will evolve and embark into the future to address young people's physically active lives.

The intersection of scientific fields conducting research on physical activity cultures, fields that often operate in isolation, creates challenges for the frequently advocated

inter- and transdisciplinary collaborations of the future (Heywood, 2017). Here, Choi and Pak (2006, p. 351) articulate their thinking on multi-, inter-, and transdisciplinarity:

> Multidisciplinary draws on knowledge from different disciplines but stays within their boundaries. Interdisciplinarity analyzes, synthesizes and harmonizes links between disciplines into a coordinated whole. Transdisciplinarity integrates the natural, social and health sciences in a humanities context, and transcends their traditional boundaries. (…) The common words for multidisciplinary, interdisciplinary and transdisciplinary are additive, interactive, and holistic, respectively.

Against the history of a century marked by deep specialization and disciplinary excellence, collaborations are promoted to counter the limitations of siloed approaches, such as tunnel vision, discounting other perspectives, hindering creative breakthroughs, failing to address complex issues, and imposing past approaches on the present (Repko et al., 2020). As our world accelerates and grows more interconnected, modern societies must lift their gaze from narrow disciplinary paths and confront complexity in its entirety. In addition to encouraging inter- and transdisciplinary work through this thesis, I also believe that addressing this pose both a challenge and an opportunity to position yourself as a new academic scholar when conducting research in school settings.

Negotiating divides and scholarly positionality in school-based research

School as a contested arena between scientific fields and communities for physical activity research is not something new. There have been ongoing discussions for decades in relation to the school subject of Physical Education and Health (e.g., Kirk & Tinning, 1990; Larsson & Redelius, 2008; Penney, 2013; Quennerstedt, 2008). Given that many public health initiatives and political agendas have further pushed for physical activity promotion and expanded it to encompass the entire school day, as earlier displayed, it is an issue that has become increasingly significant and demands attention. The ‘divide’ between ideas in Physical Education and Health and physical activity is highlighted by Borgen and colleagues’ (2021) work on the (un)clear boundaries between ‘PE and PA discourses’ in school curricula and policy documents, emphasizing the need for new concepts of knowledge that open up for negotiation between the positions of physical education and physical activity boundaries. Tinning (2015) has earlier highlighted the importance of addressing academic discourses in Physical Education and Health research, describing how these discourses shape different ways of thinking, communicating, and knowing. This is not just about using specific words, it is a process that involves learning ways of thinking, speaking, and acting in a particular academic

community. It is also about shaping your identity and dealing with the expectations and values of your field, which for many can be challenging and emotional, as it often involves navigating power dynamics and fitting into new academic cultures (Duff, 2010). For example, discourses of scholars invested in exercise physiology, medicine and public health often differ from those invested in sport pedagogy and sociology (Tinning, 2015). These scientific fields and communities are often bound to different communities of practice, which draw from distinctive literature, go to different conferences, and take diverse theoretical and methodological standpoints to address a research problem using rhetorical techniques that are aligned with their academic praxis.

Positioning myself as an academic scholar and researcher has been, and continues to be, an ongoing negotiation, often experienced as navigating different yet sometimes overlapping terrains of thought and practice. When I began this scholarly journey, I believed I had a clear sense of direction. With a background in public health from a medical faculty and a master's degree in sport science, I initially imagined continuing along a familiar path, supported by research assistant roles in health intervention and implementation studies. However, being accepted as a doctoral student into the interdisciplinary project "Brain Health in School" shifted that trajectory. I found myself primarily situated in an ethnographic sub-project, surrounded by colleagues rooted in pedagogical and critical research, while other parts of the project were grounded in medical and interventionist paradigms. This positioning – within, outside, and in between academic discourses that do not always speak the same language – has shaped how I understand and conduct research. My work is grounded in physical activity research, yet it is equally informed by critical theory and ethnographic inquiry. The in-betweenness I occupy is not a place of confusion, but of possibility, a space where I can question assumptions, bridge perspectives, and try to remain open to multiple ways of knowing. Writing this thesis has been part of learning how to navigate this space, to recognize the often-unspoken rules of multi-, inter- and transdisciplinary research, and to reflect on the values, assumptions, and roles that shape both knowledge production and my own scholarly practice. It is from this position – both connected and questioning – that I approach the complexities of researching physical activity in school contexts. This has prompted a critical interrogation of theoretical applications and concepts used to form this thesis.

Theoretical framing and concepts used

Through the process of this PhD project and writing this text, I have worked with and reflected over the used theories, terms, concepts, and definitions along the way. The theoretical framing entails three layers of how theory has been used. The first layer of framing is the scientific theory and the ontological, epistemological and axiological underpinnings of different areas of research and academic discourses (interventionist, pedagogical, and critical), as well as substantialism and relationalism perspectives. The second layer contains the theoretical aspects of addressing agency in relation to ideas of actor-agency-structure and context, where ecological and critical theory is used. The third layer involves highlighting examples of theories within different academic discourses and how theoretical framings of actor-agency-structure and context is thought of and used. All three layers are represented throughout the text, with the first layer being mainly presented here, the second layer mainly outlined in the theory-section, and the third layer throughout the whole thesis.

Interventionist, pedagogical and critical research

The research that we undertake is shaped by the perspectives acquired, where there are, often tacit, taken-for-granted ideas connected to physical activity promotion. As contended by Piggin (2019) "physical activity is rhetorically and discursively constructed, well before any person moves" (p.9), in which physical activity as a means is assembled in ways where there are various goals, various ways of achieving them, and various interest groups. The meanings and functions of physical activity and its promotion differ across scientific fields and academic discourses, resulting in practical implications for how knowledge production is conducted within physical activity research. There are several ways of thinking about research on physical cultures in school contexts. Here, drawing on Fitzpatrick's (2023) categorization of physical education research into interventionist, pedagogical, and critical areas, I have expanded these categories to encompass the intersecting domain of physical activity research. I argue that there are differing ontological, epistemological and axiological starting points that guide these perspectives. Ontology deals with the nature of reality, what is considered true or real, which explores the fundamental categories of existence and how entities are understood or organized. Epistemology, on the other hand, is the theory of knowledge, which focuses on what can be known, how we come to know it, and the procedures used to gain that understanding. Axiology concerns the underlying assumptions about what is considered important and valuable in research, particularly regarding the perceived usefulness of the knowledge produced.

In line with Fitzpatrick (2023)'s arguments, drawing on Tinning (2015), ideas of different academic discourses and positions, together with Piggin's notion that physical activity should be thought of as more-than-just-one-thing narrated in line with various ideals – here, I outline three academic discourses as follows:

> *Interventionist research* – driven by mainly biomedical ideals, situated in objectivist and instrumental paradigms that often rely on public health and medical knowledge, using interventionist strategies focusing on changing physical activity and sedentary-related behaviors among students, school staff, and policy makers with aims linked to promote health and prevent ill-health. Keywords: Evidence-based, best-practice criteria, causation, standardization, generalization.
>
> *Pedagogical research* – driven by mainly educational ideals, situated in sociocultural and interpretivist paradigms that rely on teacher education and sport pedagogy knowledge, using, for example, models-based practices as strategies concerned with reworking and diversifying pedagogies in schools, improving teaching practices and student learning. Keywords: Practice-based, learning, meaning-making, transferability.
>
> *Critical research* – driven by mainly equality, equity and social justice ideals, situated in paradigms that broadly relies on sociocritical knowledge, sometimes post-structuralism and more recently also posthumanism, concerned with how complex relations of power intersect to marginalize, exclude, and (re)produce social and political hierarchies, aiming at disrupting, problematizing and changing policies and practices. Keywords: Justice-based, power relations, reflexivity, emancipatory, deconstruction, transformability.

I see these discourses as approximates, overlapping and sometimes combined – yet they are still distinct from each other, highlighting dividing lines of oppositions as well as serving a heuristic function for the purposes of this thesis and its field of inquiry. Even if some people work across these areas of research, their ontological, epistemological and axiological underpinnings also work against this (Fitzpatrick, 2023). If we ask why the chosen topic of this thesis matters, the answer lies in how these divides create silos of knowledge and establish hierarchies of dominant research practices (Kretchmar, 2008). In particular, what is considered 'the problem', and the corresponding 'solutions', vary significantly. These structures, in turn, generate tensions between differing perspectives and discourses, which can complicate collaboration and mutual understanding in research contexts. Recognizing these dynamics is essential for fostering more inclusive and reflective research approaches.

Relationalism and substantialism perspectives

The above outlined divides between research undertakings across academic discourses relate to how to address school context and the ideas concerning agency in physical activity research. For the purpose of this thesis, I will use the thoughts of Emirbayer (1997), as highlighted by Veenstra and Burnett (2014), where he claims that the fundamental divides in contemporary sociology are not between individual versus society, agency versus structure, or qualitative versus quantitative, but rather substantialism versus relationalism:

> [Substantialism] takes as its point of departure the notion that it is substances of various kinds (things, beings, essences) that constitute the fundamental units of all inquiry. Systematic analysis is to begin with these self-subsistent entities, which come "preformed," and only then to consider the dynamic flows in which they subsequently involve themselves. (Emirbayer, 1997, pp. 282-283)

> [R]elational[ism], the very terms or units involved in a transaction derive their meaning, significance, and identity from the (changing) functional roles they play within that transaction. The latter, seen as a dynamic, unfolding process, becomes the primary unit of analysis rather than the constituent elements themselves. (Emirbayer, 1997, p. 287)

As described by Veenstra and Burnett (2014, p. 191), "[s]ubstantialism is written into the ontological, epistemological and methodological fibers of the wider health research community, perhaps inevitably so in a field of research that puts individual health at its core." From a substantialist perspective, physical activity promotes, for example, healthy cardiovascular systems in the substances of bodies and mental health manifested in the minds of individuals (Veenstra & Burnett, 2014). In contrast, physical activity in relational terms is rather a dialectic phenomenon that emerges in the relationships between individuals (with minds, bodies and self-identities) within spatiotemporal contexts. When the school context is considered, it is often either conceptualized as a deterministic setting or as a dynamic site where actors, structures, and agency are mutually constituted – an analytical tension that reflects the broader divide between substantialist and relational perspectives.

To exemplify, I illustrate these perspectives using concepts such as power and equity in physical activity research, drawing on a growing body of recent studies that emphasize the need to address these issues in shaping future health and physical activity research agendas (Ding & Ekelund, 2024; Guthold et al., 2022; Love et al., 2019; Östlin et al., 2011; Owen et al., 2022). Braveman and Gruskin (2003) define health equity as the absence of systematic disparities between social groups who have different levels of underlying social possibilities (different positions in a social hierarchy). Unlike health

equality, which calls for equal opportunities for all independent of the need of support, health equity addresses opportunities based on the need in relation to power distributions. Power is a deeply contested concept in social theory, with a wide array of definitions that range from viewing power as resources specific to individuals, to seeing it as the ability of a social system to mobilize resources (Avelino, 2021). As Emirbayer (1997) contends:

> Take the key concept of *power,* which is typically seen in substantialist terms as an entity or a possession, as something to be 'seized' or 'held'. In the [relationalism] approach, the concept of power [is] transformed from a concept of substance to a concept of relationship (…) Far from being an attribute or property of actors, then, power is unthinkable outside matrices of force relations; it emerges out of the very way in which figurations of relationships (…) are patterned and operate. (Emirbayer, 1997, pp. 291-292)

Research disciplines within health and physical activity studies often focus on power and equity from a substantialism perspective. These approaches are commonly employed by researchers in social epidemiology and public health sub-fields, emphasizing structural factors such as class, age, gender, race, or ethnicity. Predominantly, deterministic methods are used to explain the relationship between structure and action within these frameworks (Frohlich et al., 2001; Veenstra & Burnett, 2014). However, from a relationalism perspective "we can think of power dialectically as *the (in)capacity of actors to mobilise means to achieve ends*" (Avelino, 2021, p. 440). In contrast to a substantialism perspective, physical activity becomes something expressed in relational terms as a phenomenon that emerge in matrices of power relationships between actors within contexts.

Similar to academic discourses, I view the concepts of substantialism and relationalism as approximations. In this way, they serve a heuristic function within the scope of this thesis, guiding inquiry into the ontological, epistemological, and methodological fibers of the wider physical activity and health research community. Rather than offering a rigid framework, these perspectives help illuminate how different research traditions conceptualize context, agency, and power, particularly in relation to school environments and young people's active lifestyles.

Research aim

The aim of the thesis is to examine how divergent academic discourses think of and go about doing research in relation to school environments' role in supporting young people's active lifestyles. It addresses adolescents' daily physical activity in school contexts through an inter- and transdisciplinary lens. Four individual articles, which are situated within different research paradigms, perspectives, and discourses serve as illustrations in what can be learnt from their juxtaposition. The thesis is guided by the following research question:

- How are school contexts for adolescents' physical activity thought of and articulated as a means of responding to agendas across interventionist, pedagogical, and critical research?

Research questions that correspond to the included articles:

- What are the opportunities and barriers for students' physical activity during the school day, how are these being negotiated by students and staff, and how is agency expressed in relation to students' daily physical activity? (Article 1)

- How does physical activity express social position during the school day and leisure time among adolescents, and are there differences between groups in relation to intersecting social positions and school segregation? (Article 2)

- In what ways do staff value and prioritize physical activity for students during the school day? What are the structural characteristics of the staffs' social networks, who are the central actors, and how is network centrality associated with valuing student physical activity? How does professional network characteristics relate to the ways students' physical activity during the school day is valued and prioritized among staff? (Article 3)

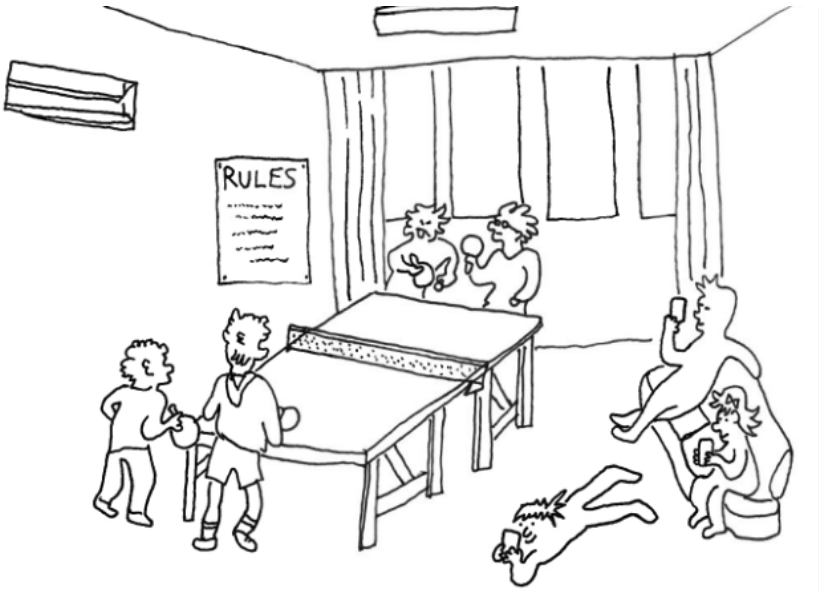
- What are the existing measurements of factors influencing implementation in school settings? How do the psychometric and pragmatic properties of these measurements align with the domains of the Consolidated Framework for Implementation Research (CFIR)? (Article 4)

Based on this, the thesis further addresses how tensions between discourses create both challenges and opportunities, identifying potential spaces for maneuver for future inter- and transdisciplinary research.

Outline of the thesis

Academic theses in Sweden usually take the form of a so-called ‘compilation’ or ‘monography’, where the previous tradition has been that natural science subjects stick to compilations and social sciences and humanities write monographs. In a compilation thesis, several scientific articles form the main part, where a comprehensive introductory text (in Swedish ‘kappa’, which in English means ‘coat’) often summarizes the content of these articles. A monograph is instead like a coherent text that exhaustively discusses a particular object or topic within a scientific field. However, more and more theses in the social sciences and humanities are now also written as compilation theses (Jägerskog & Niemi, 2023). This development means that we in higher doctoral education are facing new challenges when it comes to writing theses. Here, I have chosen to engage with this challenge through a hybrid format – where the ‘coat’ (kappa) of the thesis has a distinct aim and research question independently of the included scientific articles, which instead serve as illustrative representations in relation to the overarching aim. Since my objective is to communicate with researchers across several disciplines and research fields, I have chosen to broadly follow a traditional Introduction-Methods-Results-and-Discussion (IMRaD) structure for the thesis. The outline is as follows.

Having introduced the central concepts and the role of schools in promoting physical activity, the thesis now turns to its broader structure and aims. Previous sections have also addressed scholarly positionality and the negotiation of divides within school-based research. The following sections explore past and present practices in physical activity research, the multifaceted phenomena of physical activity, and the school context as an educational site of socialization and health promotion. The theoretical framework draws on critical ecological perspectives, engaging with questions of prediction, understanding, emancipation, and deconstruction. Methodological reflections challenge the conventional ‘quantitative–qualitative’ divide, focusing instead on diverse ways of knowing and doing, and examining the research processes and approaches used in the included studies. The results analyze how school contexts are conceptualized in relation to adolescents’ physical activity, as illustrated through four distinct representations. The discussion and concluding chapters aim to rethink how schools can support young people's physically active lives, while also identifying future directions and spaces for development within the field.


RULES

Navigating physical activity research – past pathways and present practices

> Much research, policy and practice around human movement and physical activity has become dominated by health discourse and healthism (albeit for benevolent purposes), and in turn this has subjugated many aspects of human movement beneath instrumental, utilitarian, and commercial objectives. (Matias & Piggin, 2022, p. 181)

As outlined in the citation above, today's physical activity research is shaped by certain assumptions and narratives. Ding and Ekelund (2024) recently published a reflection on "70 years of physical activity research," where one of the take home-messages was that future research should address the nuances of physical activity and move away from glorified ideas of free-choice and the messaging of more-movement-is-always-good. Since the 1950's, physical activity research has developed its understanding mainly through a biomedical science paradigm using affiliated research methods, for example, including studies that demonstrated relationships between higher levels of physical activity and a reduced risk of cardiovascular disease (Mclaughlin, McCue, et al., 2025; Morris et al., 1953). Later, during the 1970's, the American College of Sports Medicine released one of the earliest (known) published exercise and physical activity recommendations intended for the health and fitness of the general population (Haskell, 2019). This has been followed by several releases of global guidelines from the World Health Organization up until today (Bull et al., 2020). During the 1980-90's and early 2000's, a broader understanding of physical activity has emerged for both disease prevention and health promotion, with landmarks such as the Ottawa Charter (World Health Organization, 1986) along with influences of behavioural science and psychology (Mclaughlin, McCue, et al., 2025). Then, from the 2000's and onward, there has been an emphasis on recognizing physical activity as a global and cross-sectoral priority, including advocacy for ecological and systems science frameworks used in the implementation of policy and innovation (International Society for Physical Activity and Health, 2022; Kohl & Cook, 2013; Mclaughlin, McCue, et al., 2025; Sallis et al., 2006; Woods & Mutrie, 2012).

Since the later development of physical activity research and its reach towards involving wider systems and societal institutions – with schools being one targeted health-promoting arena – there have been calls for including other perspectives than (only) biomedical. Importantly, there is an articulated need for involving research from adjacent fields, such as pedagogy, sociology and political science (Mansfield & Rich, 2013; Mclaughlin, McCue, et al., 2025), while also advocating for interdisciplinary collaborations (Ding & Ekelund, 2024; Kay, 2017; Kirk & Haerens, 2014). However, while it all sounds good on paper, I would argue that for these collaborations between perspectives to truly happen, there are challenges and opportunities along the way. One such challenge is the need to understand one another, not least, as Tinning (2015) put it, that:

> interdisciplinarity requires some communication… you need to have some capacity to speak the same language… [which] includes [a disciplines'] ideas, research methods, metaphors, concepts, as well as its specific vocabulary… [working productively] requires an attitude or disposition that is characterized by an openness to knowledge and ways of knowing. (p.719)

Tinning's (2015) observation serves as a timely reminder that interdisciplinarity is not simply about combining expertise, but about cultivating a shared space for dialogue, translation, and mutual understanding. His emphasis on language, metaphors, and openness to different ways of knowing points to the deeper work required for meaningful collaboration. The further push for physical activity on public health, educational and equity agendas is in need of social scientists' long-accustomed expertise within the area of capturing our increasingly complex and diverse society (Kay, 2017).

In this section, I attempt to outline these narratives connected to the construct of physical activity – the what's, how's, and why's that are ascribed to the phenomenon, and how it is contextualized in relation to school settings. This includes tracing and illustrating key pathways through which physical activity has been narrated and researched over the past, highlighting shifts in discourse, methodological orientations, and the broader socio-political landscapes that have shaped its meaning and significance.

Physical activity – the what's, how's and why's

Physical activity is a common focus in public health and sport science research; however, it is rarely critically scrutinized or problematized. The construct of physical activity has more frequently been connected to the earlier-described biomedical and interventionist discourses. Pedagogical and critical discourses are more found in sub-disciplines such as sport pedagogy and physical education research. However, human

movement has been researched within those fields to an extent, but more often with other objectives than health outcomes as within interventionist research. There are many differing objectives to the study of physical activity:

> [Physical activity as t]he idea of human movement as a **means** by which an array of political, educational, nationalistic, health, environmental, commercial and personal goals are operationalized, enacted, reinforced and hoped for by institutional and individual bodies. (Piggin, 2019, p. 9)

Piggin (2019) further defines three components of these means: (i) there are various goals, (ii) there are various ways of achieving them, and (iii) there are various interest groups. This means that before anyone actually engages in physical activity, it is already shaped and defined through language and discourse. In other words, how we talk and think about movement influences its meaning and significance long before any physical action takes place. Here, my aspiration is to display how physical activity can be defined, and how it is commonly addressed, along with the various underpinning rationales.

What 'is' physical activity?

The current dominant definition of physical activity is the one used by Caspersen, Powell, and Christenson (1985), where "physical activity is defined as any bodily movement produced by skeletal muscles that results in energy expenditure" (p.126). This definition and versions of it influences research and health policies around the world; e.g., U.S. National Institute of Health, Australian Government Department of Health, World Health Organisation, and UK Chief Medical Officers, to mention a few. The definition is also mainly used within interventionist research. The main critique of this definition is that it is too narrowly framed through biomedical and epidemiological lenses, leaving limited space to account for the complex aspects of physical activity. This is why, for example, Piggin (2020) instead suggests a more holistic version, where physical activity is: "people moving, acting and performing within culturally specific spaces and contexts, and influenced by a unique array of interests, emotions, ideas, instructions and relationships" (p.5). The definition intends to be holistic in the sense of addressing several domains of physical activity beyond (only) physiological, and points toward affective, social, contextual, and political domains that need further acknowledgement. Instead of the definition of physical activity being reductionistic by limiting human movement to energy expenditure and treating all physical activity as uniform, this definition aims at emphasizing inclusivity and complexity, to be used by a wider group of scholars and practitioners (Piggin, 2020).

Aggerholm and colleagues (2018) offer another recent outlook on defining human movement, inspired by Hannah Arendt's philosophy (1958) and contextualized within a models-based approach in physical education and pedagogical perspectives. A models-based approach is argued to help focus on clear, manageable learning objectives, encourage diverse pedagogies tailored to content, and promoting sustained, in-depth engagement for both teachers and students in a school context (Aggerholm et al., 2018). The focus here is therefore on the subjectivist (experiential and existential) understandings of physical activity. The authors identified three fundamental forms of activity for the human condition – labour, work, and action:

- *Labour:* Physical activity fulfills biological needs, involving repetitive tasks required to sustain life and prevent bodily decline.
- *Work:* Physical activity is about reification – making and bringing forth of objects, instruments and equipment – in an artificial world of things and constructs, with a clear beginning, end, and purpose, driven by means and ends.
- *Action:* Physical activity enables self-expression, revealing individuality and identity through what we do and communicate, even if not consciously recognized.

Additional attempts to define physical activity has been made by Matias and Piggin (2022), where the authors want to move away from attached health goals of physical activity to focus on the most intrinsic reasons for why people are active (i.e., putting the experience of moving in the foreground). Their definition is: ”physical activity/human movement is an essential human act of corporally existing through inherent urges: *to feel, to explore, to transform* and *to connect* (…) these urges are a prelude to psychological needs and motivations and are the primordial foundation of an integrated embodied structure and experience” (p.181). These urges are explained as (Matias & Piggin, 2022):

- *To feel:* Engage with bodily experiences through senses (touch, hearing, sight, taste, smell) and connect them to values, desires, or memories.
- *To explore:* Embark on adventures, search, and discover; evoke journeys into uncharted or already charted territories.
- *To transform:* Create oneself through actions – shaping identities, bodies, or environments.
- *To connect:* Build connections with oneself, others, and the material/spiritual worlds; foster self-awareness and mastery through physical activity.

The authors argue that these urges condition physical activity through three key conditions: it holds potentiality, is both distinct and integrated. Physical activity is further influenced externally by social, political, and contextual forces that interact with urges to shape the human experience of physical activity (Matias & Piggin, 2022).

As a last example, in a recently published article titled "Is It Possible to Decolonize the Field of Physical Activity and Health?", Knuth and colleagues (2024) set off to further understand physical activity in the light of oppressions that connect to capitalism, patriarchy, and racism. The authors addressed this topic within the context of physical activity and health research being considered hegemonic. In this context, systems of oppression are often overlooked in population-level physical activity data and in the ways major global and national agencies, along with the prevailing status quo, promote physical activity. This perspective is referred to as a "physical activity other," where "[p]hysical activity should be understood as an end in itself, as a right, and human development" (Knuth et al., 2024, p. 634). Although the authors do not explicitly attempt to redefine physical activity, the article argues that the field of physical activity research – traditionally guided by the dominant definition by Caspersen, Powell, and Christenson (1985) – should incorporate social and political dimensions to what physical activity 'is'. It advocates for reorienting the study toward social justice by addressing the interconnected issues of race, gender, and class, creating a dialogue between decoloniality and intersectionality. Knuth and colleagues (2024, p. 635) go on to say that:

> It is possible to play another game. It is not just about 'considering' the social and the cultural; this should be obvious. It is time for a reorientation, emancipatory movements toward social justice, refuting a new academicism, which could make the Black locus of enunciation invisible. This game has not yet been played.

What this alternative 'game' entails and the forms of 'new academicism' will be for future physical activity research to define and develop. Accounts for changing the game have been made, suggesting, for example poststructuralist, posthumanist, new materialist theories to be further applied to research in sport, health and physical culture (e.g., Beggan, 2023; Fitzpatrick & Wyatt, 2021; Fullagar, 2017; Larsson, 2015; Markula, 2019). Another recent example of this is the work by Santos and colleagues (2025), who distinguish between 'neoliberal and capitalistic health-PA' and 'incommensurable health-PA', drawing on relational ontology. Neoliberal and capitalistic health-PA refers to a dominant model where physical activity is framed as a tool for economic productivity, individual responsibility, and societal control. It is characterized by standardization, medicalization, and commodification – where health and movement are measured, prescribed, and marketed. This model reinforces normative ideals (e.g., fitness,

performance, aesthetics) and often marginalizes those who do not conform, thus contributing to epistemic and social injustices. In contrast, the authors propose incommensurable health-PA as an alternative, relational, and fluid concept. It resists fixed definitions and embraces the idea that health and movement are always becoming – situated, embodied, and culturally contingent. Rather than serving market or policy agendas, it values diverse experiences and ways of moving, emphasizing justice, inclusivity, and the entanglement of human and non-human configurations. It invites scholars to explore new, creative, and context-sensitive pathways for inquiry (Santos et al., 2025).

The mentioned examples above are more or less used within different academic discourses, something the next section will develop further. Most importantly, depending on which definition of physical activity a research project applies, the project's process and methodologies will look very different in its outset to capture 'physical activity'.

How and why is physical activity addressed?

The way physical activity is defined in research shapes how it is operationalized and addressed, reflecting the underlying rationales. The rhetorical and discursive framing of physical activity, therefore, implicates the direction that related research takes.

Physical activity is commonly constructed in the light of declining levels of bodily activity or insufficient levels of activity among different populations. For example, recent public health research highlights how inadequate physical activity levels have gone from 23% to 31% globally between the years of 2000 and 2022 (Strain et al., 2024), with 81% of the world's adolescents not meeting physical activity guidelines (Guthold et al., 2020). Youth is targeted because it is seen as a period when engagement in physical activities declines, and because activity habits formed at a young age tend to carry over into later life. Here, as earlier mentioned, schools are expressed as ideal youth-gathering-arenas to target health promoting physical activity through, for example physical education curricula, active recess and classrooms, active transportation to and from school, and after-school programs. Physical activity's health-related benefits and disease prevention abilities have been the dominating rationale for decades globally (Matias & Piggin, 2022). The health benefits are rhetorically prescribed through living up to physical activity guidelines (or not), where often WHO's guidelines for physical activity are referred to. The guideline says that children and adolescents under 18 years should accumulate at least an average of 60 minutes per day of moderate-to-vigorous-intensity physical activity and engage in regular muscle-strengthening activity at least three times a week, and additionally, reduce sedentary behavior throughout the day (Bull et al., 2020). This guideline is often reflected in national policies, including in the

Swedish context, for example, through the Public Health Agency of Sweden (2021a, 2023), where this PhD project is situated. Much research has been conducted on assessing behavior changes to adolescents moderate-to-vigorous-intensity physical activity (MacIntosh et al., 2021). Depending on what knowledge of physical activity is sought – which often is quantitative estimates of its frequency, duration, and intensity level – it is assessed through different concepts of measurements, such as accelerometry or survey designs (Esliger, 2017).

From the above-described viewpoints, physical activity often becomes medicalized, prescribed, and appears as an 'inherently good' health-related choice at the individual level, where individuals are addressed through monitoring, measuring, and changing their behavior against the ideas of a dose-response relationship and evidence-based policy and practice (Malcolm, 2017; Weed, 2017). The chase for 'more' (often moderate-to-vigorous-intensity) physical activity, put against that physical activity mainly produces healthy benefits, is open to critique. This perspective glorifies physical activity, overlooking the reality that many people worldwide are compelled to move out of necessity rather than choice, often in unsafe, unpleasant environments and under demanding conditions (Ding & Ekelund, 2024; Piggin, 2020). Like any other knowledge, scientific knowledge is socially constructed. In their work regarding tracing translations of the journey from evidence to policy to physical activity promotion campaigns, Lee, Williams and Sebar (2017, pp. 140-141) highlight 'who gets invited to the table' and the 'black box' surrounding this process:

> Reliance on a traditional 'hierarchy of evidence' tends to pay little attention to, or exclude the sociocultural, qualitative, and humanist forms of evidence. As such, the types of evidence informing policy and practice serve to ignore the stories of individuals and populations and the meaning of their experiences. It has been further suggested that evidence-based-medicine focuses on the fate of individuals to the exclusion of the social and environmental factors that shape health behaviors and risk for disease. This understanding of evidence is explicitly positivist by eliminating culture, context, and the subjects of knowledge production from consideration. (…) Given the largely positivist approach to evidence-based-medicine and evidence-based-policy, one of the main tensions is the contentiousness of what counts as evidence (…) [and] 'who gets to sit at the table?'.

The statement above pinpoints how certain groups, for example, researchers within certain academic discourses, or adults, acquire interpretative privilege over other stakeholders, such as other groups of researchers, or children, concerning the meaning of physical activity and how physical activity research and policy agendas should be framed. This imbalance further informs what is counted as evidence and scientific knowledge, which, as Lee and colleagues (2017) pointed out, often discounts the

sociocultural and humanist forms of evidence. In his text "Why 'what works' won't work," Biesta (2007) advocates for the integration of pedagogical and critical viewpoints as a contrast to evidence-based discourses in school settings. He emphasizes the need to broaden our understanding of the connections between research, policy, and practice, highlighting education as a deeply moral and political endeavor that demands ongoing democratic debate and reflection.

As a critical response to dominant discourses, emphasizing the need for broader viewpoints, several scholars have highlighted aspects that warrant further examination. Drawing on social and political theory, Malcolm and colleagues (2024) analyze and criticize the uncritical global acceptance and uptake of WHO's physical activity guidelines, along with how these influence policy prescriptions, methodological assumptions, empirical justifications and geographical biases. The authors argue that physical activity and health promotion in this way can be viewed as part of a neoliberal ideology through the processes of medicalization and healthism (Malcolm et al., 2024). Larsson and Thedin Jakobsson (2024) underscore in their critical analysis of physical activity interventionist research in schools that interventions often operate within a neoliberal framework, focusing on altering individuals rather than addressing the social structures that shape their lives. Jago and colleagues (2023), recognize that focusing solely on average minutes of moderate-to-vigorous physical activity may not always be the most suitable way to studying youth physical activity in schools, and that new context-specific approaches are necessary. Additionally, García Bengoechea and colleagues (2024) emphasize the importance of moving beyond traditional positivist research designs and embracing the complexity and non-linearity of physical activity behavior in future research. These critiques open the door to alternative viewpoints and methodologies for exploring the nuances of physical activity in school settings. Adding to the dominating instrumentalist rationales on physical activity to how and why it is being studied, are ways that situate physical activity more firmly as part of a human experience and meaning-making (Matias & Piggin, 2022). Other examples, already suggested in the 1990's by Siedentop (1996), are how physical activity research for youth does not pay enough attention to pedagogical and contextual considerations that include the larger picture of school environments. Studies such as those by Alliott and colleagues (2022), Farias and colleagues (2023), and Jansson (2024) address the importance of examining the relational aspects of movement and non-movement. In this view, physical activity is understood as something that occurs in relation to other people or contexts, where an environment that facilitates activity for one person may act as a barrier for another.

To explore additional critical ways of addressing physical activity, Oliver and Kirk (2015) propose a pedagogical model known as 'an activist approach', specifically

framed towards physical education in schools working collaboratively with girls and their everyday experiences of physical activities. This approach draws heavily on feminist and critical pedagogies with a commitment towards social justice and transformation, where knowledge production is perceived as situated and that change will start in local contexts, through action and finding spaces for change (Oliver & Kirk, 2015, pp. 2-3). Another critical example is the work of Mansfield and Rich (2013), which contrasts with the micro-level activist approach previously described. Their work emphasizes the importance of deconstructing the dominant weight-centric healthism discourse shaping physical activity promotion and research. Instead, they advocate for developing alternative ways of promoting, representing and experiencing physical activity, prompting the fostering of meaningful social change on a larger scale at macro-level. For example, the authors highlight practices that de-center weight loss as a goal and instead focus on how people feel when they move, encouraging diverse and meaningful experiences of physical activity. This macro-level critique and reimagining of physical activity promotion contrasts with micro-level interventions by aiming to reshape the cultural and institutional narratives around health and movement (Mansfield & Rich, 2013).

To conclude, decisions made about how to address physical activity issues are framed according to different viewpoints, which further implicates what methodologies are used to understand the problem and to interpret it. Similarly, to the what's, how's and why's of physical activity, the following chapter will develop how school contexts are thought of and communicated in research.


A
BOOK

School contexts

> It is right before lunch, and a light rain is hitting the ground on this fall day. This week I am back for fieldwork at one of the schools, and on my way to interview the PEH teachers. I am standing outside the sports hall, waiting to be let in, and literally cannot avoid the rain due to that there is no roof over the entrance to get cover from. I am thinking to myself what students might feel about waiting outside the sports hall when it is raining, and what that does to their experience of PEH classes. I also cannot help myself from thinking back on another visit at one of the other schools, and how their sports hall had both a warm glazed entrance, clean changing rooms, and big well-equipped premises. Suddenly, I hear the door being opened from the inside, and one of the PEH teachers lets me in. We walk through the changing rooms with graffiti on the walls and toilet paper along the floor on the opposite side of the room. The PEH teachers want to do our interview in the sports hall, and not their usual office. They are having issues with mold, and does not want to expose me (as they explain) to that situation (with me being visibly pregnant). *Fieldnote*
> (Hoy, Thedin Jakobsson, et al., 2025, p. 10)

As illustrated in the fieldnote excerpt from one of the articles included in this thesis, my ethnographic fieldwork across several suburban schools gradually made me reflect on subtle yet powerful contrasts – contrasts that challenged the notion of schools as equal arenas for promoting physical activity. What became increasingly clear was that these were not 'leveled playing fields'. The lived, situated conditions through which physical activity was made possible, meaningful, or marginal, were deeply entangled with the affordances and limitations of each school's context. Despite being governed by the same national curriculum, the material, spatial, and relational conditions varied significantly from one school to another. These differences were not merely aesthetic or logistical; they shaped how students and staff could act, respond, and engage with physical activity in their everyday school lives – where the material realities intersected with broader institutional and social dynamics, influencing how agency was expressed and constrained.

Context, meaning 'to weave or join together', typically refers to the surrounding conditions or environment in which a phenomenon occurs. It encompasses the social, cultural, physical, and temporal factors that shape and give meaning to actions, experiences, or events. Rather than being a passive backdrop, context actively influences how we interpret and understand what takes place within it. This way, I mean that physical activity does not happen in a vacuum, merely it is dependent on and entangled with the

environment where it occurs. Here, I will outline the features of school settings, and how physical activity is contextualized within these environments. Especially, what constitutes a school setting, what its role is, and how physical activity is shaped and formed in accordance with this. As this project is situated in Sweden, this section also incorporates a point of reference specific to that context.

An arena for socialization and health promotion

> Education is commonly regarded as an important site for socialization, which refers to the processes through which people acquire or are 'taught' (either directly or indirectly, explicitly or implicitly, intentionally or unintentionally) and internalize the values, beliefs, expectations, knowledge, skills, habits and practices prevalent in their groups and societies. (Smith et al., 2017, pp. 249-250)

Education is one of the most fundamental institutions in our societies, and as is illustrated in the above citation, a crucial arena for youth socialization. Nevertheless, school systems are complex, comprising diverse elements such as *students and organizational subgroups*, including management, teaching, support, and administrative staff. They encompass *formal structures* like policies, guidelines, curricula, and physical facilities, alongside *intangible aspects* such as social and cultural environments and school ethos. Additionally, schools are interwoven into broader *networks*, including national education systems, local communities, and families as interconnected systems (Keshavarz et al., 2010). School systems also have the role of juggling many tasks connected to its educational/learning and fostering/care-taking missions, where addressing student agency in health and well-being is one out of many.

The Ottawa Charter for Health Promotion was one of the contemporary starting points for health-promoting school strategies that highlighted salutogenic ways of thinking about student health (World Health Organization, 1986). Since then, many school initiatives have targeted students' physical activity as a health behavior. In line with other recent public health and health promotion research, van Sluijs and colleagues (2021) argue that school contexts "offer an effective avenue to increase physical activity among adolescents" (p.430). However, the same authors also conclude that school-based initiatives have largely been ineffective, with limited research focusing on adolescents. Against this problematized area of school contexts serving a crucial function for youth physical activity, scholars argue for the pressing need for sustained, multicomponent programs co-designed with adolescents, supported by context-specific resources to

ensure their successful implementation and long-term sustainability (van Sluijs et al., 2021). In recent years, the WHO (2023; 2021b) has outlined several 'evidence-based strategies' for enhancing students' physical activity in school settings. These strategies emphasize encouraging active transport to and from school, integrating physical activity both during and between lessons, and providing physical education that fosters self-confidence, competence, and motivation for an active lifestyle. Additionally, schools are advised to organize recess activities that allow participation on students' own terms and to offer inclusive and accessible activities throughout the school day.

The Swedish school context

The current PhD project has been carried out in Sweden, where the school system operates under a decentralized structure, giving schools considerable autonomy in organizing their activities. Schools are goal-driven, with the state setting the educational goals and evaluating the activities, while school authorities, such as municipalities and private actors, are responsible for implementing them. The Swedish National Agency for Education (SNAE) is responsible for designing the curriculum and monitoring its implementation in compulsory schools for students 6-16 years of age. However, local schools oversee compliance with regulations, with school leaders and teachers determining how to plan and carry out their activities (Ferry & Westerlund, 2023). The national curriculum comprises two parts: a general section and a subject-specific syllabus. The general section highlights the school's dual role in educating and fostering young people in collaboration with families. Physical activity is addressed in both the general and subject-specific parts of the national curriculum. Since 2003, the general section has emphasized that schools "should strive to provide all students with daily physical activity throughout the school day" (SNAE, 2022). In Sweden, Physical Education and Health is a mandatory core subject, evaluated and graded like other core subjects, and outlined in the subject-specific syllabus. Additionally, it is a high-stakes subject in the sense that students' grades in the subject affect their overall grades, which in turn impacts their chances of gaining admission to the next level of education.

In 2016, the Swedish government tasked the SNAE with evaluating the need for increased daily physical activity in schools and proposing potential solutions (Ministry of Education and Research, 2018). As a result, an additional 100 hours were added to the Physical Education and Health curriculum for the nine-year compulsory school period, raising the total to 600 hours, with a stronger focus on secondary school students (ages 13–16). While this acknowledges the decline in adolescent physical activity, it also blurs the distinction between promoting physical activity for mainly health objectives and the subject of Physical Education and Health. Despite these efforts, physical activity

beyond the scope of Physical Education and Health is still advocated to need further attention (Ministry of Education and Research, 2018). The Public Health Agency of Sweden (2021a) emphasizes that schools are vital arenas for shaping young people's physical activity behaviors. However, differing viewpoints remain on what and how schools should include in their efforts to promote physical activity for all students during the school day. Recently, the Committee for the Promotion of Increased Physical Activity (2023) released the report "All movement counts – how do we create a society that promotes physical activity?" The report concludes how schools and other key stakeholders should be provided with improved conditions and opportunities to enhance students' physical activity during the school day. Emphasis is placed on the necessity of a national framework to guide this effort, with structural proposals spanning six key areas, including "Active preschool, school, and after-school care" and "Leisure, sports, and outdoor activities."

Swedish schools bear a responsibility to address disparities as part of their 'compensatory assignment'. This mandate holds schools accountable for compensating for students' varying needs, abilities, and living conditions, including differences in family background, socio-economic status, or gender (SNAE, 2022). In the 1990s, the Swedish education system underwent significant structural changes, shifting responsibility to municipalities and families through the introduction of 'free school choice' and the establishment of privately operated independent schools (Granvik Saminathen et al., 2018). This system allowed students and their families to choose schools beyond their designated catchment areas, creating a preference-driven, neoliberal, market-like education model. Critics of the free school choice argue that parental decisions often align with social class, disproportionately affecting students from diverse social and ethnic backgrounds (Yang Hansen & Gustafsson, 2016). Yang Hansen and Gustafsson (2016) highlight that school segregation varies across municipalities, with the highest levels found in metropolitan and large urban areas. Segregation is particularly pronounced in relation to migration background and academic performance (grades), with free school choice emerging as one unintentional driver of this segregation.

Segregation denotes the process of social separation between groups of people with diverse backgrounds (Norberg et al., 2023, p. 8). Increasing signs of school segregation show that schools are becoming more and more stratified, with students grouped based on their parents' country of birth and level of education. This trend is supported by multiple studies (Brandén & Bygren, 2022; Kornhall, 2019; Swedish National Agency of Education, 2012). Using Sweden as an example, Beach (2020) highlights this issue as a reproduction of power and privilege, manifested as structural classism rooted in distinctions such as ethnicity, gender, and other social memberships. The earlier-mentioned

reforms of decentralization, school choice, and privatization were justified as means to improve quality, efficiency, and cost-effectiveness, however, these reforms have exacerbated school inequality and segregation, leaving municipalities struggling to address the resulting challenges (Osman & Lund, 2022). Lund (2021) shows that policy actors advocating for school integration draw on a shared narrative rooted in the ideal of 'a school for all', collegial learning, and social interaction to reduce prejudice. This narrative aligns with structural conditions, cultural-historical contexts, and consensus-building efforts, enabling actors to establish legitimacy and reframe integration as both morally grounded and practically viable. This points to the potential for more inclusive and sustainable strategies to counter school segregation, where engaging with narratives in relation to context can gradually address complex issues and help overcome local communities' concerns over time.

In Sweden, sports participation and segregation among youth show distinct patterns. Areas facing significant socioeconomic challenges tend to have lower participation rates, whereas areas with favorable socioeconomic conditions exhibit higher rates. Gender disparities in sports participation are particularly pronounced among girls situated at the socioeconomic extremes, with those in disadvantaged areas experiencing the most significant inequities (Norberg et al., 2023, pp. 14-15). As established, both sports and physical activity engagement commonly decline during early adolescence (Jakobsson et al., 2012; Nyberg et al., 2020). Additionally, between 2010 and 2017, the proportion of foreign-born students in grade 9 (ages 15–16) increased from 6 to 13 percent, with studies indicating that foreign-born students, on average, perform worse academically compared to their peers with domestic background (Grönqvist., 2020). The findings underscore adolescence as a critical period requiring further attention in connection with the outlined issues of inequities and segregation. In light of this, many attempts and initiatives have been made to use sport and physical activity as a means for social integration (Ehnold et al., 2024; Ekholm, 2016; Höglund & Bruhn, 2024). In another example, Tolgfors (2020) explored how one of these integration projects played out in the school context of Physical Education and Health classes, showing how underlying rationalities were aiming at promoting intercultural encounters, collaboration and mutual respect, where teachers' pedagogical actions manifested in relation to compliant and resistant strategies enacted by students. An important takeaway from the study is that these initiatives can evolve into processes that lead either toward cultural assimilation or pluralistic integration. To further display the importance of a school's student composition in relation to physical cultures, a study by Jansson and colleagues (2024) showed a growing influence of family background on Physical Education and Health grades over time, particularly affecting foreign-born students, which points to a reduction in educational equity.

School contexts in interventionist, pedagogical, and critical research

This section offers a selective and situated overview of how school contexts have been conceptualized and engaged with across the three academic discourses earlier outlined. Rather than attempting an exhaustive review, the intention is to trace key orientations and tendencies within and across these discourses, with particular attention to how context is made constitutive in relation to physical activity.

To illustrate how context is considered in school-based *interventionist research* on physical activity, Jago and colleagues (2023) highlight factors such as the school setting, student demographics and interests, available facilities, staff attitudes, training, and skills, as well as school priorities. Similarly, Daly-Smith and colleagues (2020), in their Creating Active Schools-framework, define context as encompassing whole-school practices and ethos, along with the social and physical environment of the school. Context is often studied with the objective of identifying predictable physical and social environmental factors that either enable or hinder adolescent physical activity, as well as understanding how these factors influence the implementation of policies, innovations, and practices aimed at promoting such activity (Cassar et al., 2019; Nathan et al., 2018; Naylor et al., 2015; van Loon et al., 2014). For example, McLoughlin et al. (2023) investigated individual and contextual factors influencing elementary school teachers' intentions to implement classroom-based physical activity, using survey data from 181 classroom teachers from 10 schools across three separate cohorts. The authors hypothesized that perceived benefits, competence, administrator support, norms, and existing practices would positively predict intentions, while perceived barriers would have a negative impact. Results from the study showed how the biggest predictors of intentions to adopt classroom-based physical activity were compatibility, principal support, perceived autonomy, and openness to innovations (McLoughlin et al., 2023). Here, the school context became the focus, including its teaching staffs' behaviors and perceptions of hindering and enabling factors affecting the aim at implementing physical activities for students.

In *pedagogical research*, physical activity in school contexts is commonly ascribed to the site of physical education – which aims at socializing young people into sport and physical activity cultures, with the idea of equipping them with knowledge and skills to maintain participation. It is often viewed as a vital tool for encouraging engagement in physical activities during school, leisure time, and throughout their lives (Smith et al., 2017). For example, Backman and Barker (2020) describe the importance of context in relation to pedagogical content knowledge in physical education, where different movement cultures (they give the examples gymnastics and parkour) more or less include

rules, equipment, and ways in which movements are normally performed that are often taken for granted and well-known. This implicates teachers' pedagogical strategies. Here, the culture of specific forms and shapes of physical activities holds contextual meaning. Recent research by Larsson and colleagues (forthcoming) highlights the pedagogical implications of their findings on the forms of physical activity within school contexts and how adolescents perceive and engage with these activities throughout the school day. The study further distinguishes between intentional physical activities, which hold specific meaning for participants in their context, and unintentional activities, where physical movement occurs without a deliberate aim to be active but as a by-product of another action. In summary, the school environment, its students and staff, as well as the physical activities, carry significant contextual meanings connected to specific spaces in time.

In examples of *critical research*, the contextual meanings of physical activity in school environments are also examined through the lens of critical theory. One example being Ferguson (2024), who applied new materialist and posthumanist points of reference to examine how gender-diverse youth navigate physical education in secondary schools, exploring their experiences and ways to foster more positive moments in physical education. The study also highlighted how physical education teachers grapple with understanding gender diversity, revealing opportunities for developing more inclusive knowledge and practices. The findings showed both progress and empowerment, alongside challenges of stagnation and regression, with the broader school climate proving largely unsupportive of gender diversity Ferguson (2024). Another example is Jansson's (2024) study that used intersectionality theory to explore areas of tension connected to participation in physical education. He identified 10 areas of tension connected to the intersection of non-static categories of gender, religion and ethnicity: "(1) clothing during PE classes, (2) school swimming lessons, (3) showering after PE class, (4) mixed-gender couple dancing, (5) negative emotions during competition, (6) music playing during PE classes, (7) yoga, (8) physical activity during fasting periods, (9) Swedish as the language of instruction, and (10) winter activities" (Jansson, 2024, pp. 199-200). Importantly, these areas of tension that emerged for norms and expectations in physical education were similar across school contexts, yet were also handled differently depending on if these groups of students constituted the minority or majority in a specific school context. In summary, the exemplified contextual meanings associated with physical activities in schools emerged and were intertwined with networks of hegemonic practices and materialities.

Context-sensitive strategies are gaining traction across disciplines researching school settings, yet what constitutes 'context' and how it is studied varies significantly across

academic discourses. Ecological frameworks are commonly employed, though interpreted differently depending on the field. This section has provided a situated overview of how school contexts are conceptualized within interventionist, pedagogical, and critical research discourses, illustrating that context is not a neutral backdrop, but a constitutive dimension – interwoven with institutional structures, cultural norms, material conditions, and lived experiences. These varying understandings shape how physical activity is embedded and enacted in school environments, and influence the strategies used to study and engage with it. With this foundation in place, the following theoretical section will explore the conceptual frameworks that inform these perspectives, focusing in particular on how agency is understood and mobilized across discourses.


Culture
eats
strategy
for
breakfast
STAFF
HANDBOOK

Working with theory – critical ecological deliberations

> Reading theory isn't just about getting to know what others think, it is also, inevitably, about developing an understanding of how we have come to know, what we know, and to better understand our own prejudices, attachments and affiliations to particular ways of seeing and disciplinary approaches. Working out one's own theoretical affiliations ought not to be confused with feeling a need to pick sides between approaches. Who or what we read is always a political, strategic and ethical decision. Though any type of theorising we choose to do – or not to do – reveals our own prejudices and attachments regarding work of theory. This is also part of the joy, shame, discomfort and disorientations of working with theory. Theory is not disembodied, but nor is it a necessarily identity based. Whatever route we choose, debates about theory are always embedded in the politics of knowledge. (Rasmussen, 2020, p. 9)

As the quote elucidates, engaging with theory is not merely an intellectual exercise, but a process of self-reflection and positional (un)comfortable awareness. Reading theoretically oriented texts, participating in seminars and examine the thinking-doing processes of research has become a way for me to critically examine both the frameworks used in physical activity research and the assumptions I bring into my own work. Theoretical inquiry has helped me to reflect on how my disciplinary background shapes the questions I ask and the interpretations I make, as well as the kinds of questions that are commonly posed within my research field. When I began this PhD project and immersed myself in the literature on adolescents' physical activity within school contexts, I quickly observed how ecological models and whole-school strategies were frequently advocated as guiding frameworks for both research and practice. These models were often presented as comprehensive and future-oriented, aiming to address the complexity of promoting physical activity in school settings. However, as I delved deeper, I became increasingly aware of the theoretical inconsistencies underpinning these models. For example, how agency is conceptualized in markedly different ways – ranging from being treated as an individual trait or variable, to being positioned in opposition to structural constraints, or, to being understood as an emergent phenomenon shaped through the dynamic interplay between individuals and their environments. These differing conceptualizations are not only used differently across academic discourses; they carry significant implications for how we understand school contexts and adolescents' capability to

act within these, and for how programs and innovations targeting physical activity are designed and justified.

This section explores the underlying structures that shape knowledge production and how theory is used with different purposes, focusing on the perspectives of *substantialism* and *relationalism* and their implications for ecological frameworks and research practice. It further unpacks the varied theoretical conceptualizations of *agency* – commonly embedded in ecological frameworks – through the lens of physical activity in school contexts. Lastly, it reflects on how sociocritical theoretical accounts enrich ecological frameworks by foregrounding issues of power, structure, and equity.

To predict, understand, emancipate or deconstruct

Researchers work with theory in different ways. A prerequisite for inter- and transdisciplinary research collaborations is recognizing the underlying structures of knowledge production, often positioned differently across academic discourses. Below, I illustrate how theory informs research and ways of seeing.

Theoretical orientations are often classified according to the objectives of the research, such as objectivism, interpretivism, skepticism, and defamiliarization (Kamberelis, 2005), where the role of theory performs distinct functions – to explain, to understand, or to emancipate (Biesta et al., 2011). As Moon and Blackman (2014) describes in their "Guide to understanding social science research for natural scientists" – biomedical and natural scientists increased interest in social science "requires a basic understanding of the philosophical principles and theoretical assumptions of the discipline, which are embedded in the design of social research" (p.1167). Now, there are several features to this understanding. Without delving into an exhaustive analysis of ontological and epistemological foundations, this subsection will focus on theoretical understandings relevant to the thesis's exploration of physical activity in relation to context. It will examine how these understandings manifest across research disciplines, raising the question of what guides their actions and inquiries. The different features which guide disciplines' ideals and application of theoretical frameworks, are the objectives to *predict*, *understand*, *emancipate* or *deconstruct* (Moon & Blackman, 2014). The wish to predict through research exists mainly within substantialism perspectives (e.g., positivism/post-positivism), but also within structuralism and pragmatism that can apply a wide range of perspectives to research (where using any or all of these objectives can be of interest). However, the wish to understand, emancipate or deconstruct through research exists mainly within relationalism perspectives (e.g., interpretivism and sociocritical theory). For example, much physical activity research conducted in school settings is interested

in predicting ‘what works’ to increase levels of health-improving activity so that these interventions can be up-scaled to other schools (if not all) and the knowledge to be generalized to larger populations. In contrast to this, other school physical activity research (although, often other terms such as sport or movement are used) engages in trying to understand how barriers and facilitators are negotiated and shaped by actors in a certain school, with the potential for this knowledge being transferable yet still situated to the context the research has been conducted in.

Since, as previously outlined, research on physical activity increasingly calls for the integration of social and political theory – and for collaboration with scholars from the social sciences and humanities – there is a growing need to deepen our understanding of the theoretical foundations and objectives that underpin such inter- and transdisciplinary efforts. Ecological frameworks, for instance, are not theoretically uniform; their conceptualization of agency varies significantly across disciplines, shaped by differing ontological, epistemological and axiological commitments.

Ecological theory and agency

Ecological theoretical frameworks commonly emphasize both individual and contextual systems and especially the interdependent relations between the two (McLaren & Hawe, 2005; Richard et al., 2011). These include ideas about human agency and influential structures in society, which further implicates how to promote physical activity (Piggin, 2017).

Ecological theories include, for example, social ecological models that place the drivers of physical activity in their social and environmental context, focusing on predicting such relations (Rutter et al., 2019). These frameworks often suggest that factors influencing a phenomenon are to be studied in multiple micro-to-macro levels interacting with each other (Bronfenbrenner, 1979; McLaren & Hawe, 2005; McLeroy et al., 1988; Spence & Lee, 2003; Stokols, 2016). This is not something new. These theories originate from ecological scholars during the 1960’s and 70’s, such as in the work of Bronfenbrenner (1979), and have been further developed within multiple health promotion areas. Stokols (2016) and McLeroy and colleagues (1988) work are two examples within health promotion, and other well used examples influencing physical activity research are the work by Sallis and colleagues (2006), Bauman and colleagues (2012) and Michie and colleagues (2011). Recently, a significant trend in physical activity research, particularly in school-based interventions, is the adoption of medically oriented implementation science models. This includes widely used ecological frameworks, such as those developed by Durlak and DuPre (2008) and Damschroder and colleagues (2009;

2022), originally mainly used for implementation of innovations in medical-clinical environments. All these examples extend psychological, behavioral and individualistic ways to address physical activity and health by situating the individual within a context, illustrating how the context influences a pre-existing subject, one that is often conceptualized within substantialism perspectives.

One of the most dominant ecological models used, researching determinants of health, also for physical activity, is the rainbow-model suggested by Dahlgren and Whitehead (1991). According to this model, the determinants of health are governed by a complex interplay between structural, socio-economic and demographic variables, the individual's lifestyle, influence and participation in society, and the individual's other life circumstances. Now, over 30 years after the model's publication, the authors reflect on its unexpected success. Originally rejected by the same international agency, WHO, that later adopted it, the model has become one of the most widely used frameworks for understanding the social gradient of health disparities (Dahlgren & Whitehead, 2021). In addition, they further reflected upon some of the side-tracked mistaken assumptions that were never their intention, which emerged when the model took a life of its own:

> One of the most common mistakes is assuming that it is a model of the determinants of *inequalities* in health: it is not. The model conceptualises the main determinants of health for the whole population, which may differ from the most significant determinants of the social inequalities in health observed in that same population. (Dahlgren & Whitehead, 2021, p. 21)

This way, the authors criticize their own model in how it is often interpreted as only pertaining to issues of health equity rather than to population health as a whole (Dahlgren & Whitehead, 2021). Although the model is widely applied across health-related disciplines, likely due to its inclusion of both salutogenic and pathogenic aspects, its primary purpose in research has been to predict health outcomes in different populations. The models' usage within public health and social epidemiology is critiqued, for example, by Lundberg and Östergren (2023) due to the separation between the individual actor and the structure from an essentialist viewpoint (a substantialism perspective). Instead, they argue that this separation is illusory, as the surrounding structure is ontologically and temporally inseparable from the actor itself. Their critique calls for a more relational and integrated understanding of the individual and context, challenging the static and layered representation often associated with the model (Lundberg & Östergren, 2023).

In accordance, other recent research advocates for a more dialectical (a relationalism perspective) viewpoint that highlights the mutual influence between actors and their

environment, as well as understanding the agency that emerge out of that relationship. In other words, people and their environments are interconnected; neither exists independently of the other. Several scholars propose for these perspectives to be further used in research in connection to how students' physical activity (agency) emerges in relation to school contexts (Boonekamp, Jansen, et al., 2022; Spotswood et al., 2021; Wiltshire et al., 2019). Similarly, teacher agency, recognized as an indispensable feature of good and meaningful education, has supported the inclusion of a relational context-actor perspective in research related to school staff (Biesta et al., 2015; Priestley et al., 2015). This agentic perspective focuses on increasing an actors' (e.g., student or staff) ability and space to maneuver particular forms of practice (e.g., physical activity) within a certain structure (e.g., school) through ongoing negotiations. This ecological framework rests heavily on the conceptualization of agency, which emphasizes the importance of both individual capacities and contextual dimensions (Emirbayer & Mische, 1998). First, agency is considered an emergent phenomenon (Priestley et al., 2015, p. 19). Second, agency does not come from anywhere; instead, it is rooted in past experiences (iterational aspects) and orientated toward future short-term and long-term objectives, values, and aspirations (projective aspects). Finally, agency is enacted in concrete present moments (practical-evaluative aspects). From this perspective, agency holds aspects that are both relational and temporal – being largely about negotiating the possibilities for different forms of actions available at particular points in time within specific contexts. However, agency is also commonly addressed from several theoretical perspectives.

> For many, agency is viewed as a *variable* used in explaining or understanding social action. In such approaches, agency is often set against structure, where the key question is whether structure or agency is more important in determining or shaping social action. A regular corollary of such a conceptualization of agency is a tendency to view agency as an *innate capacity* of the human; agency in such a view is seen as something that people possess, so that people can be seen as being more or less agentic as individuals. An alternative conceptualization of agency is to see it as an *emergent phenomenon* – as something that is achieved by individuals, through the interplay of personal capacities and the resources, affordances and constraints of the environment by means of which individuals act. This latter, ecological conceptualization of agency emphasizes the importance of both individual capacity and contextual dimensions in shaping agency. (Priestley et al., 2015, p. 19)

When considered in the context of adolescents' physical activity in schools, agency can be understood through the three distinct but interconnected ways, illustrated in the above citation; either as a variable, an innate capacity, or as emergent. These are summarized in Table 1a. The first views agency as a variable – an internal, individual trait that students possess to varying degrees. From this standpoint, some adolescents are seen as naturally more motivated or self-directed in engaging with physical activity,

such as choosing to participate in sports or physical activities, regardless of external influences. The second perspective frames agency in contrast to structure, emphasizing the tension between personal choice and institutional constraints. Here, the focus shifts to how school policies, schedules, or cultural expectations may limit or enable students' ability to act on their intentions, highlighting the broader systemic factors that shape behavior. Finally, the emergent view of agency offers a more dynamic and integrated understanding. It suggests that agency is not simply possessed or constrained, but rather co-constructed through the interaction between an adolescent's personal capacities and the affordances or limitations of their environment. In this view, a student's ability to be active is shaped by both their internal motivation and the supportiveness of the school context – such as access to facilities, encouragement from teachers, and inclusive programming. This perspective encourages educators and policymakers to consider how environments can be designed to foster agency, rather than merely expecting it to arise from within the individual.

Table 1a. Perspectives on and conceptualizations of agency

Perspective	*View of agency*	*School physical activity context*
Variable	Essential trait, individual possession	Focus on student motivation and self-discipline
Agency versus structure	Dualism, choice versus constraint	Examines how school rules or culture limit/enhance action
Emergent	Dynamic, context-dependent	Emphasizes interaction between student and environment

This distinction between conceptualizations of agency in ecological frameworks is crucial for research on adolescents' physical activity in school settings because it shapes how we interpret students' behaviors and the kinds of interventions we design. If agency is seen solely as an individual trait, responsibility for participation is placed on the student, potentially overlooking structural barriers. In contrast, viewing agency as emergent encourages researchers and practitioners to attend to the relational and contextual factors, such as school culture, teacher support, and access to resources, that enable or constrain students' capacity to be active. Still, none of the mentioned perspectives explicitly foreground issues of power and equity, concerns that have been increasingly emphasized within the literature as critical to address (e.g., Damschroder, Reardon, Widerquist, et al., 2022). Critical social theory offers a valuable complement to ecological frameworks by foregrounding the power relations and institutional structures that

shape adolescents' opportunities for agency. While it often aligns with certain conceptualizations of agency, it also interrogates who gets to express agency, and under what conditions. These intersections are central to my analysis, as I explore how agency is both enabled and constrained within the everyday realities of school life.

Critiques of the (lack of) sociocritical

Ecological and comprehensive frameworks and strategies are critiqued to not address political and cultural barriers, including "the dominance of the biomedical paradigm with its emphasis on quantification and short-term targets of performance and political imperatives of immediate outcomes at odds with a health promotion perspective" (Richard et al., 2011, pp. 321-322). While ecological theories have been employed in research to address the complexities of school systems, some research highlights a lack of critique regarding the assumption that schools are suitable and effective venues for advancing health policy goals as part of a public health agenda. This underscores the need for more nuanced, reflective, and sociocritical strategies to developing and implementing health policies, especially those involving schools, teachers, and students (Pluim & Gard, 2018). Parallel, there is an ongoing discussion among researchers using critical theories of how critical research has led to actual transformative action and change or if it has become more of a spectator sport (Pringle et al., 2018b). Social theory offers a foundation for understanding the complex social dynamics that shape human behavior, institutions, and cultural practices. Initially grounded in the work of classical theorists such as Marx, Weber, and Durkheim, it has since developed through various paradigms – from structural functionalism and symbolic interactionism to postmodernism and beyond. Over time, social theory has expanded to encompass a wide array of perspectives that critically examine power, identity, and social structures. Within this development, critical theories – such as feminist theory, critical race theory, poststructuralism, and critical pedagogy – have emerged as essential tools for analyzing and challenging systems of inequality/inequity (McCallum, 2022).

In the context of human movement and physical activity, modern sociocritical theory has shifted the focus from purely physiological, biomechanical or performance-based understandings to more nuanced analyses of how physical activity is socially constructed and experienced. This shift is particularly significant for school settings, where physical activity is often embedded within broader educational, cultural, and political agendas. Research informed by these theories examines how school-based physical activity practices reproduce or challenge dominant ideologies related to gender, ethnicity, ability, and class. For example, critical scholars have explored how physical education

and health curricula may privilege certain body types or forms of movement, how students experience inclusion or exclusion based on identity, and how broader neoliberal narratives influence the goals and ways to address physical activity in schools. Moreover, critical theory encourages researchers to question whose knowledge counts, who benefits from current practices, and how power operates within educational spaces (Pringle et al., 2018a). This perspective is vital for developing more equitable and inclusive strategies to physical activity in schools – ones that recognize diverse experiences, challenge marginalization, and promote social justice. As inter- and transdisciplinary collaborations become more common in public health, educational, and sport science disciplines, integrating critical social theory offers a powerful lens for understanding and transforming the role of physical activity in schools. It invites scholars, educators, and policymakers to move beyond surface-level interventions and engage with the deeper social and structural issues that shape students' embodied experiences.

This broader perspective on equity and inclusion in school-based physical activity also resonates with my own journey exploring critical research. In my twenties, I worked for several years as a project leader for youth leadership trainings in socio-economically disadvantaged and culturally diverse communities. These projects were part of a Swedish political initiative against violent extremism. At the time, I had grown disillusioned with my public health studies, feeling they did not lead to real-world change. I wanted instead to work with 'real' people to make a tangible difference. However, despite my strong motivation, the experience also exposed the limits of my understanding – particularly of the everyday lives of young people raised in contexts very different from my own white, middle-class upbringing. I became acutely aware of my lack of cultural competence and the influence of white privilege, echoing Barker's (2019) findings on physical education teachers in culturally diverse schools. Now, years later and back in academia, those early experiences continue to shape my research. I align with Pringle et al. (2018a, p. 1), who describe a common thread in critical research: "that the social world is fundamentally unfair and [I] correspondingly use research as a tool to challenge inequities, inequalities, and injustices." This perspective underpins the critical ecological stance I take in my PhD project.

This type of stance to make the so-called critical part of my identity as a researcher and a conscious influence in my research is usually more common in critical research and in research disciplines relying on methods and analytical techniques using qualitative data. Often you see handbooks for 'qualitative research' containing chapters where it is highlighted how 'qualitative researchers' should consider a social responsibility, for example that researchers "need to locate their work in a transformative praxis that leads to the alleviation of suffering and the overcoming of oppression" (Kincheloe & McLaren,

1998, p. 298). As Moon and Blackman (2014) writes, "researchers who adopt a critical theory approach begin with an explicit ideological perspective (e.g., deep or radical ecology, feminism) that dictates how a chosen theoretical framework will direct data collection and interpretation." However, I argue that ideological dimensions can be found in all knowledge production. Exploring normative positions and considering how research can positively impact the world, while critically examining the interests it serves, is not something exclusively ascribed to 'qualitative research'. As Åsberg (2001) writes:

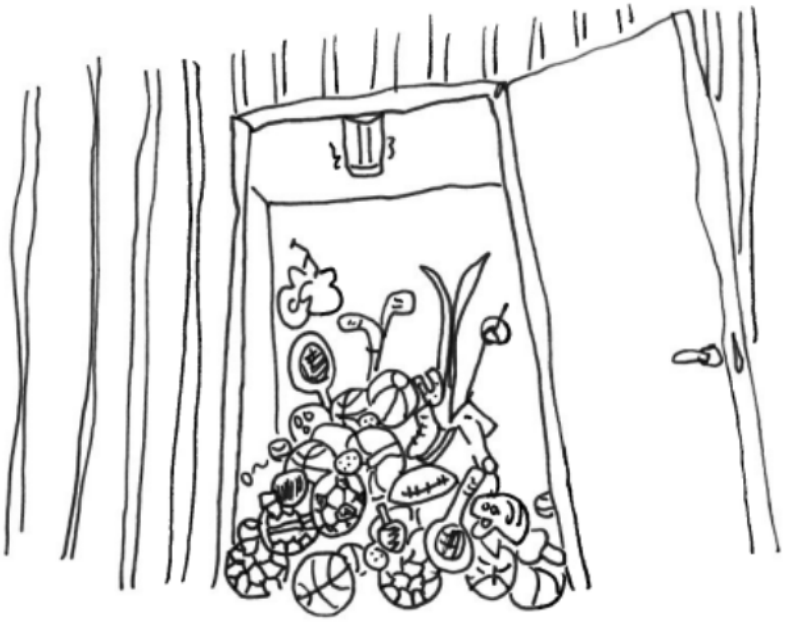
> By bringing the question of what interests' research serves under the umbrella of *qualitative research*, the very point is obscured and confused. Would I serve the interests of the oppressed more if I devote myself to analyses of qualitative data, of word-data, than if I have numerical descriptions of differences in what condition humans? (p. 287, my translation)

There is research in public health and social epidemiology that has engaged in critical issues for decades, mainly relying on quantitative data. Take Nancy Krieger's work as one example of using a critical gaze, mostly in relation to advanced methods and conceptualizations of researching gender, race, class and oppressions through critical and ecological points of reference (2001, 2003; 2020; 2024; 1997). Another example is the scientific journal *Critical Public Health* – whose aim is to publish "critically engaged research on public health, health promotion, sociology, and psychology, and explores oppression, equity and social justice in health." Another example is research that uses intersectionality theory, which acknowledge the blind spots in critical theories that assess social factors in isolation (e.g., focusing only on gender). Crenshaw (1989) is known to have coined the term *intersectionality,* to describe the structural convergence of intersecting social systems of power (Collins, 2019). The theory of intersectionality is advocated as a lens of investigation for the complex processes of multiple interlocking systems of structural disadvantages and privileges formed by these intersections of individuals' membership in differing social categories. Recent sport and physical activity research emphasize the need to develop studies that make use of intersectionality theories and that rely on quantitative data (Lee et al., 2023; Lim et al., 2021; Sone et al., 2024). The notion of being critical is not confined to researchers focused on collecting and analyzing either qualitative or quantitative data. Instead, it centers on if and how context is addressed – through the application of differing perspectives on knowledge production (Åsberg, 2001).

Returning to the story of my own interest in sociocritical viewpoints, the desire to make a change, and the frustrations I experienced during my time at the university – frustrations tied to a lack of perceived real-world impact – these are all characteristics that

reflect common critiques of critical research. Perhaps not of the research itself, but of its transformative impact or lack thereof, as both Tinning (2018) and Kirk (2018) voice in their discussions on the evolution of critical research's ambitions and the backlashes over recent decades. On the other hand, during my current PhD project, I have encountered a different kind of frustration, stemming from the uncritical assumption that schools are ideal settings for implementing public health agendas. In addition, some research has been criticized for lacking reflection on health policy and interventions, particularly those promoting physical activity and pedagogy, which can themselves be potentially oppressive by insisting that students participate in activities they find unpleasant, intimidating, humiliating, or marginalizing (Alberga & Russell-Mayhew, 2016). In this thesis, I advocate for moving beyond theoretical perspectives that frame schools merely as platforms to 'reach' adolescents and promote physical activity – a view often rooted in neoliberal and substantialist framings that position young people as passive recipients of intervention. Instead, I also explore an alternative perspective that understands school contexts as relational spaces and places, where adolescents are active agents in shaping their own experiences. From a relationalism perspective, adolescents are not isolated individuals to be acted upon, but are entangled in dynamic networks of relationships, materialities, and meanings. Physical activity, in this view, is not simply a behavior to be promoted, but an emergent practice co-constituted through interactions between bodies, spaces, places, discourses, and histories. Schools, then, are not static settings but fluid, lived environments where physical activity is continuously negotiated and redefined through the everyday actions and relations of those within them. This perspective invites a shift from intervention to co-creation, from control to collaboration, and from outcomes to ongoing processes of becoming.

All this brings us to question of the purpose of scientific knowledge and its application. Should it serve to influence policy-makers, and should researchers actively intervene in the issues they examine? If so, how? These questions are far from new; nonetheless, they remain relevant and important for us and our research communities to reflect on as part of practicing reflexivity. Especially while addressing the critical endeavors in our research projects and how we wish to bring about change. The important question here rather has to do with the perspective taken on concepts such as equity, equality and justice, and the ways we go about researching them. This section has shed light on the importance of the research questions asked and knowledge produced aligned with views on the world and the ways to situate oneself as a researcher. The following section will delve deeper into how this influences the study of a chosen phenomenon or problem, as well as the processes and methodologies to do so.



Methodological reflections – ways of knowing, ways of doing

> Even in medicine the hierarchy of evidence is not without critics (…) At its heart is a recognition that the hierarchy of evidence is a difficult construct to apply in evidence-based medicine, and even more so in public health (…) [which] points to the continuing debate about the appropriateness of relying on study design as a marker for the credibility of evidence. (…) [The hierarchy] disregards the issue of methodological aptness – that is, the fact that different types of research question are best answered by different types of studies. There is now a considerable body of methodological literature in the social sciences, particularly from qualitative researchers, on the aptness of particular study designs to answering particular research questions (…) focusing on the question being asked is more important than squabbling over the 'best' method. (Petticrew & Roberts, 2003, pp. 527-528)

My first experience of getting a scientific article published was through conducting a systematic review of randomized controlled trials' (RCTs) effect on health outcomes. I had learned about the 'hierarchy of evidence' both through public health studies at the medical faculty for my bachelor studies and through my position as a research assistant at a public health department where these forms of reviews, meta-analyses, and RCTs were, as contended by Petticrew and Roberts (2003, p. 527), "occupying the top rungs of the methodological ladder." However, in their critique, the authors advocate for the use of typologies instead of hierarchies to better conceptualize the strengths and limitations of various methodological approaches, highlighting the importance of aligning research questions with appropriate types of research (Petticrew & Roberts, 2003). This thesis primarily employs case study, cross-sectional, and systematic review designs, grounded in different academic discourses. These methodologies are all well-suited to explore the complexity of school contexts and young people's physically active lives, yet, in different ways. The reference to Petticrew and Roberts (2003) highlights how evidence hierarchies – which typically place systematic reviews and RCTs at the top, and observational and 'qualitative' studies on the bottom half – have historically shaped interventionist research. While influential, this model has been increasingly critiqued, particularly in fields that value contextual, relational, and exploratory knowledge. For pedagogical and critical research then, such hierarchies can obscure the value of commonly used methodologies that emphasize meaning-making, power relations, and social justice

– central concerns of this thesis. By situating my work within interventionist, pedagogical, and critical research traditions, the thesis argues that different methodologies generate different forms of knowledge, each valid in relation to specific research aims. This critique is especially relevant in school-based physical activity research, where pluralistic and interdisciplinary strategies are warranted to address the social, cultural, and institutional dimensions of health-related behaviors.

Because of the interdisciplinary character of the larger project that this PhD project is embedded in, it has forced me to again and again (re)consider methodological issues across disciplines. I believe one of the greatest personal and professional gains for me has been learning to value the (often methods-driven) interventionist research's commitment to stringent procedures, robust designs, and detailed checklists, while also appreciating the (often theory-driven) pedagogical and critical research's focus on raising new questions, engaging reflexively and critically with established assumptions, and venturing into unexplored areas. Hence, I have chosen to describe this methodology section in a way that highlights the patterns of ideals, values and norms that commonly are ascribed to the different academic discourses. This is followed by exemplifying how this thesis' included articles more or less connect to these different positionings, followed by ethical considerations that have developed along the process of this PhD project.

Common and distinguishable features of research processes

Research processes and their methodologies can look very different depending on the field of inquiry, but there are also commonalities. A common divide is between the idea of 'qualitative and quantitative methods', which refer to the characteristics of the phenomena we seek to predict, understand, emancipate or deconstruct, and is reflected in the empirical materials and data we generate. However, this divide risk to further sediment these dichotomies, which really is more about the value-systems that drive the idea of the 'qualitative-quantitative-divide'. The common distinction between quantitative and qualitative methods as separate is an oversimplification that warrants reconsideration, where emphasis instead should be placed on the scientific theory and perspective guiding a research process and its methodologies (Åsberg, 2001; Baur, 2019). This connects back to the concepts of substantialism and relationalism perspectives. These underlying structures of scientific theory influence the actions we take – through our used theories and methods – in our quest to do research and generate data to analyze. Data that we intend to analyze for our research projects hold different characteristics (words, numbers, pictures, symbols, sounds, scent, materials and so on), often transformed into

either so-called numerical or non-numerical data that we analyze in different ways. Depending on what form of knowledge and ideas of how to 'know more' about something, the collection, transformation, and analysis of data will look different.

Similar to Sparkes (2015), I understand methodology as the overarching approach to studying a topic or problem. It concerns how researchers access and interpret the world, guided by philosophical inquiry. Methods, by contrast, are the specific techniques used to generate and analyze data, such as participant observation, interviews, surveys, statistical analysis, or reflexive thematic analysis. When methodology and method are clearly distinguished, for example, mixed-methods research becomes largely uncontroversial. The core debate lies not in the methods themselves, but in the axio-onto-epistemological assumptions that shape research inquiries – assumptions that cannot be arbitrarily combined. Diverse paradigms, such as positivism and constructivism, are rooted in distinct ontological and epistemological foundations and are often viewed as incompatible (Sparkes, 2015).

Additionally, every researcher and research community strives for high 'quality' of the knowledge they produce through research, however, how quality is appraised also varies between academic discourses. In line with Sparkes and Smith (2009), Burke (2016) refers to two different ways of thinking about quality – a criteriological or relativist way of thinking. A criteriological way adopts pre-determined criteria to judge whether a study holds high quality and rigor. Criteria often referred to are a study's credibility, dependability, transferability, and confirmability, especially used within pedagogical research but also in interventionist research. These widely acknowledged criteria used in sport, exercise and physical activity research were outlined by Lincoln and Guba (1985) as a response to other criteriological ways of assessing quality through the concepts of validity, reliability, generalizability and objectivity (Sparkes, 1998). Another criteriological way of assessing quality is more common within interventionist research. An example of this way of assessing quality is using the standardized checklists provided by the Equator Network – where your research design dictates what appraisal tool to use. Another example of more recent criteria is the "Eight 'big-tent'" by Tracy (2010). Criteriological ways are also critiqued for their one-size-fits-all strategies to ascertain the quality of research. As Burke (2016) puts it:

> Applying universal criteria to judge research that is underpinned by an ontological position, wherein reality is considered multiple and subjective is deemed inappropriate, is akin to trying to fit a square pig into a round hole. For example, using member checking (e.g., giving the transcribed interview back to the participant for verification) to test research findings (i.e., a pathway to the 'truth') contradicts the paradigmatic tenants of qualitative inquiry framed by interpretivism, constructionism or critical approaches, for example,

> by assuming that participants are possessors of 'truth'. This is not to say that member checks are of no use. (p. 332)

A relativist way of approaching member checking could instead be to provide opportunities for "reflexive elaboration and an enhanced understanding of how research findings are co-constructed in the creative process of the research" (Sparkes & Smith, 2013, p. 191). This orientation rejects the idea of universal criteria. Instead, evaluative criteria should be specific to the chosen study, tailored to its goals and methods through informed decisions and ongoing judgments over time (Burke, 2016). In this way, quality appraisal becomes situated and context-specific. A relativist stance to establishing quality is commonly used within critical research, as well as in pedagogical research. Building on the work of others, Smith and Caddick (2012) have provided alternative points of reference for researchers to use when addressing quality from a relativist perspective. These references offer a basis for evaluating research without relying on fixed or universal standards.

Here, my objective is to challenge the qualitative-quantitative divide on research processes and methodologies. This positioning instead emphasizes the shared and unique features included in differing *methodologies*, such as philosophical assumptions and scientific theory, theoretical frameworks, methods, data (qualitas or quantitas), and quality appraisal. These features are shaped by, for example, external forces, including political and funding bodies, academic discourses, and researching subjects such as independent researchers and research groups.

Linear, circular and non-linear methodological approaches

Here, I will outline research processes by examining shared and distinct features at both micro and macro levels of differing approaches, that in differing ways also are part of the included studies of this thesis. Two key strategies addressed include linear and circular approaches, as described by Spradley (1980, pp. 28-35) and Jägerskog and Niemi (2023, p. 54). However, recent research also explores alternative strategies to linear and circular research processes, which I refer to as non-linear approaches. To illustrate these, I present three studies that I consider being strong examples of quality research within each approach. While these approaches differ, they also overlap to some extent. Here, they are used more as heuristic devices than as definitive categories.

To exemplify *linear approaches*, these are often found in research that follows a sequential process, such as pre-registering study designs with specific research questions

or hypotheses, using standardized measures and instruments to collect data, and applying criteriological standards to assess quality and rigor. This often includes study designs with a high degree of standardization, such as randomized controlled trials (RCTs), or large-scale cohort, cross-sectional, or longitudinal studies. Figure 1 illustrates a linear approach.

As an example, Guldager and colleagues (2018) performed a study based on a cross-sectional questionnaire survey targeted at teachers who, together with their classes of schoolchildren, had participated in a 3-week long Danish national classroom-based health program called Active Around Denmark. The study investigated teachers' perceptions of the program's effectiveness and examined whether these perceptions were influenced by the school's social context. Questionnaires assessed teachers' views on changes in children's attitudes toward and participation in physical activity. The findings revealed that certain contextual factors – such as the prioritization of health promotion by schools, the support provided by school principals during implementation, and teachers' satisfaction with the physical environment of their schools – significantly impacted teachers' perceptions of the program's effectiveness. Thus, the study demonstrated that teacher-perceived effectiveness of the program varied according to the school's social context. The authors also discussed the limitations of their study against upheld quality criteria (Guldager et al., 2018). This exemplifies a linear, sequential process, from aim to reporting, to study the school context connected to physical activity.

Circular approaches in research are often characterized by an iterative process, where the features of the study are (re)constructed in a more exploratory and flexible manner. A study may be initially designed and later revisited or redesigned to varying degrees, depending on the traditions of the discipline. The process often begins by selecting a research area or project and defining the scope of the scientific inquiry through guiding questions. These questions frame the generation of data and empirical material, which, in turn, may lead to the emergence of new questions. Analytical methods are integrated into the process to varying extents as the study progresses. This approach often involves pivotal and back-and-forth dynamics, employing more or less flexible criteria to assess quality throughout the research. Examples of circular research processes are found in ethnographic work (Hammersley & Atkinson, 2007; Spradley, 1980) and action research (Carr, 2006; Kemmis, 2009). Another example is the hermeneutic circle, based on the work by hermeneutical thinkers like Heidegger, Bultmann, Ricoeur, and Gadamer, which is a process of constant interaction between the whole and the parts with the aim of achieving a deeper understanding of the object of interpretation (Grondin, 2015). Figure 2 illustrates a circular approach.

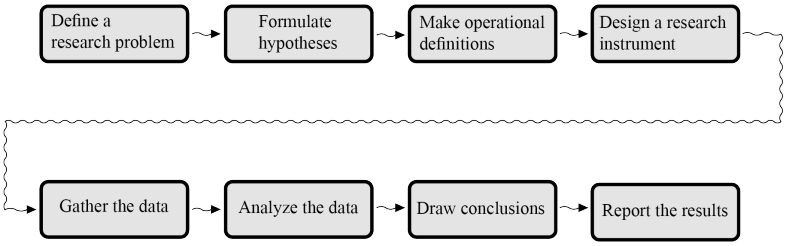


Figure 1. Linear approach

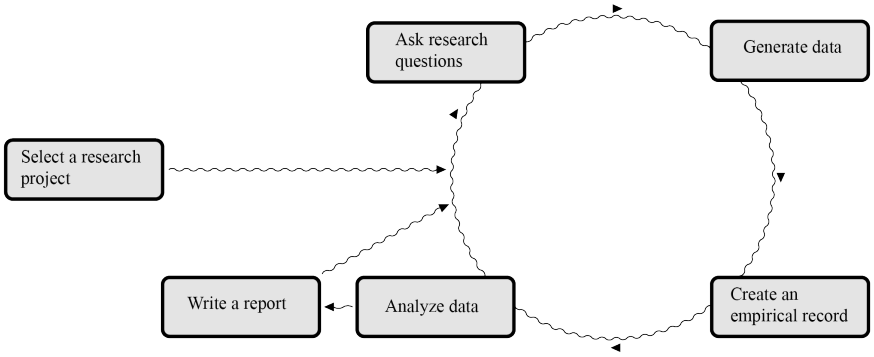


Figure 2. Circular approach

Håman et al. (2022), for example, performed an action research project targeting physical education teachers in their school contexts. The aim was to draw on physical education teachers' discussions and reflections about the implementation of a health-promoting intervention in eight primary and middle schools in Sweden, called "Pulse for Health and Learning," which focused on moderate-to-vigorous physical activity and incorporated a child-centered strategy. The researchers used the theoretical framework of 'practice architectures' to guide their study, analyzing discourses emerging from teacher discussions during the three circle processes, which were conducted collaboratively with the researchers. Their results from a dialectic analytical process showed three identified discourses which constrained and enabled intervention implementation; a technical-rational discourse, a participating discourse, and a steering and supporting discourse (Håman et al., 2022).

Non-linear approaches are not utilized in the individual articles of this thesis. However, I choose to mention them, as they represent emerging approaches within the field of inquiry and critical research. They have also influenced my own way of thinking-doing, the questions I ask, and how I have engaged with the writing of this thesis. Non-linear approaches are most often found within posthumanism and new materialism forms of research, often with the objective to deconstruct a certain phenomenon. The approach can be seen as a response to conventional humanist research methodologies that is perceived of becoming too increasingly formalized, systematized, and positivized. Although that research emerged during the interpretive turn as a rejection of positivism, the focus shifted from measurement and prediction to understanding lived experiences and, in cases of perceived injustice, promoting transformation and liberation (St. Pierre, 2018). Instead, St. Pierre (2018, p. 603) advices us to encourage "those who inquire now, after the ontological turn, to break the habit of rushing to preexisting research methodologies and, instead, to follow the provocations that come from everywhere in the inquiry that is living and writing." A common example of a non-linear approach is the concept of rhizomatic processes, which challenge conventional systems thinking by contrasting with the rooted, branching structure of trees (Deleuze, 1987; Deleuze & Guattari, 1994). This perspective emphasizes a shift from 'either-or' to 'both-and' thinking, suggesting that rhizomatic and arboreal logics can coexist. However, Deleuze and Guattari acknowledge that dominant research ideals often favor the arboreal model. Rhizomes spread through constant connections between heterogeneous features, embodying multiplicities rather than unity or individualized agency. These multiplicities interact with other formations to drive change within 'assemblages'. Rhizomatic cartography has particularly inspired critical research practices by transforming academic subjectivities and challenging assumptions about agency (Fullagar & Kuby, 2021). Figures 3 and 4 illustrate arboreal and rhizomatic (non-linear) approaches, respectively.

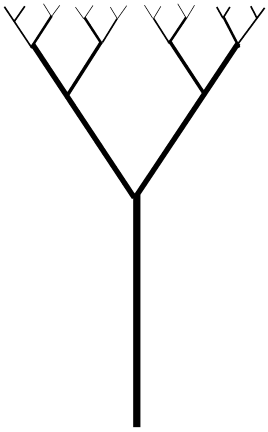


Figure 3. Arborescent (tree-like) system

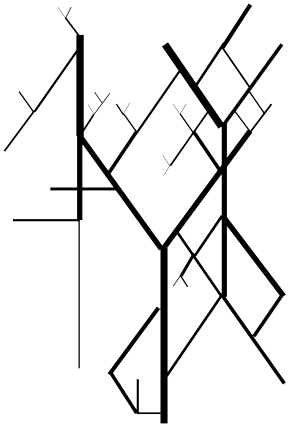


Figure 4. Rhizomatic system

The figures illustrates the distinction between arborescent (tree-like) and rhizomatic approaches to research processes, calling attention to the illustration of a non-linear approach in Figure 4.

As an example from school environments, Rich (2010) engaged in a non-linear approach where the methodology incorporated various techniques to examine the growing trend in recent years of monitoring and collecting data on children's weight and health in schools against the so called obesity epidemic. The study analyzed schools as components of a broader 'surveillance assemblage', shaped by an interconnected network of agencies, institutions, entities, and socio-technological advancements, all formed through a complex web of rhizomatic flows. Data used for the study was mainly based on material from young women/girls between 11-18 years experiences of health-related policy and practice within schools in the UK. Findings revealed relationships between girls' private troubles' of their bodies, food and exercise, and 'public issues' of contemporary weight-centric assemblages existing within school contexts. A personal sense of ethical duty towards thinness arose against prevailing health-messaging and school-based surveillant mechanisms and pedagogies as part of 'the cultures of schooling'. (Rich, 2010). This example of a non-linear approach shows how research aims to deconstruct in a rather unsystematic way as part of knowledge production, where the study especially highlights its revealing of confusion and the need to ask 'new' questions at the juncture of difficult ontological and theoretical perspectives.

Well worth mentioning again is that these outlined approaches to research processes are not synonymous with the idea of 'qualitative-quantitative', which is an unfortunate common misleading rhetoric. Following, I will outline how the included studies in this thesis relate to these approaches of research processes and methodologies, adhering mainly to linear and circular approaches.

Study methodologies of the included articles

Four articles are included in this thesis, each representing different perspectives that contribute to its overall purpose. These articles stem from three distinct sub-projects within the PhD project: (i) an ethnographic study combined with a social network survey, (ii) a cross-sectional study using data from surveys, accelerometers, and national registries, and (iii) a systematic review assessing measurements for evaluating school contexts. The studies primarily draw on ecological and critical frameworks, each to varying degrees focusing on the dynamic interplay between actor-agency-structure. This methodological combination is both interdisciplinary and innovative in its approach to examining school contexts in relation to physical activity during the school day, specifically within a Swedish setting. Furthermore, the articles reflect various aspects of linear and circular approaches, as well as interventionist, pedagogical, and critical research traditions.

An overview of the article characteristics is provided in Table 2 and further elaborated in the following section. Each article also includes a detailed account of its respective methodology.

Table 2. Brief overview of the four included articles

Article	*Overview*
Article 1 – Negotiating adolescents' physically active life during the school day	
Research question	What are the opportunities and barriers for students' physical activity during the school day, how are these being negotiated by students and school staff, and how is agency expressed in relation to students' daily physical activity?
Method	Multiple-case ethnographic study design
Material	720 hours of fieldwork from four secondary schools, and 86 interviews with 102 respondents, including students and school staff
Theoretical framing	Ecological theory of agency
Article 2 – Matrices of (dis)advantage: School segregation and social inequities in adolescent physical activity from an intersectionality approach	
Research question	How does physical activity express social position during the school day and leisure time among adolescents, and are there differences between groups in relation to intersecting social positions and school segregation?
Method	Cross-sectional survey and registry-based study design incorporating accelerometry to assess physical activity
Material	Survey and accelerometery data generated from 1139 participating 7th grade students (73% rate) from 34 schools. School level data from SIRIS and SALSA
Theoretical framing	Critical theory of intersectionality
Article 3 – Combining social network analysis and ethnography to better understand staff and teachers' implementation of daily physical activity in secondary school	
Research question	In what ways do staff value and prioritize physical activity (or not) for students during the school day? What are the structural characteristics of the staffs' social networks, who are the central actors, and if network centrality is associated with valuing student physical activity? How does professional network characteristics relate to the ways students' physical activity during the school day is valued and prioritized among staff?

Method	Case study with an ethnographic and social network survey design
Material	180 hours of fieldwork from one school, interviews (12 staff), as well as survey nomination data (23 participants)
Theoretical framing	Relational social network theory and the valuing of a physically active life

Article 4 – How to measure context? A systematic review and a psychometric and pragmatic analysis of quantitative measurements for factors influencing implementation in school settings	
Research question	What are the existing measurements of factors influencing implementation in school settings? How do the psychometric and pragmatic properties of these measurements align with the domains of the Consolidated Framework for Implementation Research (CFIR)?
Method	Systematic review design
Material	The search strategy initially yielded 16,954 records. After two screening stages, 261 records remained, with 86 ultimately included for reporting on instruments.
Theoretical framing	The Consolidated Framework for Implementation Research (CFIR)

Article 1 – An ethnographic study

The aim of this ethnographic article was to explore students' physical activity during the school day across four different Swedish secondary school contexts using a whole-school approach and an ecological lens of investigation. The analysis was constituted in the theoretical concept of *agency*, examining how daily physical activities were engaged in and perceived as possible by actors within and across these school settings. The article was further guided by the following research questions: *What are the opportunities and barriers for student' physical activity during the school day, and how are these being negotiated by students and school staff, and how is agency expressed in relation to students' daily physical activity?*

The article aligned with a circular approach for its process and methodology, where a scope of inquiry was set between the initially three (later four) researchers that were involved, and that later also conducted the data collection across the recruited four schools that varied in size, resource denseness, and whether they were independent or public providers. The main empirical material was generated through ~720 h of fieldwork during a school year, divided over three 2-week periods at a time, along with 86 interviews

involving 50 students (aged 12-16) and 52 staff members (teachers, managers, health team and other staff). This material was analyzed using a comparative reflexive thematic analytical process. Throughout the whole study, our team of researchers held recurring meetings where we shared reflections and discussed the study to adapt and develop our methodological approach accordingly. We shared not only our own experiences through words, but also, for example pictures of the different school environments and fieldnotes. I also continuously used a non-systematic reflective account of my own experiences parallel to the fieldnotes that were generated throughout the process. Importantly, I view the empirical material as co-constructed by us researchers, our respondents, and the settings we engaged with, rather than as an objective account of the studied phenomena, since striving for objectivity would conflict with the axio-onto-epistemological stance underpinning this article.

The article adhered mainly to ideals of pedagogical research because of its focus on the interaction between actors, artifacts and their environments narrowing down in their negotiated meaning-making experiences. The study also stayed flexible to what physical activity meant in relation to the specific contexts. Further, it made use of a relationalism perspective through the use of an ecological theoretical framework by the pedagogical researchers Priestley, Biesta & Robinson (2015). The information letter, interview guides and observation protocol, which were used for the study, can be found in Appendices A, B, C, and D.

Article 2 – A critical cross-sectional study

The aim of the article was exploring how several indicators of school segregation and social position intersect in relation to engagement in moderate-to-vigorous physical activity among adolescents, using critical intersectionality theory. The article was further guided by the research questions: *How does physical activity express social position during the school day and leisure time among adolescents, and are there differences between groups in relation to intersecting social positions and school segregation?*

This article chiefly aligned with a linear approach for its process and methodology. Nested in a larger study (Nyberg et al., 2021), a cross-sectional design was applied, including a total of 1139 adolescents in grade 7 (age 13-14) from mainly urban Swedish school settings, which varied in resource denseness. Quantitative data was retrieved from surveys, accelerometers, and national registries. Although I was not part of the initial design or data collection, I was fortunate to be able to use the individual student data from the project and added on the registry data in collaboration with one of the co-authors in the article (C.L.). Descriptive statistics and stratified analyses were performed

to examine levels of moderate-to-vigorous physical activity during school and leisure hours connected to intersecting social positions and school segregation contexts.

The article adhered to ideals of both interventionist and critical research because of its original design, for example focusing on an instrumentalist definition and operationalization of physical activity that exist in mainly public health and medical knowledge. This later got complemented with registry data on institutional level (school segregation) and a critical theoretical framework by Collins (2009, 2019), instead taking on a relationalism perspective rather than a substantialism. The information letter that was used for the study can be found in Appendix F.

Article 3 – A social network and ethnographic study

The aim of the article was to explore the combination of social network analysis and ethnography to better understand school teachers' and staff's implementation of physical activity in one Swedish secondary school. We examined how school staff valued and prioritized students' daily physical activities, and how the staff's beliefs and actions related to student physical activity were associated with their professional social networks at school, considering several relational dimensions relevant to the dissemination of information and innovations: social contact, professional discussion, and professional advice seeking. The article was further guided by the following research questions: *In what ways do staff value and prioritize physical activity (or not) for students during the school day? What are the structural characteristics of the staffs' social networks, and who are the central actors, and if network centrality is associated with valuing student physical activity? How does professional network characteristics relate to the ways students' physical activity during the school day is valued and prioritized among staff?*

The article was a collaboration between both our project at GIH and Karolinska Institute, through one of my co-supervisors (Å.N.), and together with a research group called Center for Applied Network Analysis (CANA) at the University of Southern California that I visited during this PhD project for two months. The article was a result of this collaboration with the last author (K.H.) that aided my ambition in studying social network analysis, another field of research which I have learned over the years to be highly interdisciplinary.

The research process primarily followed a circular approach in terms of methodology, employing a case design with a convergent mixed-methods strategy at one of the four schools included in the larger ethnographic study. A convergent design means that the different empirical materials were collected roughly around the same time. Initially, the

plan was to recruit all four schools for the social network part of the study. However, due to changes in management, two schools declined to participate, leaving two that took part. Unfortunately, social network analysis research using whole-network designs is sensitive to missing data and needs at least an 80 percent response rate of the network to be perceived as valid. Therefore, we ended up being able to use the data from only one out of four schools. Quantitative and qualitative survey data, including whole-network nominations were collected from 23 out of 24 staff members who interacted with secondary students, including teachers, management, and staff involved in health promotion and physical activity. The rest of the empirical material comprised 180 hours of ethnographic fieldwork with fieldnotes and 12 semi-structured transcribed interviews.

The article also aligned with the principles of two academic discourses: interventionist and pedagogical research. This alignment was largely due to its survey design, which incorporated both structured questions aimed at operationalizing physical activity in an instrumental manner – drawing from public health and medical knowledge – and more open-ended questions that allowed staff to define physical activity in their own terms. Additionally, the article explored sociocultural and contextual aspects of staff members' relationships with the school environment, as well as their individual attitudes toward and prioritization of student physical activity. Furthermore, by applying the concept of social network structures and characteristics from a dialectical perspective, as described by Emirbayer and Goodwin (1994), the study adopted a relationalism approach. The information letter, interview guides and observation protocol, which were used for the study, can be found in Appendices A, B, C, D, and E.

Article 4 – A systematic review of measurements

The aim of the study was to (i) systematically review the literature to identify measurements of the factors influencing implementations that have been developed or adapted in school settings, (ii) describe each measurement's psychometric and pragmatic properties, and (iii) describe the alignment between each measurement and the corresponding domain of the Consolidated Framework for Implementation Research (CFIR).

The article followed a linear approach in its process and methodology, utilizing a systematic review design in accordance with standardized tools such as the Preferred Reporting Items for Systematic Reviews and Meta-Analyses tool (PRISMA 2020) (Page et al., 2021). It was prospectively registered with the Open Science Framework (Hoy, 2022) and includes a published protocol (Hoy et al., 2022). Six databases (Medline, ERIC, PsycInfo, Cinahl, Embase, and Web of Science) were searched for peer-reviewed articles reporting on school settings, published from the year 2000. An updated search

has been conducted during August 2025, however, it is not included here. The identified measurements were mapped against the ecological theoretical implementation framework CFIR, and analyzed for their psychometric and pragmatic properties. This way, a criteriological approach was applied to the research process. Two stages of screening were performed independently by at least two researchers, and 10% of all records were cross-checked at both stages by a third senior researcher. Data were extracted by two researchers, including study characteristics, items mapped to the CFIR, and information reported on psychometric and pragmatic properties. Notably, since the publication of our protocol in 2022, where we applied the CFIR framework based on the original work by Damschroder et al. (2009), an updated version of CFIR was released (Damschroder, Reardon, Widerquist, et al., 2022). We therefore chose to use the updated framework in the final analysis presented in this article.

The article followed the ideals and principles of the academic discourse of interventionist research, typically applied within a mechanistically focused substantialism perspective, often with the main objective to identify causal pathways of influence through so-called determinants that predicted, mediated, and moderated outcomes.

Ethical considerations

Throughout this PhD project, an evolving ethical landscape including discussions and changes in research ethics procedures have been in significant focus. Notably, social science and humanities has further been subjected to mandatory ethical standards, akin to those long established in medical research, under Swedish state law and the Swedish Ethical Review Authority. This shift has transformed researchers' daily practices, as ethical procedures traditionally have varied across disciplines. In response, numerous public debate articles have raised concerns about the negative impact of applying medical research standards universally to all Swedish researchers. These criticisms highlight issues such as restrictions on academic freedom, excessive time demands, and a disregard for disciplinary differences in addressing ethical challenges (e.g., Danielson & Bennich-Björkman, 2022; DN Debatt, 2023b; Utbildningsdepartementet, 2023; Widmalm, 2023). One article, signed by 2,489 Swedish researchers primarily from the social sciences and humanities, further emphasized these concerns (DN Debatt, 2023a), outlining a key critique of this tactic:

> The problems are probably due to the fact that the law was designed based on large-scale medical and natural science research where the format of the data is known in advance. However, this is not the case in large parts of the social sciences and humanities. The situation is particularly serious for qualitative

> research where the researcher does not work to test a hypothesis but tries to understand a context, often through interviews, ethnographic studies or analysis of texts. This is often based on a gradual development of the method and the follow-up of new interesting leads. Nevertheless, the Swedish Ethical Review Authority forces researchers to specify in advance which questions may be asked of the interviewees and what the answers may contain. (DN Debatt, 2023b, my translation)

The criticism appears to target the privileging of research traditions that predominantly follow linear methodological approaches over circular and non-linear ones. In response to the widespread critique, Minister of Education Mats Persson (2023) announced a review of the Ethics Review Act and mandated ethical processes for Swedish research. This led to a proposed new research ethics law, expected to be implemented in 2026 (Regeringskansliet, 2024).

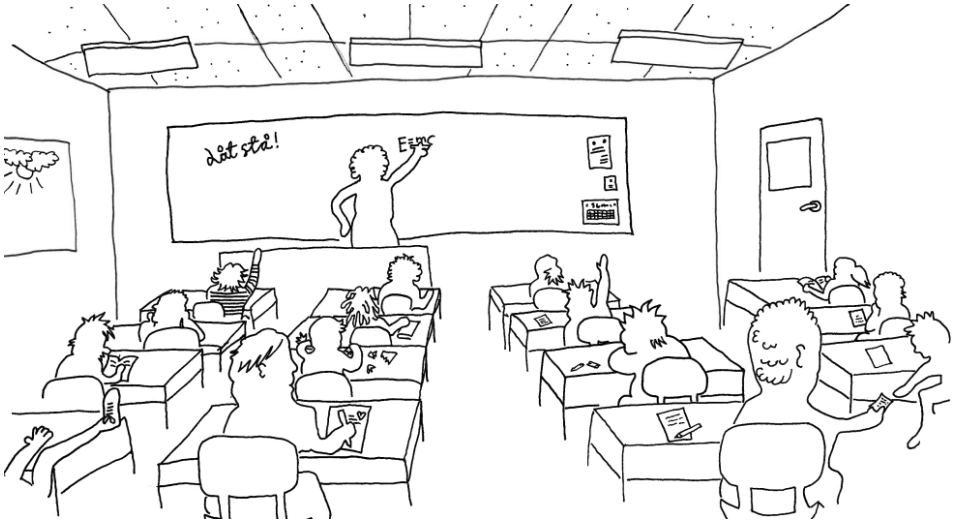
As my PhD project, with its included articles, incorporates both linear and circular methodological approaches, the ongoing debate throughout these years has necessitated continuous reflection over research ethics as an integral part of the process. The research studies included here have adhered to the mandated ethical application standards (the Ethics Review Act) as well as taken a situated ethical way of working in accordance with "Good research practice" outlined by the Swedish Science Council (2024). For example, I have adopted a situational ethical way of working in the ethnographic study, as proposed by Hammersley and Atkinson (2007), due to the open-ended, iterative nature of ethnographic research. This approach involved making contextual judgments on ethical matters, such as safeguarding individuals' integrity, maintaining confidentiality, and ensuring their right to consent or dissent. Given that the larger ethnographic study also included young participants aged 12–16, a group considered as potentially vulnerable, ethical deliberations held particular significance (Quennerstedt et al., 2014). For example, different disciplinary ways to study physical activity in schools carry distinct ethical implications, particularly in how they conceptualize young people and the role of school settings. Some traditions emphasize measurement, behavior change, and intervention, often framing students as recipients of externally designed programs. Others focus on the social and relational dimensions of physical activity, viewing agency as something that emerges through interactions within school environments. These varying perspectives reflect different assumptions about identity, power, and the purpose of education in shaping physical activity experiences.

Another important ethical aspect I have contemplated is the role of power structures, mainly tied to the role of 'the researcher' in school contexts and the role of physical activity as a potentially normative behavior. For example, me and the other three adult researchers with ethnically Swedish appearances and academic affiliations, shared

similarities with school staff, reinforcing hierarchical norms that place young people in subordinate positions (Darbyshire et al., 2005; Gubby, 2021). Additionally, physical activity, seen as a 'desired' behavior and practice in this context, likely influenced interactions during our research. Ethical considerations extended beyond data generation (ethnographic fieldwork, interviewing and surveying participants) to the analysis and writing phases, demanding sensitivity toward culturally distinct environments and vulnerable groups. Efforts were made to amplify the voices of marginalized groups and avoid 'othering' to prevent stereotyping, stigmatization, and moralization (e.g., Pickering, 2001).

The included empirical studies that have involved forms of data generation from individuals and school contexts have been ethically approved by the Swedish Ethical Review Authority (*Article 1* and *3*, dnr 2021-03834; *Article 2*, dnr 2019-03579). All participants interviewed and surveyed formally consented to partake by signing consent forms, which provided information about the studies (see Appendix A and F), aims, and the voluntary nature of participation. Parents also had to consent for students to participate. To further protect the individuals who participated, pseudonyms were used for both schools and respondents. Furthermore, detailed descriptions about schools and respondents were omitted throughout the data materials. There were at least two respondents in every sub-group category for the formal interviews to keep the confidentiality of the individuals themselves. *Article 4* did not involve the collection of empirical data and therefore did not require ethical approval.

As a closing remark, this thesis weaves together a set of methodological reflections and empirical elaborations that trace the patterns and tensions of ideals, values, and norms embedded within the academic discourses of interventionist, pedagogical, and critical research. These traditions, while overlapping in their concern for educational practice and transformation, diverge in their assumptions about knowledge production, the role of the researcher, and the nature of change. These orientations are not only theoretical but are also enacted through distinct research practices, which this thesis explores through its juxtaposition of ethnographic work, cross-sectional data, and systematic review. The four included articles, derived from the several sub-studies, reflect this methodological pluralism and are all situated within a Swedish school context. Ethical considerations – particularly around participation, representation, and the researcher's positionality – have been central throughout the project, shaping both the design and the interpretive stance of the thesis as a whole. The following section presents the results and analysis, offering inquiring insights into how these methodological and theoretical considerations unfold in practice, and how they shed light on how school contexts are narrated in relation to physical activity promotion.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Results and analysis

> Tackling inequities and inequalities related to adolescents' engagement in physical activity and sport is highlighted in recent research. However, rarely addressed are the issues of intersecting hierarchal systems of power that interlocks on both micro and macro levels, affecting how physical activity patterns express social memberships across several contexts. (…) [T]he power structures of school segregation together with educational and sport logics intertwined seem to 'disadvantage' especially girls with a non-ethnically Swedish background. Yet, it also highlights a need to problematize 'the absent minority girl' in equity focused physical activity research. [Shedding] light on social (dis)advantages connected to adolescents' MVPA from two poles of power [could contribute] to a more comprehensive and critical understanding of social inequities in physical activity and health research. (Hoy, Lunde, et al., 2025, p. 1).

The quote above is from one of the individual articles included in this thesis and its analysis, which is further elaborated upon here in the results chapter. The text illustrates the entanglements of various contextual characteristics – such as school, family, background, and sport logics – and how these characteristics interact within a matrix of power relations, shaping the ways in which youths are physically active. The article draws on quantitative data from a study based on a linear, interventionist research process, while also incorporating a relationalism perspective and critical theory. It serves as an example of interdisciplinary collaboration. Nevertheless, it does not entirely resolve the tensions that often accompany such endeavors, some of which may be difficult to reconcile. One could critique the article for attempting to merge two fundamentally different 'ways of knowing' within a single article, arguing that such integration is inherently incompatible. However, in a world where we are often required to hold two thoughts simultaneously, I would argue that one of my objectives in writing the article, and this thesis, was to explore both the potentialities and the incompatibilities of using ontologically distinct perspectives side by side. This, I would say, is a meta-reflection of the purpose of the analysis: to observe what happens when multiple articles and perspectives are placed in juxtaposition.

These within and in-between tensions and entanglements are not only theoretical – they are lived. Charlotte, a teacher I met during the ethnographic sub-project, captured this complexity in an interview: "The school is as long as a string; you can pour however

much of yourself you like into it if you don't limit yourself and prioritize." At the time, she was primarily working as a teacher, though her employment status seemed to fluctuate. As we sat together in a classroom, I sensed that her story reflected a deeper frustration with how schools address young people's physical, mental, and emotional well-being, often in tension with performance and institutional limitations and demands. Yet, despite this, a strong sense of care and commitment kept drawing her back. Charlotte's reflections mirror the broader challenge of researching school contexts: they often appear boundless, absorbing a wide range of elements, meanings and expectations. Like many researchers, I have struggled to define the scope of my work within such expansive terrain. This has led me to explore not only how school environments are described and understood, but also how different academic discourses approach research on schools' roles in supporting young people's active lifestyles.

So, I began in the middle – situated between the four articles that make up parts of this PhD project, each shaped by different methodologies, theoretical influences, and materials. This in-between space became both a challenge and a productive site for reflection and analysis. In this results chapter, I show how I have analyzed patterns in the ways school contexts for adolescents' physical activity are conceptualized and articulated, particularly in response to an increasingly intensified agenda around health and well-being. The four individual articles serve as illustrative representations, each engaging differently with interventionist, pedagogical, and critical research traditions and elements of school contexts. Together, they offer insights into how school environments can – or are expected to – support young people's active lifestyles, while also revealing the tensions and possibilities that arise when different research logics intersect.

School contexts for physical activity – articulated means

This section outlines the analysis and results presented in the thesis. The analysis is based on *three key components*, through which the four individual articles are examined. From this analysis, *three rhetorical patterns* were generated, illustrating how school contexts are constructed regarding adolescents' physical activity. The articles were then mapped in relation to *four complex elements* that shape and influence school environments. The integrated results are presented here below and illustrated in Figure 5. The individual articles are presented in the following section, one by one, offering a more detailed description of how each adheres to the rhetorical patterns identified in the analysis, as well as the elements.

School contexts are frequently conceptualized in diverse ways, shaping how adolescents' physical activity is understood and articulated within these environments, as previously outlined in the background. This connects back to the earlier insights quoted from Piggin (2019, p. 9) in the introduction section, where physical activity is not just about movement, it functions as a tool through which a wide range of societal goals are pursued. These include political, educational, nationalistic, health-related, environmental, commercial, and personal objectives. This emphasize how human movement is deeply embedded in broader social systems. Institutions (like schools, governments, and corporations) and individuals use physical activity to promote values, reinforce norms, and achieve strategic aims. This outlook encourages us to see physical activity as socially constructed and often purpose-driven, rather than purely biological or recreational. Integral to these considerations are three key components that have guided the analysis. First, there are diverse goals, highlighting that the aims of initiatives or strategies may vary widely depending on context, objectives, or priorities. Second, there are multiple ways of achieving these goals, indicating that a range of methods, approaches, or strategies can be employed to reach desired outcomes. Finally, there are various interest groups involved, emphasizing the presence of different stakeholders, each with unique perspectives, agendas, and contributions that shape both processes and outcomes. (Piggin, 2019). These components collectively underscore the complexity and multifaceted nature of such endeavors.

To identify the rhetorical patterns, the four articles were placed side by side and analyzed using the three components. Each article was examined to understand how it addressed these components, and three patterns were generated by comparing how each article framed school context regarding physical activity. The first pattern frames school contexts as an *(in)effective backdrop*, where schools are viewed as environments meant to influence individual behaviors in line with public health agendas, aiming to increase participation in physical activity by changing personal habits through targeted interventions. The second pattern centers on *student and teacher meaning-making*, emphasizing the role of pedagogical practices in shaping attitudes toward physical activity, promoting lifelong learning and cultural appreciation, and fostering meaningful engagement among both students and teachers. The third pattern presents school contexts as *oppressive and supportive/empowering*, exploring how power structures within the school system can be challenged to promote equity and socially just opportunities for physical activity through empowerment and support.

Since school contexts are also often understood as consisting of complex elements, the four articles were mapped against four elements outlined by Keshavarz and colleagues (2010): (i) the students and organizational subgroups of management, teaching, support,

and administrative staff; (ii) the formal structures of policies, guidelines, curricula, and physical facilities; (iii) the sociocultural intangible aspects of environments and school ethos; and (iv) the broader interconnected networks of national education systems, local communities, and families. All four individual articles align with the elements outlined, though to varying degrees, illustrating how deeply intertwined, and potentially inseparable, these elements are.

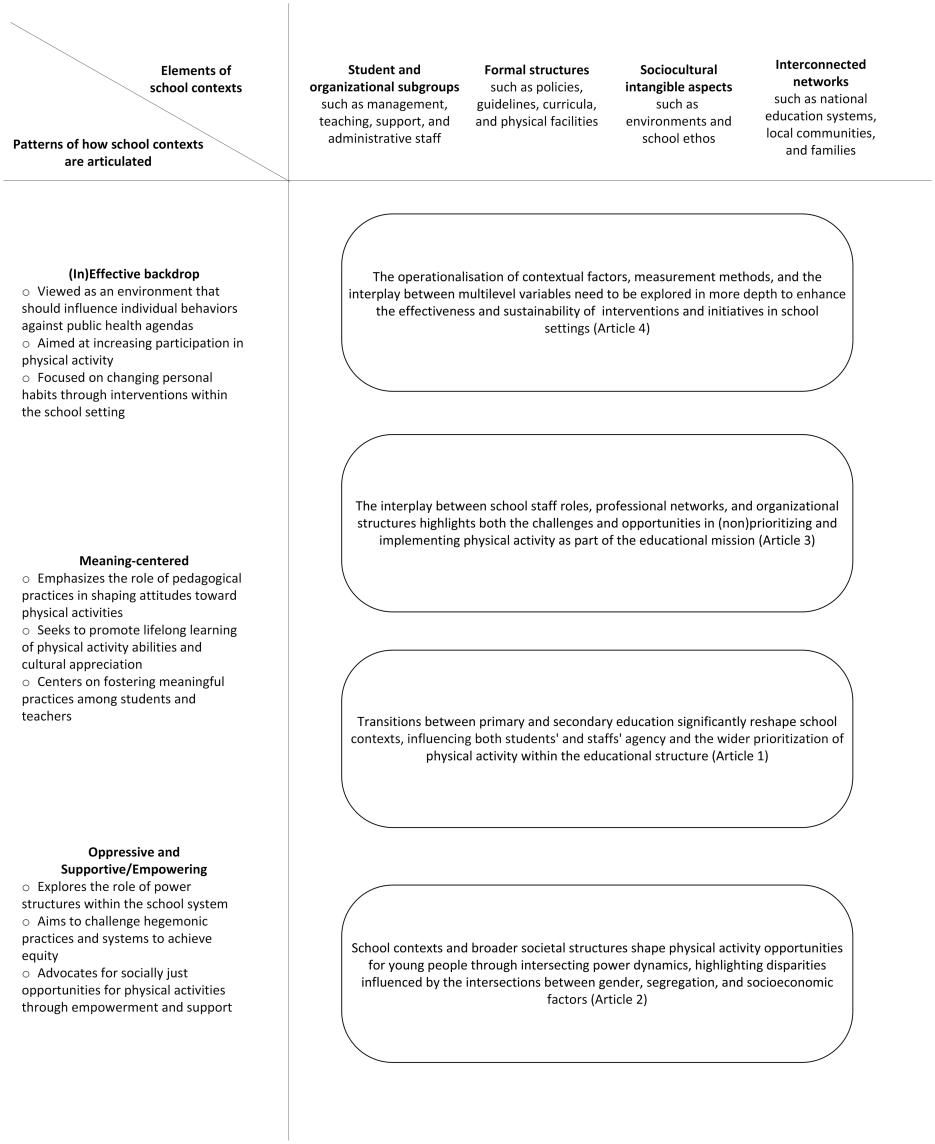


Figure 5. A synthesis of the relationship between the four individual articles, patterns in how school contexts are articulated, and key elements.

Four illustrative representations

The four included articles depict how school environments can or should support young people's active lifestyles, all in different ways. These illustrations highlight the rhetorical patterns and elements through which school contexts are framed in relation to adolescents' physical activity. They all mainly adhere to one pattern, yet, sometimes touch upon one more, showcasing their integrative angles. All four articles address the four elements to a varying degree, each employing a distinct perspective in doing so. A more detailed description of each article's results follows, with how the articles align with different rhetorical patterns and school-related elements, as briefly outlined in Figure 5.

Article 1 – Negotiating adolescents' physically active life

This article addresses school contexts informed by the pattern that these contexts are articulated as *meaning-centered*, but also as *oppressive and supportive/empowering*. Especially, the study highlights the contextual aspects of how staff and student agency in connection to physical activity practices were enabled or constrained and conditioned. The results suggest that promoting physical activity requires addressing not only pedagogical practices but also the broader organizational and structural factors that interact with and shape these practices.

The study was conducted against the background that school contexts are addressed as important for encouraging adolescents' physically active lives, where whole-school approaches have emerged as globally recognized strategies. In addition, recent research has emphasized the need to better understand how school contexts relate to physical activity, as well as strategies to enhance both students' and staff's agency in accessing physical activity opportunities. The findings from this study underscore the complex interplay between students and organizational subgroups, formal structures, sociocultural intangible aspects, and interconnected networks.

For example, transitions between educational stages introduced changes that influenced the agency of both students and staff in relation to physical activity. Here, the contextual aspects of the school being organized in primary and secondary stages showed how the different stages truly mattered for how the school context was thought of for adolescents' physical activity. The shift from primary to secondary school transformed the characteristics of the school day due to a subject-focused schedule, with different teachers coming and going throughout the day, each teaching their subject to the students. In addition, school staff were organized in teams focusing on either primary or secondary school. These organizational changes for secondary student education tightened the

schedule, leaving less time between classes for teachers to build relations with students and for other less prioritized tasks, such as physical activity promotion.

The shift between educational stages also changed the perception of and expectations on the students and their relationships and embodiment of physical activities and sporting cultures. The social climate transition brought about tangible changes concerning social relationships, with increased self-awareness among students in relation to oneself and others, where being a 'good' student and engaging in physical activity was something that aligned in various ways with attractive attributes or went against in accordance with stratifications of age, gender, social status, and cultural and sporting background. Also, teachers' perceptions of how to be a 'good' teacher influenced their view and implementation of student physical activity. Physical activity, if implemented, was mainly thought of as effective in the quest for educational achievement and well-being, as well as being the responsibility of adults 'in charge', where student voices were overlooked.

The shift from primary to secondary school came with distinct notions of how student's agency was expressed in relation to physical spaces and materialities (school facilities and yard, sporting equipment, bodies), where certain spaces were used more or less. Common features of physical spaces allocated for physical activities during recess were outdoor areas for mainly soccer, basketball, king (a ball game involving a basketball in a drawn square on asphalt played by four or more players), and sometimes ping pong/table tennis (some schools had this indoors), along with a few other alternatives. Across the four schools included in this article, physical activity took similar and various forms – occurring primarily during practical-aesthetic and academic classes, recess periods, and while navigating transport routes within the school premises, such as moving between classrooms in different parts of the buildings. Additionally, both students and school staff largely agreed that the Physical Education and Health subject partially fulfilled the physical activity assignment outlined in the Swedish national curriculum, in addition to it also being a mandatory subject, and graded like any other subject. The schools implemented various measures to implement physical activity during the day, mainly focusing on group-level initiatives that provided the same opportunities for all. However, the extent to which students utilized these opportunities varied significantly. How students' agency in relation to physical activity was expressed in these school contexts was particularly evident in Physical Education and Health classes as well as during recess. The opportunities provided by the schools tended to favor already active students from resource-rich backgrounds, while disadvantaging less active students with a differing background, thereby perpetuating inequalities in access to physical activity opportunities.

Importantly, the four schools shared challenges in being a context aiming to promote student physical activity, but also, all schools faced different challenges in relation to structural, sociocultural, and material aspects of their own unique environments.

Article 2 – Matrices of (dis)advantage

This article addressed school contexts informed by the pattern that these contexts are articulated as *oppressive and supportive/empowering*. Especially, the article addressed how adolescents' physical activity during school and leisure hours expresses intersecting social positions and institutional school segregation.

The article is situated within a growing recognition of schools as key platforms for addressing disparities in adolescents' participation in physical activity and sport. However, less attention has been paid to how layered systems of power – operating simultaneously at institutional and societal levels – shape these participation patterns and reflect broader social affiliations. The findings presented here pinpoint the interplay between elements within school contexts, where student subgroups are stratified across schools in ways that relate to the broader interconnected networks of educational politics, socioeconomic segregation, and family/neighborhood environments.

For example, due to the constraints of educational and physical activity logics tied to social positions within school contexts, many groups of girls faced limited opportunities to lead physically active lives during school hours, compared to their leisure time. Further, the findings showed that students in underprivileged schools were more engaged in physical activity during school hours, while students in privileged schools were more active during leisure time compared to those in other school profiles. Consequently, these results imply that power structures of school segregation might contribute to and shape young people's physically active lives not only during school hours, but also during leisure time. It thus appeared that the school environment conditioned physical activity differences among boys but not among girls, whereas the leisure environment influenced differences among girls but not boys. The results emphasized girls situated in contexts shaped by specific educational achievement logics and family/environment dynamics. One interpretation was that physical activity during school hours did not strongly reflect gender within groups of girls, as various expressions of 'doing girl' in relation to peers were not defined by physical activity. However, during leisure hours, the results reveal the opposite: physical activity expressed gender differently among girls across segregated school contexts.

The findings suggest that the broader societal structures of segregation and politics in relation to school contexts, intertwined with educational and sports logics, particularly constrain girls with non-Swedish backgrounds in certain educational settings (schools and family and parental structures) from engaging in physical activity. This may indicate that groups of girls, more than boys, align with the notion of being a 'good student' (remaining seated and focusing on academic work) during school hours, while not being integrated into after-school sporting cultures. Furthermore, the results highlight the need to critically examine the concept of the 'absent minority girl', as girlhood at the intersection of foreign and socioeconomic background risks being positioned as vulnerable, potentially reinforcing stigmatization through governing interventions.

Importantly, the article underscores that girls in privileged schools are, on one hand, advantaged compared to other groups of girls, yet, on the other hand, face disadvantages in the context of physical activity when compared to boys. Efforts to implement physical activity innovations or policies trying to reach *all* students must take into account the potential influence of interlocking power structures at both individual and institutional levels. Recognizing and addressing the relational dynamics of (dis)advantaged socially defined intersecting groups will be crucial for future initiatives aiming to emphasize the role of school contexts in promoting physical activity to facilitate just opportunities.

Article 3 – Understanding physical activity implementation

This article addressed school contexts informed by the pattern that these contexts are articulated as *meaning-centered,* but also as *an (in)effective backdrop.* Especially, the article highlights how school culture and professional network characteristics influence staff's valuing and prioritization of students' physical activity during the school day in a Swedish secondary school. The results further implicate how physical activity-in-schools research should explore how staff roles overlap with their (non-)central network positions, along with the social and physical organization and status of physical activity and Physical Education and Health within school cultures.

The article was performed against the background of the inner social environments of school staff being advocated as key to facilitating physical activity policy and innovation targeting students. For instance, colleagues may share ideas about physical activity programs and policy, support each other to adopt new initiatives, and enable individuals to become agents-of-change to promote physical activity. The article findings emphasize the interplay between schools' inner organizational subgroups of management, teaching, support, and administrative staff – especially the dynamic between their roles

and their positions within different professional networks. This dynamic was evident regarding both the formal structures of policies, guidelines, curricula, and physical facilities, along with the sociocultural intangible aspects of environments and school ethos. In addition, broader interconnected networks in the local community and among families affected the school culture.

Notably, the article illustrated explicit and tacit priorities regarding the role of physical activity and physical education and health in relation to the schools' educational mission. Staff schedules, alongside the teachers' personal values and interests, shaped the daily decisions they made in managing students to meet educational goals. Occasionally, the schedule together with priorities created opportunities for physical activity initiatives when a need was identified and feasible to implement. Here, 'sensing' a need for physical activity was a dynamic process. It involved recognizing physical activity as purposeful and engaging with it emotionally or through personal interest. This included observing a direct need within a student group. Additionally, it encompassed experiencing a physical or non-physical urge for movement, influenced by the teacher's active role in contrast to the students' sedentary roles. However, most staff perceived the integration of physical activity during the school day as a responsibility belonging to others, such as parents or management, who oversee scheduling and resource allocation.

In the particular school where the study took place, students were generally active after school, and physical activity and sports were highly valued by families. Yet, during school hours, staff showed a disconnect between the stated importance of physical activity and the implementation of it. Physical activity was predominantly associated with Physical Education and Health classes, making its teachers significant to the school's efforts in promoting physical activity. However, structural limitations and the low status of Physical Education and Health within the performance-focused school framework left it marginalized. The results indicated further that prioritizing physical activity was not a core focus of the professional community at the focal school. Rather, students' daily physical activity was approached as a peripheral task or an additional undertaking. This was the case despite staff being physically active themselves, students participating in Physical Education and Health as well as after-school activities, and management and the national and local curriculum emphasizing the significance of physical activity. Beyond the surface-level, physical activity was rarely implemented for secondary students other than in Physical Education and Health.

Interestingly, in addition to the evident isolation of Physical Education and Health teachers within the explored networks, they were included in the professional community primarily when issues related to physical activity arose. Staff attributes, other than

prioritizing physical activity, appeared to have a greater influence on shaping the professional networks at the school, alongside the educational mission. Bridging, active, and popular roles were held by different individuals across the professional networks. School management and team leaders mainly occupied bridging positions in most networks, while a few teachers bridged across all networks. Staff interactions around student physical activity primarily involved a few popular people. For example, these interactions were often centered on one key figure who combined a formal role as a physical-activity-promoter with influence in other professional matters. Characteristics such as holding a central role across various tasks, being part of the secondary school organizational team, teaching the same subject as colleagues, and maintaining a strong social presence seemed to play a more significant role to physical activity promotion in the focal secondary school.

Article 4 – How to measure context in school settings?

This article addressed school contexts informed by the pattern that these contexts are articulated mainly as *an (in)effective backdrop*. Especially, the article highlights the need to consider the factors influencing implementation success and how school context is operationalized and measured, in order to address the effectiveness and sustainability of school-based interventions targeting for example increasing levels of physical activity.

The article was conducted with an awareness that interventions in school settings are often not implemented as planned. This underscores the need to investigate and address contextual factors influencing implementation across multiple levels, from individual to policy. At the same time, the rapidly growing field of implementation-focused research in schools continues to face challenges in establishing effective methods for evaluating and measuring implementation-related constructs. Previous studies have emphasized the importance of robust psychometric and pragmatic measures in advancing this work. This article addresses the interplay of variables connected to elements of school environments such as students and organizational subgroups, the formal structures, the sociocultural aspects, and the broader interconnected networks.

The initial search strategy yielded 16,954 records. Following two screening stages, 261 records remained, of which 86 were ultimately included for reporting on measurements. The article further implicated that most of these instruments developed or adapted to measure school context was addressed operationalized factors that align with the inner setting domain and the individual domain in the CFIR, followed by the process domain, then outer setting domain, and the least common domain was innovation domain.

The article highlights the large number of available instruments addressing school contexts, but also reveals an uneven distribution of these measurements across the CFIR domains, pointing to gaps in implementation measures. The psychometric and pragmatic analysis showed high variability in instrument robustness and in how issues of validity and reliability were addressed. A key finding was the diversity of included measurements mapped to the CFIR, developed across a wide range of innovation characteristics – such as STEM (Science, Technology, Engineering, and Mathematics) innovations, evidence-based practices, constructivist-oriented learning, transformative school-community collaborations, leadership models, and health-based initiatives. Another notable finding was the broad geographical spread of these instruments, developed in various contexts across multiple continents and in both low-, middle-, and high-income countries. Together, these findings underscore the diversity of measurement approaches and their alignment with different innovation characteristics and local implementation contexts, suggesting that the review successfully captured instruments across disciplines and settings. This also underscores the complexity and vastness of assessing school contexts, given the wide range of factors and conditions that shape implementation efforts.

An important aspect of using the updated version of the CFIR was that it highlighted the fast-paced and transformative landscape of implementation research. In the updated version by Damschroder and colleagues (2022), constructs that were previously operationalized as implementation determinants and included in the main framework of the original work (Damschroder et al., 2009) have now been reorganized as antecedent assessments, namely, implementation climate and implementation readiness, along with acceptability, appropriateness, feasibility. In their ”CFIR Outcomes Addendum,” Damschroder, Reardon, Opra Widerquist, et al. (2022) made a clearer distinction between innovation and implementation, as well as between determinants and outcomes. This resulted in the categorization of CFIR implementation determinants (which the current article addressed), implementation outcomes (anticipated and actual), innovation determinants, and innovation outcomes. However, since our original objective was to map measurements against the original CFIR, we chose to include the antecedent assessments in our mapping, as many of the measurements were developed prior to the release of the updated version in 2022. This decision also reflects the broader significance of evolving definitions and conceptual frameworks within implementation research – developments that increasingly shape how school environments and physical activity are studied and understood.

A few summarizing words

The results section showcases how all four articles address all the four elements of students and organizational subgroups, formal structures, sociocultural intangible aspects, and interconnected networks. While *Article 4* treats these elements more as distinct domains and constructs, *Articles 1 through 3* emphasize their entanglement and inseparability. Although most of the articles primarily align with one overarching pattern, *Articles 1 through 3* also touch upon an additional rhetorical pattern in which school contexts are articulated as a means for physical activity promotion. This nuanced understanding of how the patterns and contextual elements interact lays the groundwork for the following discussion section, which will further explore the implications of the findings and how they inform broader interpretations of physical activity research in school contexts.

Discussion

> One of the reasons I have come to concentrate on imagination as a means through which we can assemble a coherent world is that imagination is what, above all, make empathy possible. It is what enables us to cross the empty spaces between ourselves and those we teachers have called 'other' over the years. If those others are willing to give us clues, we can look in some manner through strangers' eyes and hear through their ears. That is because, of all our cognitive capacities, imagination is the one that permits us to give credence to alternative realities. It allows us to break with the taken for granted, to set aside familiar distinctions and definitions. (Greene, 1995, p. 3)

The quote comes from Maxine Greene's book *Releasing the Imagination: Essays on Education, the Arts, and Social Change*. To tap into imagination is to begin seeing alternative possibilities – to open spaces where what is can be contrasted to what might be, and to bring into view the not-yet-visible. I believe these thoughts capture the essence of juxtaposing perspectives: placing them side by side not to necessarily merge or resolve their differences, but to allow their distinct logics, assumptions, and values to interact. In the context of physical activity research in schools, this means acknowledging the coexistence of interventionist, pedagogical, and critical research, each offering unique insights while also generating tensions. Rather than seeking a unified framework, juxtaposition invites a reflexive stance – one that embraces complexity and fosters dialogue across disciplinary boundaries.

This thesis addresses adolescents' daily physical activity in school contexts through an inter- and transdisciplinary lens, a space-place where different ideas are meant to meet, integrate, and cross boundaries. It explores interventionist, pedagogical, and critical research traditions on how schools are expected to support physically active lifestyles. Especially, it aimed to investigate how school contexts for adolescents' physical activity are conceptualized and articulated, with four juxtaposed articles providing theoretical and practical insights. The results and analysis illustrated three patterns through which school contexts are rhetorically constructed in relation to adolescents' physical activity. The three patterns articulate school contexts either as: (i) an (in)effective backdrop; (ii) meaning-centered, or (iii) oppressive and supportive/empowering. These patterns adhere in different ways to interventionist, pedagogical, and critical research practices. Interventionist research is mainly concerned with investigating school contexts as an

(in)effective backdrop, using linear approaches and substantialism perspectives to predict factors in the school environment for implementation success. Pedagogical research is mainly concerned with investigating school contexts from a meaning-centered viewpoint, using circular (sometimes linear or non-linear) approaches and relationalism perspectives to understand conditioning elements and phenomena in school settings. Critical research is largely concerned with school contexts as oppressive and supportive/empowering, using often circular and non-linear approaches, and relationalism perspectives emancipating and deconstructing conditioning and unfair systems of power in school environments.

Especially, the results and analysis of the illustrative representations in this thesis highlight the intricate interdependent relationships between the elements that school contexts consist of. *Article 1* showed how promoting physical activity requires attention not only towards pedagogical practices but also to the broader organizational structures that influence them. While schools share common challenges in fostering student and staff agency connected to physical activity, they also faced unique obstacles shaped by their specific structural, sociocultural, and material contexts. *Article 2* showed how student subgroups stratify across schools, shaped by interconnected networks of educational politics, socioeconomic segregation, and family or neighborhood contexts. While some groups are advantaged in certain ways, they faced disadvantages in relation to physical activity compared to others. Physical activity policies should consider the influence of interlocking power structures at both individual and institutional levels. Addressing the relational dynamics of socially (dis)advantaged intersecting groups will be essential to fostering equitable opportunities in school contexts. *Article 3* suggested that research on physical activity in schools should examine how staff roles intersect with their network positions and the social and physical organization of physical activity and Physical Education and Health within school cultures. The article showed the importance of the dynamics among management, teaching, support, and administrative staff, shaped by formal structures such as policies and facilities, together with sociocultural aspects of the school ethos. Additionally, connections with local communities and families significantly influence in which ways schools value and prioritize physical activity. *Article 4* emphasized further understanding and operationalization of factors influencing implementation success and how to measure school context. It identified strengths, but also disproportions and gaps in the demonstrated measurements and quantification of school context domains, guiding future research in ecological and whole-school-approach designs to address the issue.

As previously mentioned, Mclaughlin and colleagues (2025) expressed concerns that, over the past decades, physical activity research has primarily focused on the

effectiveness of evidence-based interventionist strategies, predominantly rooted in a substantialist perspective. In contrast, the majority of the articles serving as examples in this thesis adopt a relationalism perspective on physical activity research in school settings, emphasizing the interconnectedness of actors, their contextual cultures, and the ways in which agency takes form within these relationships. It is important to underscore that some of the representations embrace a plurality of perspectives – *Articles 2* and *3*, for example, illustrate how interventionist research can be integrated with critical and pedagogical research. It demonstrates the feasibility of intersections and combinations between academic discourses, showing that critical theories do not need to be confined to what is traditionally framed as critical research. Tensions or conflicts can serve as opportunities for development, as they highlight differing perspectives or 'issues of concern' among various actors or academic discourses within the same research problem or topic.

Despite some of the earlier outlined divides and boundaries between academic discourses and their commonly attached methodologies, the rhetorical patterns (articulated means) generated in this thesis could transcend across these boundaries. The quest for school contexts being more *effective, meaningful* and *equitable* for young people's physically active lives are not necessarily in conflict with each other; rather, these articulated means could co-exist. Pedagogical and critical research have the potential to support interventionist research by acknowledging the hegemonic, normative, and oppressive aspects of physical activity, as well as the meaning-making processes embedded in physically active and sporting cultures. This contribution is not limited to only redefining what physical activity *is* or how it is conceptualized, it also opens up spaces for alternative research questions, processes, and methodologies that are advocated within different academic discourses. This could be one way of addressing the warranted need expressed by Borgen and colleagues (2021) for new concepts of knowledge, especially in relation to the 'divide' between physical activity and physical education research – opening up for potential negotiations of boundaries between 'PA and PE' research. It could also pave the way for future inter- and transdisciplinary research initiatives.

Let us revisit the statement posed for discussion at the beginning of this thesis: how tensions between discourses create challenges and opportunities, and how they identify potential spaces for maneuver in future inter- and transdisciplinary research. Building on these discussion points, and on the findings of the thesis – namely, the potential to imagine school contexts to simultaneously be more *effective, meaningful*, and *equitable* in their efforts to promote physical activity – the discussion unfolds across several sections. It focuses on this thesis's contribution to rethinking school settings through relationalism perspectives, acknowledging misalignments between methodologies and

viewpoints, and addressing the tensions that arise when academic discourses intersect. These tensions are explored as potential passage points for development, and how change can be enacted in future efforts.

How to rethink school settings for young people's physically active lives

García Bengoechea and colleagues (2024) advocated for "rethinking schools as a setting for physical activity promotion," presenting three key arguments for reorienting research initiatives in addressing context: adopting a systems approach, focusing on an asset-based (salutogenic) perspective, and moving beyond conventional positivist research designs. A systems approach recognizes the complexity and non-linearity of physical activity behavior, emphasizing the need to integrate actions that promote physical activity across interconnected political, societal, cultural, economic, and scientific domains (García Bengoechea et al., 2024; Rutter et al., 2019). In addition, Rosas (2017) points to the importance of patterns of interrelationships associated with the non-linear, dynamic, and adaptive nature of complex hierarchical systems, as well as the difficulty of fully grasping these patterns. Addressing the complexities of systems strategies is challenging, making it essential to identify key contextual factors within both broader and individual school systems. Various combinations of these factors can serve as leverage points or assemblages, exerting a greater collective influence than they would in isolation. Recently developed frameworks aim to address this challenge – for example, the Action Scales Model by Nobles and colleagues (2022), and a school-specific context approach described by Jago and colleagues (2023).

In *Article 4*, the findings revealed a high number of developed measurements for assessing implementation determinants within school contexts; these were unevenly distributed across ecological domains, with inner setting and individual factors being the most represented. This distribution highlights areas of concentrated measurement while exposing gaps in outer setting and process-level factors, thereby informing systems strategies by identifying where measures assessing context may need to be broadened or better integrated across multiple levels of ecological frameworks. To effectively identify key contextual factors, many of these measurements require further validation, although several are already robust. From a pragmatic and cost-effective perspective, one way could be to adapt existing instruments to local contexts and enhance their validity by testing them psychometrically across different environments, rather than developing entirely new tools, which can be both time- and resource-intensive. New instruments should be developed only where clear gaps exist. Importantly, building bridges across

disciplines that engage with school contexts is essential to ensure that new and adapted instruments are both valid and useful for interdisciplinary work.

As demonstrated in *Article 3*, the implementation of daily physical activity for students faced obstacles due to a combination/assemblage of aspects: (i) the narratives of physical activity and the Physical Education and Health subject as having low status and not being regarded as a significant issue, (ii) the gym hall being physically separated from the main school building, and (iii) the isolation of Physical Education and Health teachers from the secondary staff team organization. This example could also point towards further exploring posthumanism and new materialism theoretical and methodological approaches, focusing on interconnected heterogeneous configurations, which represent multiplicities that drive change through interactions within these assemblages. This line of inquiry is further exemplified in McGregor's (2004) work, which draws on Latour's (2005) actor-network theory to explore how school contexts can be understood as dynamic assemblages of human and non-human actors. Rather than treating physical activity as a discrete behavior to be modified through isolated interventions, McGregor's analysis reveals how spatial arrangements, material objects, and institutional narratives co-construct the conditions for action within schools. For instance, the placement of the gym hall, the symbolic status of physical activity and the Physical Education and Health subject, and the organizational separation of staff are not merely contextual barriers – they could be considered active components in a network or system that shapes possibilities for movement engagement.

The aforementioned discussion stands in contrast to ways of traditional physical activity research that often seek linear causality and isolate variables, overlooking the entangled, relational becoming of school environments. By foregrounding the agency of materiality and the dynamic interactions among actors, this orientation aligns with a relationalism perspective, which views social phenomena as emerging from networks of relationships rather than isolated entities. The findings of this thesis further demonstrate these different positions on research addressing context: whereas *Article 4* treated these elements as separate domains and constructs, *Articles 1* through *3* emphasized their interconnection and mutual entanglement. As McGregor (2004, p. 347) notes, "[a] further challenge is to explore the spatialising force of objects as implicated in the active construction of social space, without resorting to simplistic behavioural determinism." This statement underscores the distinct axio-onto-epistemological commitments of such an endeavor – highlighting the need to critically discuss amongst scholars what future inquiries and assumptions that guide how we conceptualize, study, and innovate on the topic of school-based physical activity promotion.

In addition, the advocated asset-based (salutogenic) perspective involves focusing on the resources for health and well-being, addressing and promoting 'salutary' aspects that enhance the abilities of social systems, institutions, communities, groups and individuals (Boonekamp, Jansen, et al., 2022; García Bengoechea et al., 2024; Morgan & Ziglio, 2007). Asset-based approaches are meant to leverage the strengths and resources within a community to empower its members to take greater control over their health and well-being. For example, in a school setting, this could mean using the existing skills of teachers, the creativity of students, and support from parents to co-create solutions. These methodologies emphasize collaboration and sustainability by building on existing assets rather than solely addressing deficiencies, which could be used in both observational and innovation-designed studies. In such efforts, focusing on the importance of leadership and key actors in facilitating and engaging with innovations will be essential (Skovgaard et al., 2024; Skovgaard & Vestergaard Nielsen, 2023). I agree with what Skovgaard and Vestergaard Nielsen (2023, p. 78) highlight in this context: "it is the concept of meaningfulness that needs to be recognized here." As another example, Martin-Kerry and colleagues (2023) developed a framework to guide decision-makers and researchers whether a study is characterized by asset-based or deficit-based perspectives. Asset-based and salutogenic perspectives often emphasize fostering *agency*.

Boonekamp and colleagues' (2022) work explored how schools' physical, social, and pedagogical environments supported students' agency in relation to physical activity. Similar to the findings presented in *Article 1* of this thesis, their study revealed both commonalities and differences across schools in their efforts to enhance student agency. It underscored the importance of pedagogical approaches that actively engage students' perspectives, participation, and reflections on physical activity. However, the highlighted importance was closely linked to how staff balanced their willingness, skills, and available resources, including support, vision, time, space, leadership, and the pedagogical frameworks employed. Asset-based perspectives could lay the groundwork for researchers to collaborate and address school contexts through the three articulated means of *effectiveness, meaningfulness,* and *equity*. That said, the overrepresentation of effectiveness in much of the past and current physical activity research needs to be balanced with equal attention to meaningfulness and equity.

Advancing physical activity research in schools beyond traditional positivist research designs will necessitate not only incorporating, for example 'qualitative' research, case studies, concept and systems mapping, agent-based modeling, and network analysis (García Bengoechea et al., 2024), but also embracing a broader understanding of what constitutes 'evidence' and the perspectives considered. I contend that adopting 'system-thinking' shifts us away from substantialism perspectives and traditional linear

approaches, steering us towards the integration of relationalism perspectives and circular and non-linear approaches. This transition presents a challenge for research communities as they work to incorporate these ideas into their designs. It requires embracing uncertainty and adopting more flexible, adaptive approaches rather than necessarily relying on only rigid, pre-planned frameworks – a departure from the prevailing trend of methods- and criteria-driven research, particularly existing in interventionist research.

The shift toward system-thinking and focus on researching context points towards an ambition in changing systems instead of individuals, which is a welcoming contribution to the field of interest that has been dominated by the opposite. As Larsson and Thedin Jakobsson (2024, p. 1056) put it from their discourse analysis of earlier school-based physical activity interventions: "the examined research gain function within a neoliberal governmentality where scientific knowledge aims to change the individual self, rather than to change the social structures in which individuals live their lives." However, as demonstrated in *Article 1*, physical activities are expressed in relation to the elements of school settings in different ways. Although physical activity appears to be context-dependent, some scholars briefly note – albeit fewer in number compared to those stressing the importance of advancing the notion of context itself – that the process of 're-thinking' must also address other fundamental questions. These questions include *what physical activity 'is'* and *how it is conceptualized and researched*. This involves critically examining the underlying assumptions, definitions, and values tied to physical activity, as well as exploring how these influence the ways it is promoted, studied, and integrated into various school settings. Such reflection challenges the dominating use of biomedically laden definitions and invites a more inclusive and nuanced understanding that embraces diverse forms, purposes, and meanings of physical activity.

Santos and colleagues (2025), in their recently published critical article "The health–physical activity entanglement in a neoliberal landscape: alternative possibilities for inquiry," explore the complex relationship between health, physical activity, neoliberalism, and capitalism. The authors propose alternative avenues for inquiry and invite us to reimagine physical activity as immeasurable. They pose questions that are highly relevant to this thesis and its aim, such as: "What does *health-PA* become if scholars inadvertently use studies to standardize health and PA expectations? (…) Can one access alternative pathways for thinking-doing proposed in this paper, or is the neoliberal assemblage too powerful?" (Santos et al., 2025, p. 7). This contribution challenges dominant paradigms that frame physical activity primarily through measurable outcomes and standardized guidelines. Instead, it opens up spaces for rethinking physical activity as a socially and materially situated practice, shaped by broader political and economic forces. By questioning the taken-for-granted assumptions embedded in much of the

existing research, the authors encourage a shift toward more critical, reflexive, and imaginative approaches. This not only broadens the conceptualization of what physical activity is but also expands the possibilities for transformative change within the field – moving beyond behaviorist models toward more context-sensitive, justice-oriented, and pluralistic understandings. Yet, it is worth asking: is this field of research ready to take on such a quest?

Rethinking the Swedish context

In the context of rethinking school environments to support young people's physically active lives in Sweden, it is important to reflect on recent developments. Notably, the Committee for the Promotion of Increased Physical Activity (2023) published the report, *"*All Movement Counts – How Do We Create a Society That Promotes Physical Activity?" This report builds on a decision by the Swedish government in April 2020, to appoint a special investigator and national coordinator tasked with promoting increased physical activity (dir. 2020:40). It emphasizes the need for schools and other stakeholders to provide enhanced conditions and opportunities for students to engage in physical activity during the school day. Central to this initiative is the call for a national framework to steer the efforts, featuring structural recommendations across six critical areas, including the development of active environments in preschools, schools, and after-school care programs.

The committee outlines several proposals aimed at enhancing physical activity within educational settings. Of particular relevance to compulsory schools and this thesis are three key suggestions. First, the committee advocates for stronger policy statements in the curricula to ensure all students are given opportunities and encouragement to be physically active during the school day. Second, there is an emphasis on fostering a positive movement culture across all school types, highlighting the importance of creating environments that actively promote physical activity as part of daily life. Third, the committee stresses the need to ensure equal conditions within the subject of physical education and health, addressing disparities that may hinder students' engagement (Committee for the Promotion of Increased Physical Activity, 2023). These proposals set a foundation for exploring how school settings can support young people's active lifestyles while aligning with the broader goals of this thesis. Given the aim of exploring how school contexts are articulated as means for youth physical activity, I will reflect on how the findings of this thesis align with the key recommendations regarding schools highlighted in this report.

This thesis, and especially *Article 1* and *3*, has focused on examining the policy included in the national curriculum. Instead of the general section outlining what it does today, that schools "should strive to provide all students with daily physical activity throughout the school day" (SNAE, 2022), the committee suggests, all students "should be given the opportunity and encouraged to participate in health-promoting physical activities during the school day" (2023, p. 80, my translation). This suggests a change to the wordings 'should' instead of 'strive', 'encouraged' instead of 'provide(d)', and 'health-promoting' added to the physical activity. The suggested changes point towards the idea of a more mandated, action-oriented, and instrumental and health-entangled take on the policy and physical activity. Although the wording 'all' remains present, the emphasis appears to lean toward equality – providing equal opportunities for everyone, regardless of individual support need – rather than adopting a relational perspective rooted in equity and social justice. This perspective would address opportunities based on specific needs and the dynamics of power distribution.

As highlighted in *Article 1*, current school contexts are far from being level playing fields and are not for everybody, despite the claim that 'opportunities are for all'. As underscored also by other research in Sweden – one's opportunity is another's barrier – in the domains of physical activity (Farias et al., 2023), Physical Education and Health (Jansson, Brun Sundblad, et al., 2024; Jansson, Mattsson, et al., 2024; Jansson, 2024), and sport (Norberg et al., 2023). I argue that this informs us to expand our research initiative towards relationalism perspectives. To add, the report referred to is based on the theoretical framework also used in this thesis, which was developed by Emirbayer and Mische (1998), through the work of Lundberg & Östergren (p. 201-222), "Social contexts and individual actions – a mutual interaction" further described in the reports Appendix 3. While international research aligns with efforts to target policy (Woods et al., 2021), there appears to be a gap in addressing not only *effectiveness* but also the *meaningful* and *equitable* aspects. As contended by García Bengoechea and colleagues (2024, p. 6, my emphasis): "Providing children and adolescents with *meaningful* opportunities to be physically active through policies implemented in the school setting is an area ripe for applied and conceptual work."

The above reflection on the suggestions regarding schools' physical activity policy can also be applied to the second and third suggestions of fostering a positive movement culture and ensuring equal conditions within the subject of Physical Education and Health. While I agree that we need to strengthen and systematically improve schools' conditions for promoting physical activity during the school day and to develop and sustain a positive movement culture, these recommendations are framed as part of 'evidence-based' strategies aimed at increasing physical activity to support health and

enhance school performance. Drawing from the findings in this thesis, I would argue that including and achieving a balance between *effectiveness, meaningfulness*, and *equity* will be crucial. Equally important is critically examining what constitutes 'evidence', stimulating collaborations between academic discourses, which will form initiatives and research projects to come.

To meaningfully engage with the reflections in this section and move beyond conventional framings of physical activity, it becomes necessary to consider the methodological choices that shape how knowledge is produced in this field. The following section explores the methodological underpinnings of this thesis, along with the challenges and opportunities that arise from them.

A bridge over troubled waters or a bridge too far?

The title is borrowed from an article by Muncey (2006), since it captures the ongoing discussions when it comes to inter- and transdisciplinary research among scholars within different disciplines and academic discourses – all interested in physical activity. While the author sought to explore how art and science intertwine to form a human science, delving into the 'heteroglossia' of her studied phenomena within a diverse society, my focus is on examining how various academic discourses can cross boundaries and converge on the subject of human movement. Initially unfamiliar to me, heteroglossia refers to how a concept interacts with and is shaped by the diverse voices, perspectives, and languages within a society, reflecting the coexistence of various social, cultural, and linguistic expressions. While I recognize the potential in merging diverse viewpoints, the complexity of such heterogeneity may also pose challenges and invite critical examination.

In this section of the discussion, I present some of the challenges associated with inter- and transdisciplinary research, particularly in relation to the methodologies of the sub-studies that form the foundation of the included articles, as well as in connection with earlier and current research. While the specific strengths and limitations of each individual article are discussed within those articles, the focus here is on juxtaposing them within the broader framework of this thesis and considering the implications this has for the field. The main points relate to the research process itself, moments when methodological heterogeneity proved difficult to reconcile – illustrated through the navigation of the sub-studies and ethnographic work.

Contingencies and commitments

In this thesis, my writing process and analysis has been inspired by a non-linear approach – without knowing exactly where to begin or end. Throughout my PhD project, I have carried fragments with me: a few articles here, fieldnotes and reflections there, and a vague idea that I "wanted to do something critical," as I once said during a supervision meeting where one of my supervisors attempted for us to map out the process and different parts of my thesis. The planned articles changed somewhat – one was replaced by another – and most of them took shape during the final year, evolving over time. These fragments have sometimes connected closely, sometimes loosely, and at times not at all. Yet, they have formed the starting points of my process. The process of writing the thesis resembles the illustration in Figure 4 (rhizomatic) more than any of the other illustrations presented earlier in the methodology chapter. Eventually, I knew I had four articles that, in some way, were connected – while also not being fully aligned. There is a tension, and it is precisely this tension that makes the work compelling, as it raises new questions. The analysis presented in this text emerged organically, without a predetermined structure. As Lenz Taguchi (2013, p. 712) writes in her article on beginning methodologically "in the middle," and inspired by non-linear approaches, parts of my work took shape here and there, eventually needing to be finalized due to deadlines. However, it is important to emphasize that although I have been inspired by non-linear ways of working, I have not engaged with posthumanist or new materialist theories. While I occasionally flirt with these perspectives, I have aimed to illustrate them through examples of critical research and in relation to dialectical and relationalism perspectives on agency, which I will return to in the upcoming section on future research. Had I fully engaged with such theoretical frameworks, the thesis would likely have looked very different.

Had this thesis instead more traditionally summarized the included articles, it would potentially have presented a more linear and cohesive narrative – one that might have overlooked the tensions, shifts, and uncertainties that emerged throughout the research process. The complexity of how the articles relate to one another, or at times resist alignment, would likely have remained mainly unspoken. I believe the tension between the articles is not a flaw but a generative force – one that reflects the dynamic and sometimes messiness of physical activity and school research.

Mixing, crossing and transgressing

Parallel to advocating for inter- and transdisciplinary, mixing methods within the same article has been on the rise during the last decade. So called mixed-methods research has seen a significant rise in application across a wide range of disciplines. Anguera and

colleagues (2017) highlight the expanding role and transformative potential of mixed-methods approaches within the realm of sport and physical activity, emphasizing their capacity to deepen understanding and generate comprehensive insights in these fields. Mixed-methods have been described as a third research paradigm, aimed at moving beyond the narrated divide between 'qualitative and quantitative methods', emphasizing their combined value (Johnson & Onwuegbuzie, 2004). However, this does not come without critique. Gibson (2016) contends that mixed-methods are not a new paradigm but a longstanding practice of employing diverse traditions to address the complexities of humanity and the world. He underscores the importance of critically examining 'paradigmatic perspectives', as these assumptions influence the direction and nature of research. Notably, Sparkes (2015, p. 50) reminds us, "not all research methods are compatible with all paradigmatic assumptions and all methodologies," making the rationale behind mixed-methods essential for producing meaningful and quality research. In addition, when the commonly narrated divide between 'qualitative' and 'quantitative' is dismantled, as argued in the methodology chapter, the core debate lies in philosophical assumptions underpinning the methodologies rather than the methodologies per se.

I would not give myself the label of purist, though I recognize the inherent complexities of blending philosophical assumptions within the confines of a single study or article, challenges that may be less pronounced in the context of broader projects. Perhaps my stance leans heavily toward being pragmatic, as I hold that, in many facets of life, collaboration is indispensable for coexisting in the same physical world, even if our philosophical worlds remain divergent. As mentioned, in *Article 2*, I integrated perspectives from interventionist and critical research to examine how physical activity is defined and operationalized, alongside how the generated data (accelerometry assessing the quantity and intensity of physical activity) aligns with these definitions. My co-authors and I approached the survey data, which we added to by incorporating registry data as a supplement, through a relationalism lens grounded in critical theory. If the study were redesigned from scratch today, incorporating multiple theoretical perspectives from the outset, the data might have displayed different nuances. While this would be an ideal scenario, it is sometimes not the case in the reality of research. However, I believe that the article and its findings represent a highly fruitful effort, showcasing a possible model for collaboration and for challenging and negotiating the boundaries between disciplines and academic discourses. In *Article 3*, I aimed to combine methods by engaging researchers from diverse academic discourses with varying paradigmatic assumptions. This approach aligns with the larger project to which this PhD work belongs. The article's development has been time-intensive due to the integration of multiple approaches, both linear and circular, incorporating principles from interventionist and pedagogical research. Notably, the methods and analytical strategies employed reflect a relationalism

perspective, blending ethnographic and social network analysis methodologies that share significant common ground.

In *Article 4*, the aim was to address implementation determinant measures developed or adapted within educational, behavioral, and health studies, broadly framed through a systematic review process. One of the motivations behind the article was my critical response to previous reviews on the topic, particularly regarding how the 'school context' was approached in interventionist research. These reviews often excluded pedagogical and critical research, which I found puzzling. I would argue that educational studies and perspectives should naturally be included in such a project, given the long-standing tradition of research on educational environments. Therefore, together with the research team, we aimed to take a broader approach to the topic. During the initial screening of nearly 17,000 records, identified through a broad search addressing the 'school context', I moved into the second stage, narrowing it down to a few hundred records that were at least roughly aligned with the study's aim. As I progressed, I began to reflect on how many of these records adhered to linear approaches and to what this thesis describes as interventionist research ideals and procedures. In a way, this was not surprising, given that the study's aim and research questions were shaped by those very ideals. It made me reflect on how crucial our initial questions are, and how deeply they are influenced by the theoretical frameworks we choose.

In addition, I was pleased to come across many examples of studies that crossed disciplinary boundaries, incorporating pedagogical and critical theories into measurement development procedures as well as intervention adaptation. One such example was Allen and colleagues (2021), who adapted the CFIR framework (also used in *Article 4*) by applying a race(ism)-conscious lens to understand the implementation of a school-based, equity-oriented intervention. Other examples of measurement development included Grigg and Manderson's (2015) work on the Australian Racism, Acceptance, and Cultural-Ethnocentrism Scale (RACES), and Ozer and Douglas's (2015) assessment of key processes in Youth-led Participatory Action Research (YPAR) through an observational scale. Additionally, Shackleton and colleagues (2017) developed a new measure of unhealthy school environments and its implications for critically assessing health promotion in schools. I believe it is important to highlight their stated ambition: "not proposing that our measure of unhealthy school boundaries be used as a 'metric' to monitor or manage school performance. Rather, the measure is intended to be used as a means for understanding the processes via which schools might influence student health behaviours" (p. 250). This underscores the idea that

measurements can be developed for different purposes when addressing school contexts.

As a different example of pushing boundaries, Thorpe (2014) advocates for transcending the divide between biological and social perspectives in understanding the body, particularly in sport and physical culture. She emphasizes the inseparability of biological and social dimensions, using examples like exercise-associated amenorrhea to illustrate this interplay. Drawing inspiration from feminist biologists and philosophers, Thorpe calls for non-reductionist and non-determinist approaches to incorporate biology – especially hormones – into discussions about women's moving bodies. She highlights the importance of transdisciplinary research to achieve multidimensional insights into the body, advocating for new ways of thinking and theorizing to bridge gaps between academic discourses (Thorpe, 2014). Potentially, these insights could be considered for physical activity research in school contexts by emphasizing the integration of biology, materialities and sociocultural perspectives to better understand students' moving bodies. Holly Thorpe is one of many scholars who employ ethnographic methodology in their inquiries, and such approaches are increasingly gaining traction in physical activity research. As interest grows, it becomes essential to engage in discussions about the philosophical underpinnings that shape these methodologies.

Reflections on ethnographic practice

I recently attended a large international physical activity research conference, where I sat in on a presentation of an ethnographic study conducted in school settings, exploring the physically active lives of adolescents – right at the heart of my own research interests. The presenter described their approach as a kind of 'rapid assessment', and I could not help but notice how that choice of words echoed a more traditional, positivist paradigm – one that often does not align with the axio-onto-epistemological grounding of much ethnographic work. After the engaging presentation, I raised my hand. The session chair gave me the floor, and I asked: "I come from a similar methodological background to what you have just presented. Have you, like me, encountered challenges related to differing axio-onto-epistemological orientations when conducting and presenting ethnographic research in this field?" The presenter paused for a moment before responding: "Do you mean like Big Q and small q issues?" – referring to Braun and Clarke's (2021) work on the ontological underpinnings of reflexive thematic analysis. "Kind of, yes," I replied. A short discussion followed, yet I felt somewhat misplaced in my concern. To be fair, the conference leaned more toward a traditional, biomedically oriented perspectives, aligning with this thesis's description of interventionist research. Yet still, ethnography was present – a methodology that from my experience are

typically rooted in other academic discourses. This moment stayed with me. For me, it has been a persistent challenge throughout my PhD journey – especially in connection to the work that became *Article 1* and part of *Article 3*. It reminded me how deeply methodological tensions can run beneath the surface of seemingly similar research.

> Ethnographic approaches have the potential to address these challenges by immersing researchers in the intervention setting, and combining observational, conversational, and documentary data collection. Traditionally these can be long research projects where research questions emerge through the process, however, both rapid and focused ethnography have evolved to adapt the principles of ethnography (combination of methods with immersion in a setting) within more bounded timeframes and applications. Ethnographic approaches have been used to explore some elements of physical activity in schools, such as outdoor classrooms, PE, and after-school care, and rapid and focused ethnographies have been used to evaluate public health interventions, but are less common in intervention development and are relatively rare within physical activity research. This rapid ethnography offers a novel perspective that may help optimise the design, feasibility, and implementation of context-specific physical activity interventions. (Walker et al., 2025, p. 2)

The quote is from a recent article published in the field of physical activity research that uses ethnography as its methodology. The methods, analysis, and findings of the study are very similar to those in *Article 1* of this thesis, despite the study being situated in Bristol, UK. However, there is one important difference: in *Article 1*, we explicitly state that a relational ontology guides the theoretical, practical, and analytical work. The quoted article, by contrast, serves as a strong example of ethnography being used within a biomedical and interventionist research framework. Although the article does not include a dedicated theoretical section, the references supporting the quoted passage are primarily situated within interventionist research traditions mainly using linear approaches. For example, in *Article 1*, we situated our research within an interpretative paradigm, emphasizing our role as co-creators – particularly in generating fieldwork and interview data using a circular approach. I agree with what Hammersley and Atkinson (2007, p. 1) writes about the label ethnography "having fuzzy semantic boundaries," and I also argue in line with Spradley (1980, p. 28) that ethnography is about iterative processes, making its methodologies very hard to fit into linear models of inquiry.

The initial reason I ended up doing ethnographic work was due to two factors: first, it was already part of the project description for the larger research project within which this PhD is situated; and second, I had completed several courses in anthropological studies as part of my bachelor's degree, and I felt strongly drawn to this type of work. When I began my PhD journey, the references used in the quote, and similar work, were the main sources I leaned on within physical activity and health research, particularly within a biomedical paradigm, because I understood that rhetoric and those ideals.

However, the more I read, took courses, and engaged with ethnographic literature, the more I began to understand the history of ethnography and how it has been used across fields with different ontological orientations. Nevertheless, I would argue that most ethnographic work today within my field of research is primarily situated within pedagogical and critical academic discourses. Many scholars have made important contributions to ethnographic methodology within school contexts related to movement and health, including Gubby (2021), Jachyra et al. (2015), and Powell (2022). In the Nordic context, other examples include Larneby (2020) and Jansson (2024), to name just a few. I agree with Atkinson´s (2014, p. 4) words: "What I do insist on is that we ought always to conduct fieldwork in settings wherever and however they are brought into being by social actors who collectively engage in their production. Equally, I am not so naive as to overlook the extent to which fields are also produced by our own activities of fieldwork." To me, this underscores the relational and co-constructed worldview of ethnographic work. As discussed in the theoretical section of this thesis, the various references to ethnographic work – such as in *Article 1* and the previously quoted article – reflect similarities with ecological theories, particularly in how they are framed through relationalism versus substantialism perspectives.

The initial story of me attending that conference presentation, where the study presented seemed to illustrate the use of ethnographic work within a substantialist perspective, resonated with how school context is treated in *Article 4* of this thesis. In contrast, I chose a relationalism perspective for the ethnographic work throughout this project. I believe we will see more ethnographic research emerging within the field of physical activity, which I welcome and intend to contribute to. Yet, I argue that we need to thoughtfully deliberate on the ontological foundations of such projects. The title of this section reflects the central tension between building bridges to foster collaboration and the complexity of navigating diverse perspectives. While such efforts hold the potential to connect and enrich the academic world, they also raise the question: is this pursuit a bridge too far? Ultimately, the challenge lies in balancing ambition with practicality to determine whether these bridges lead to meaningful inquiries and knowledge production, and some of these adventures might mean pushing some boundaries further than others.

Future spaces for maneuver

> We will make the population more active. *Personal note*

The words above mirror a statement made by one of the key presenters at the same conference I described earlier. I have chosen to leave out the presenter's name, not only for ethical reasons, but also because the individual is less important than the broader narrative their words represent. This statement reflects a dominant discourse in physical activity research. Reading these words, I find myself asking: Who are 'we', and who constitutes 'the population'? What does it mean to 'make' someone active, and what assumptions are embedded in the phrase 'more active'? These questions bring me back to discussions I had during my bachelor's studies in Public Health, in a course on ethics – a conversation that has stayed with me throughout my academic journey. How is this quest not, in its framing, paternalistic? As scholars like Fitzpatrick and May (2022, p. 34) write about the complexities of addressing change, we might ask ourselves: should we, as researchers, "…seek to create change and challenge inequities in research sites, in themselves, in the academy, in the communities in which we live? This question continues to trouble us." Should we, for example, as physical activity researchers, tell people what to do?

This section reflects on the concept of change, recognizing that academic discourses often operate in silos. Yet, the knowledge produced within these discourses is frequently oriented toward imagining the future and exploring how change can be enacted, together. The section examines potential spaces where boundaries between disciplines, academic discourses and paradigms converge, fostering opportunities for multidimensional thinking and inspiring research initiatives grounded in the means of *effectiveness, meaningfulness*, and *equity*. To guide this exploration, I focus on two central concepts: agency and co-creation through participatory methodologies. While these concepts are well-established and not novel, they are currently gaining traction in distinct ways across the academic discourses discussed. In that sense, this section points toward future potential directions.

Imagining change – bridging discourses in youth physical activity research

The concept of *change* in youth physical activity is interpreted differently across academic discourses, each shaped by distinct axiological (values), ontological (nature of reality), and epistemological (ways of knowing) foundations. The differences influence how researchers define what counts as *effective*, *meaningful*, and *equitable* change in

school settings, articulated means addressed in the earlier sections. These three means will most likely be addressed quite different within the various academic discourses this thesis has laid out, namely interventionist, pedagogical, and critical research. Interventionist research, typically grounded in positivist or post-positivist paradigms, approaches change as a measurable and generalizable outcome. *Effective* change is defined by increased physical activity levels, often quantified through metrics such as step counts, heart rate, or time spent in moderate-to-vigorous activity. *Meaningful* change is often framed in terms of health benefits, motivation or behavioral improvements, while *equitable* change focuses on reaching populations deemed 'at risk' or 'least active'. Schools are viewed as platforms for delivering structured interventions that can be scaled and replicated, with success measured through statistical significance and population-level impact. Pedagogical research, rooted in constructivist and interpretivist paradigms, views change as a process of learning and personal development. *Effective* change is not solely about increasing activity levels but about fostering engagement, curiosity, and agency in movement. *Meaningful* change involves creating inclusive and contextually relevant experiences that resonate with students' identities and lived realities. *Equitable* change is pursued by designing learning environments that accommodate diverse needs, abilities, and interests, ensuring that all students have opportunities to participate and grow. Schools are seen as educational spaces where movement is integrated into broader developmental and relational processes. Critical research, informed by critical theory and transformative paradigms, often conceptualize change as a challenge to existing power structures and normative assumptions. *Effective* change can be understood as the transformation of unjust systems and practices that shape physical activity in schools. *Meaningful* change involves amplifying marginalized voices and questioning dominant narratives around health, fitness, and ability. *Equitable* change can be pursued by addressing structural inequalities – such as racism, ableism, and gender norms – that condition access to and experiences of movement. Schools are examined as sites of both reproduction and resistance, where physical activity can either reinforce or disrupt social hierarchies.

The varied approaches to change, depending on academic discourse, offer rich, complementary perspectives – when approached reflexively and respectfully – but also pose challenges for collaboration. As highlighted in *Article 2* of this thesis – where "girlhood in the intersection of foreign and socioeconomic background risks becoming specific groups subject to governing interventions" (p. 13) – and as also discussed by researchers such as Strandbu (2005) and Ekholm et al. (2019), the figure of the 'absent minority girl' is frequently central in physical activity and sport research. It is widely recognized as an issue that needs to be addressed and is often acknowledged across all three academic discourses. However, these differing ways of thinking and enacting change carry

significant implications for how researchers engage with complex issues such as the 'absent minority girl' in school-based physical activity research and practice. Interventionist research tends to frame absence as a participation gap to be solved through targeted interventions. Pedagogical research interprets it as a sign that current practices may lack relevance or inclusivity, prompting a rethinking of how movement is taught and experienced. Critical research, meanwhile, challenges the framing of absence itself, focusing instead on the structural conditions and normative assumptions that shape who is included and excluded. These differences influence not only the strategies proposed but also the kinds of questions asked and the values prioritized in research and practice. From a critical research perspective, interventionist approaches to change – despite their intentions – can themselves be seen as paternalistic and reproducing oppressive structures by reinforcing dominant norms and failing to account for the lived realities and agency of marginalized youth.

Additionally, in relation to *Article 2* and the topic of equity, there is a growing interest in applying intersectionality frameworks to physical activity and health research. Trygg Fagrell (2022) offers an insightful analysis in her dissertation on health inequalities, emphasizing that different approaches to intersectionality generate distinct types of knowledge and understanding – a point I strongly agree with. With the recent traction gained in sport science and public health to embrace such theoretical frameworks (e.g., Lee et al., 2023; Sone et al., 2024), we are faced with the challenge of addressing equity from diverse research backgrounds and approaches to knowledge production. In *Article 2,* I made a deliberate effort to create space for reflecting on the key conceptualizations within intersectionality research, acknowledging its origin in Black feminist scholarship (e.g., Collins, 2009; Crenshaw, 1989) as one example. I also ensured collaboration with researchers experienced in both critical and interventionist research in that project, as I aimed to work across those academic discourses.

Building on the discussion of theoretical framing, *Article 4* employs the Consolidated Framework for Implementation Research (CFIR), one of the most widely used determinant frameworks in implementation research. In its updated version, CFIR includes new constructs that address equity-related determinants. However, the authors explicitly urge users to collaborate with equity experts to integrate theories of equity, justice, or non-discrimination with the CFIR. They also emphasize the importance of understanding one's own positionality, acknowledging that "our own team's lack of equity expertise and our narrow positionality disallow us from addressing the urgent need to adequately center equity within the CFIR" (Damschroder, Reardon, Widerquist, et al., 2022, p. 12). Recognizing and engaging with critical research is therefore indispensable, not only to meaningfully apply critical theories and address oppression, but also to avoid what Lett

and colleagues (2022) term ‘health equity tourism’: the practice of researchers with limited prior knowledge or commitment to health equity parachuting into the field in response to temporary surges in public interest and funding.

As a last note, since many researchers advocate for a stronger inclusion of social and political perspectives within physical activity research. I anticipate that, much like discussions surrounding equity and justice, laid out above, where differing perspectives lead to varying proposals for change and solutions – we will need to engage in dialogue about how ‘politics’ shape the conditions that enable or hinder physical activity participation. Equity has already been a prominent topic for some time, but there is growing interest in what are referred to as ‘commercial determinants’ within disciplines that adopt more substantialist perspectives (e.g., Gilmore et al., 2023; Mclaughlin, Murphy, et al., 2025), or that are often explored through lenses such as neoliberalism, capitalism, mediatization, and healthism within more relational ontological frameworks (e.g., Malcolm et al., 2024; Malcolm, 2017; Santos et al., 2025). Here too, with this emerging ‘hot topic’ before us, we (I repeat) will need to collaborate across perspectives and contribute collectively to the future of physical activity research. The hierarchies within research and knowledge production must also be critically examined and brought to light. As Silk, Francombe, and Andrews (2014, p. 1272), write:

> The self-evident epistemological hierarchy – what we can term the epistemological violence, that privileges specific ‘scientific’ ways of knowing – has structurally and intellectually constrained the potential and relevance of the social science of sport in terms of realizing its aims of developing a truly integrative and interdisciplinary approach to the study of physical activity and thereby of society.

This quote illustrates how dominant paradigms and narrow definitions of scientific legitimacy can marginalize alternative ways of knowing, particularly those rooted in relationalism perspectives and critical and equity-focused research. In light of the previous sections, it becomes clear that addressing equity in physical activity research requires not only theoretical expansion but also a willingness to challenge entrenched epistemological norms and collaborate across discursive boundaries.

These differing conceptualizations of change and use of theoretical framings to do so highlight the complexity of engaging with youth physical activity within school contexts across academic discourses. While tensions exist, there is also potential for productive dialogue. When approached reflexively, these perspectives can inform one another and contribute to more holistic understandings of what constitutes *effective, meaningful*, and *equitable* change. I picture how these academic discourses might join forces through shared commitments to *co-creation* and conceptualization of *agency*, offering

new possibilities for bridging paradigms and enhancing the relevance and impact of school-based physical activity research.

Agency and its conceptualization

Conceptualizing agency is crucial when seeking collaboration across academic discourses in school-based physical activity research. Different paradigms bring distinct assumptions about what agency is, how it operates, and what it means for students, teachers, and institutions. Without a shared or at least dialogical understanding of agency, efforts to integrate insights from interventionist, pedagogical, and critical research traditions risk talking past one another. Exploring agency as a flexible, relational, and context-sensitive concept opens up possibilities for more inclusive, responsive, and transformative approaches to physical activity in schools.

As previously noted, and illustrated in Table 1a, various scholars have emphasized the significance of ecological frameworks and *agency* in shaping adolescents' physical activity (Boonekamp, Jansen, et al., 2022; Kirk et al., 2018; Piggin, 2017, p. 8). Likewise, teacher agency has been recognized as essential for fostering meaningful and effective education, encouraging a relational perspective that considers the dynamic interaction between context and actor (Biesta et al., 2015; Priestley et al., 2015). This perspective centers on enhancing the capacity and flexibility of individuals – whether students or school staff – to engage in specific practices, such as physical activity, within particular structural settings like schools, through continuous negotiation processes. It places agency at the core of its conceptualization, emphasizing both individual abilities and the environmental factors that enable or constrain action (Emirbayer & Mische, 1998).

According to Priestley and colleagues (2015), agency is an emergent property that is "achieved by individuals, through the interplay of personal capacities and the resources, affordances and constraints of the environment by means of which individuals act." In this view, agency is deeply rooted in the past through iterational aspects, drawing on prior experiences, and oriented toward future objectives and aspirations through projective aspects. It is ultimately realized in the present through practical-evaluative aspects, involving moment-to-moment judgments and actions. From this dialectical perspective, agency is both relational and temporal, defined by the negotiation of opportunities for various forms of physical activity at specific moments in time within particular contexts. This lens provides a nuanced understanding of how actors navigate and enact their roles within the complex dynamics of school environments. In light of recent developments in critical research on both human and non-human agency, I would also like to address the potential of the posthumanist turn in physical activity research. This

perspective invites us to consider what Fullagar (2017, p. 247) describes in relation to agency:

> critical post-humanist debates concerned with how 'matter' is thought and constituted through entanglements of human and non-human bodies, affects, objects and practices. Such a shift reorients thinking around *relational questions* about the material-discursive forces co-implicated in what bodies can 'do' and how matter 'acts', rather than a concern with what 'is' a body or the agentic meaning of experience.

This conceptualization of agency reflects how it is not solely located within individuals but emerges through assemblages and entanglements – interactions among students, physical spaces, objects, and institutional structures. For example, in a Physical Education and Health class, agency may be shaped by the layout of the room, the availability of equipment, the teacher's instructions, and the students' bodily capacities – all intra-acting together. This shift enables a more distributed understanding of action and structure, where actors and structures are co-constitutive. It reframes the debate by focusing on networks of actors – both human and non-human – rather than on agency in a classical sociological sense. From this perspective, Table 1a in the theoretical chapter requires revision, as illustrated in Table 1b. I believe there is great potential in playing with and imagining agency from multiple perspectives, and in how dialogue and collaboration across interventionist, pedagogical, and critical research traditions could inspire us to ask new and more nuanced questions.

Table 1b. Developed conceptualizations of agency

Perspective	*View of agency*	*School physical activity context*
Variable	Essential trait, individual possession	Focus on student motivation and self-discipline
Agency versus structure	Dualism, choice versus constraint	Examines how school rules or culture limit/enhance action
Emergent	Dynamic, context-dependent	Emphasizes interaction between student and environment
Dialectic through assemblages of actors	Relational and distributed; agency emerges through networks and interactions among human and non-human actors	Focuses on how materials (e.g., equipment, architecture), technologies, and bodies interact to shape movement and participation

Co-creation and participatory methodologies

As physical activity scholars increasingly advocate for equity, systems-thinking, and asset-based approaches to reimagining school environments, co-creation and participatory methodologies have gained prominence as promising strategies for collaborative innovation. These approaches invite diverse stakeholders – students, teachers, researchers, and policymakers – to actively shape the design and integration of initiatives, making them more contextually relevant and inclusive. However, just as the concept of agency is interpreted differently across academic discourses, co-creation and participation are also conceptualized in varied ways, depending on underlying axio-onto-epistemological assumptions. This makes them both rich sites for trans- and interdisciplinary collaboration and a space that demands careful reflexivity.

The concept of co-creation has gained significant traction over the past decades, becoming a cornerstone of public policy reform globally (Osborne et al., 2016). Unlike traditional top-down approaches to innovation, co-creation – along with related terms such as co-design and co-production – embraces participatory methods that enable key stakeholders to shape both the process and outcomes of innovation. It emphasizes collaboration, recognizing that meaningful change arises when stakeholders actively contribute to solutions that reflect their lived experiences and institutional realities (O'Cathain et al., 2019; von Thiele Schwarz et al., 2018). The rationales for co-creation are diverse and multidimensional. As Oliver, Kothari, and Mays (2019) explain, one rationale is *substantive*, focusing on how co-creation can enhance research quality by grounding it in contextual understanding and ensuring its relevance to stakeholders. Another is *instrumental*, emphasizing how participatory processes can build trust, empower participants, and improve the feasibility of interventions through collaborative design. A third rationale is *normative*, which highlights the ethical and democratic value of redistributing power and recognizing diverse forms of expertise. Finally, the *political* rationale positions co-creation as a strategy for facilitating knowledge translation, making research more actionable and impactful in real-world settings.

Despite its promise, co-creation is not without challenges. Scholars have noted limited evidence of its long-term impact, a lack of consensus on theoretical frameworks, and uncertainties around stakeholder outcomes (Brett et al., 2014; Mockford et al., 2011). Practical barriers – such as time, resources, and the skills required to facilitate participatory processes – can also strain research efforts (Oliver et al., 2019). These challenges underscore the need for evaluation and a deeper understanding of the conceptual foundations of co-creation. Recent studies illustrate both the opportunities and complexities of co-creation in school settings. For instance, de Boer and colleagues (2025) explore school staff experiences in co-creation processes, revealing how participation can foster

ownership and alignment with institutional goals. Yet, they also highlight challenges such as resource constraints and uneven engagement. Similarly, Alfrey, O'Connor, and Jeanes (2017) present teachers as policy actors who co-create and enact critical inquiry within secondary Physical Education and Health. Their work underscores the relational nature of co-creation, where educators negotiate policies and practices in response to their professional expertise and student needs.

Schools are pivotal in shaping young people's engagement with physical activity, and participatory methodologies offer valuable insights into how these environments can be transformed. Smith and colleagues (2023) provide a comprehensive overview of co-creation in sport, exercise, and health sciences, identifying three distinct types. The first involves *citizens' contributions to public services*, where individuals draw on their lived experiences to co-develop services that better meet community needs. The second is *integrated knowledge translation*, which brings together researchers and policymakers to ensure that research is both practical and applicable. The third emphasizes *equitable and experientially-informed research*, prioritizing inclusivity and social justice by addressing power imbalances and valuing diverse perspectives. Importantly, the authors emphasize the need to address institutional norms and academic structures that can hinder effective co-creation (Smith et al., 2023). Engaging in participatory research requires navigating differing axio-onto-epistemological positions – ways of knowing – held by institutions, researchers, stakeholders, and policymakers (Oliver et al., 2014; Oliver & Duncan, 2018).

Co-creation and participatory methodologies represent promising strategies for making research more effective, meaningful, and equitable. At the same time, they call for careful consideration, particularly regarding how these articulated means are understood and applied across different academic discourses. An important takeaway for the overall aim of this thesis – to juxtapose perspectives, fragments, thoughts, concepts, and ideas – is that co-creation can serve as a strategic entry point for inter- and transdisciplinary collaboration in future dialogue and research. The conceptualization of agency and participatory methodologies offers spirited passageways for advancing physical activity research in school contexts. By emphasizing the relational and spatiotemporal dimensions of agency, researchers can better understand how students, staff, and broader networks navigate structural barriers and opportunities for meaningful physical activity. Integrating participatory methodologies ensures that diverse voices shape innovations, fostering inclusive, equitable, and sustainable practices that resonate with the needs of communities.

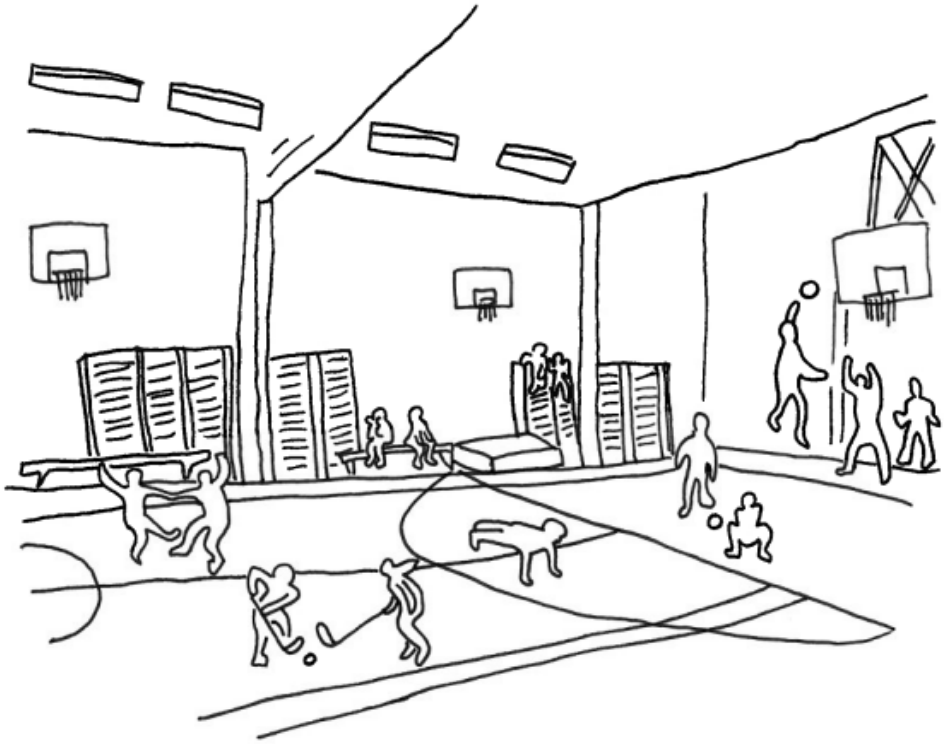
Concluding reflections

For over half a century, physical activity research, as described by Ding and Ekelund (2024), has evolved within a biomedical science paradigm, employing related research methodologies often centered on reducing health risks or promoting health. During this period, other silos and bunkers have simultaneously influenced the development of sport science, the study of human movement and its associated sub-disciplines (Kretchmar, 2008). Silos have grown from an urge of academic expertise and specialization, meanwhile, bunkers lend legitimacy to a field often dismissed as mere play and games. While not all, many of these silos and bunkers have advocated for greater collaboration across fragmented academic discourses, fostering inter- and transdisciplinary initiatives to address the pressing demand for sustainability in our shared societal landscape. Even if silos and bunkers are useful, in line with Kretchmar (2008, p. 3), I too recommend:

> a brand of kinesiology whose silo walls are lower and more permeable, whose spirit is more playful, and whose researchers and practitioners interact more democratically, with increasing levels of interdependence and humility and with a higher degree of mutual respect.

Researchers in interventionist, pedagogical, and critical fields often agree on the need for change, yet the question remains: what kind of change are we striving for? I trust in the possibility to align research on school contexts across academic discourses as a means to be *effective*, *meaningful*, and *equitable* in addressing adolescents' physical activity and promoting sustainable solutions. The ability to embrace multiple perspectives simultaneously is essential. However, the act of mindfully conducting research and recognizing the situated nature of knowledge will be pivotal for advancing inter- and transdisciplinary goals in the future.

Let us not be tethered to the norms and ideals woven into our academic discourses, nor confined to the narrow tracks of singular thought. Instead, we must dare to untangle ourselves from these constraints, while embracing the weight of the real challenges before us – challenges tied to fostering and cultivating the physically active lives of this generation and those yet to come.



Postlude

> It matters what matters we use to think other matters with; it matters what stories we tell to tell other stories with; it matters what knots knot knots, what thoughts think thoughts, what descriptions describe descriptions, what ties tie ties. It matters what stories make worlds, what worlds make stories. (Haraway, 2016, p. 12)

In her book *Staying with the Trouble* (2016), Donna Haraway, drawing inspiration from a fellow scholar, emphasizes how it matters what ideas we use to think other ideas with. The selection of ideas used to conceptualize other ideas profoundly shapes research perspectives and outcomes, influencing how questions are framed and knowledge is generated. This interplay between foundational concepts can foster innovation while challenging established standards and taken-for-granted(s), enabling deeper insights into the complexities of physical activity and sport across diverse disciplines. Just as Haraway (2016, pp. 89-98) uses (Navajo) weaving to illustrate, one can imagine the crafting of scientific knowledge – intertwining materials, meanings, and histories to create fragmented connections, subjectivity, and beings spanning numerous species.

This thesis is an expression of my time as a PhD student, with my positioning, within, outside, and in between academic discourses that do not always speak the same language. It has emerged slowly over the years, ‘cooking’, parallel to conducting the individual sub-studies and engaging with academic and normal life as usual among colleagues and friends. I have physically felt the tensions and conflicts, which are now expressed and embodied into this text. The thesis, then, is not just a product of research, but a reflection of the process: of learning to play the game while questioning its rules, and of finding a voice in the spaces where disciplines and academic discourses meet and sometimes clash, meetings and clashes that will force you to question the questions being asked and getting a few gray hairs along the way.

Asking the *other* question

During the early period of my doctoral education, coming from medically informed interventionist research, I remember being frustrated over that my research project did not evaluate any 'hard outcome' related to physical activity or health (such as including accelerometry or standardized survey questions). Because of this frustration I visited one of my supervisors at their office, to get some clarity for the project ahead, and how I could include these outcomes to be able to explain and predict how and what aspects of school contexts that were associated with increased levels of students' physical activity. Instead of feeding into offering me suggestions of "stringent procedures … or produce straight-jackets for monitoring research" (p.223) as Davis and Lutz (2023) expressed in their text 'Asking the other question' – my supervisor turned the question back towards me. Asking me questions like: *Why* I felt the need to include these types of measurements? What *is* physical activity and health? I cannot remember that these questions (gently) thrown back at me helped me there and then to unease my frustration, but it certainly shaped the way that this thesis took form.

Just like Marcia, the teacher I quoted in the introduction, whose difficult and unexpected questions during a day at one of the schools challenged my assumptions and opened up new lines of inquiry – this thesis would not be what it is without all the encounters and interactions over the years. Living in *uncertainty* and asking the *other question* have been of importance.

Sail on, silver girl

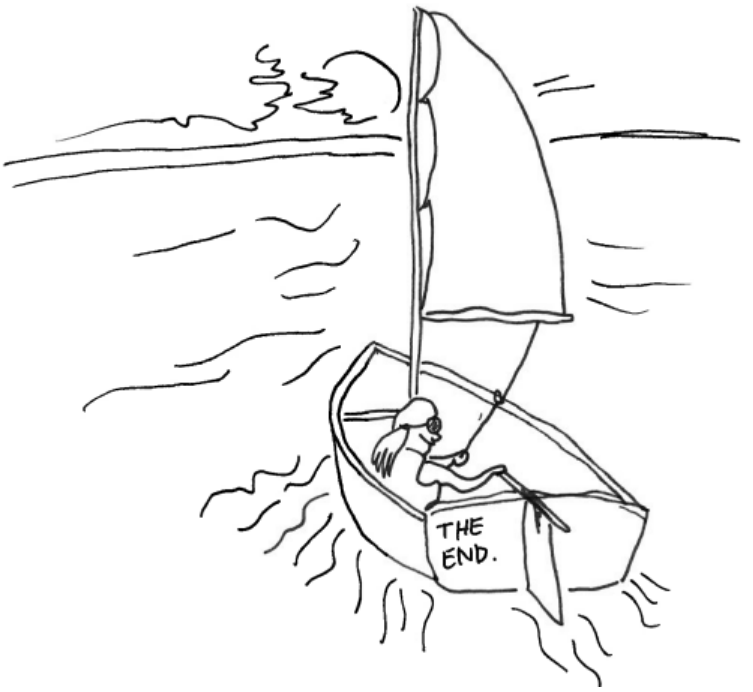
Playing the game of inter- and transdisciplinary research does not come without its challenges, as problematized in this thesis. It has left me with moments of feeling both weary and small – just as pictured by the words in "Bridge over Troubled Water," the song by the American folk rock duo Simon & Garfunkel released in 1970, that the title of this section refers to (Wikipedia). This song has turned into an inside joke between me and my supervisors, and I felt the need to make it an official part of this thesis as one of its closing pieces of music. The song makes me feel both slightly amused and somewhat self-conscious, as it portrays someone enduring a difficult period in their life – while I am living a relatively privileged life as a PhD student in Sweden. Despite that, I too recently noticed my first gray hairs, similarly to how apparently Simon's then-wife Peggy Harper at that time had noticed her first gray hairs ("Sail on, silver girl").

… When you’re weary
Feeling small
When tears are in your eyes
I will dry them all
I'm on your side
(…)

… Sail on, silver girl
Sail on by
Your time has come to shine
All your dreams are on their way
See how they shine

… Oh, if you need a friend
I'm sailing right behind
Like a bridge over troubled water
I will ease your mind
Like a bridge over troubled water
I will ease your mind
(*Simon & Garfunkel, 1970*)

Despite the challenges, I trust the idea of combining perspectives, acknowledging that it requires support and academic camaraderie to ease the journey. Embracing collective work, we must confront existing tensions and allow them to shape new expressions of academism and knowledge creation. *What sails sail sails*.


THE
END.

Svensk sammanfattning

Introduktion

Forskning inom idrotts- och hälsovetenskap har sedan länge betonat skolmiljöns avgörande roll för att forma unga människors fysiskt aktiva liv. Även i detta doktorandprojekt står skolmiljöns roll i fokus, men framför allt görs i avhandlingen en bredare analys av de akademiska diskurser, forskningsdiscipliner och fält inom vilka ungdomars fysiska aktivitet i skolmiljöer studeras. Dessa diskurser påverkar hur vi förstår kunskapande och hur vi *gör* forskning. Diskurser handlar inte bara om språkbruk och forskningspraxis, utan också om att tänka, tala, agera och navigera maktstrukturer inom en viss akademisk gemenskap och kultur. Exempelvis skiljer sig diskurser inom idrottsfysiologi, medicin och folkhälsa ofta från dem inom idrottspedagogik och sociologi, då de utgår från olika praktiker, teorier, metodologier och ideal. Inom biomedicinska och folkhälsovetenskapliga diskurser framställs ofta skolkontexter som ’ideala’ för att främja fysiska aktivitet kopplat till hälsa, och utgår vanligen från rekommendationer om rörelse och ambitionen att få unga att bli mer aktiva. I den här avhandlingen granskas dessa dominerande diskurser i relation till andra sätt att kunskapa. När vi som fysisk aktivitetsforskare forskar, gör vi det utifrån antaganden som vilar på specifika ontologiska, epistemologiska och axiologiska ställningstaganden. Medan ontologi handlar om verklighetens natur och hur fenomen förstås, så rör epistemologi kunskapsteori: vad vi kan veta och hur vi når förståelse. Axiologi handlar om vad som anses värdefullt i forskning, särskilt i relation till kunskapens nytta. Inom de olika diskurserna finns skiftande syn på vad fysisk aktivitet är, hur det bör studeras och varför det är viktigt. På liknande sätt formas framställningen av skolkontexter, inklusive elevers och personals roller, av dessa ställningstaganden på olika sätt inom distinkta akademiska diskurser. Fokus i denna avhandling ligger på tre sådana akademiska diskurser: interventionsforskning samt pedagogisk och kritisk forskning.

För att möta komplexa samhällsutmaningar krävs att forskare och akademiska verksamheter är beredda att släppa på snäva perspektiv och ha vilja och kraft att samarbeta brett. Ett sådant angreppssätt innebär både en utmaning och en möjlighet för forskare som studerar skolan, då forskning om fysisk aktivitet idag ofta sker inom isolerade discipliner och perspektiv. Multidisciplinära arbetssätt innebär att olika discipliner bidrar med sin

kunskap, men utan att den kombineras eller omformas. Interdisciplinära arbetssätt går ett steg längre, genom att analysera och samordna kunskap mellan fält för att skapa en gemensam förståelse. Transdisciplinära arbetssätt strävar efter att överskrida traditionella gränser och integrera olika vetenskaper i ett bredare sammanhang, vilket möjliggör ett mer holistiskt angreppssätt. Genom att röra sig mot dessa mer integrerade former av samarbete kan forskningen bättre spegla och hantera den komplexitet som präglar dagens utbildningsmiljöer. Om vissa kunskaper och perspektiv utelämnas kan det påverka och begränsa vilka policyer och innovationer som anses relevanta eller ens tänkbara, vilket i sin tur kan begränsa både forskning och beslutsfattande som rör främjandet av fysisk aktivitet. Den här avhandlingen avser att belysa vikten av trans- och interdisciplinärt samarbete inom forskningsfältet ungas fysiska aktivitet i skolmiljöer, men även utmaningarna som kommer av ett sådant projekt.

Teoretisk inramning och metodologi

I forskning och praktik kring fysisk aktivitet i skolan spelar våra grundläggande antaganden om verkligheten en viktig roll. I den här avhandlingen ställs två perspektiv mot varandra – det *substans-ontologiska* och det *relationellt ontologiska* – för att synliggöra hur sådana antaganden formar forskning om fysisk aktivitet i skolkontext. Ett relationellt ontologiskt perspektiv utgår från att elever, lärare, miljöer och aktiviteter är delar av ett nätverk av relationer, snarare än isolerade enheter. En elevs deltagande formas av samspelet med klasskamrater, lärarens förhållningssätt, skolans kultur och de fysiska ramarna – allt är sammanvävt och ömsesidigt beroende. Att använda ett relationellt perspektiv innebär att forskningen riktar uppmärksamheten mot sammanhang, relationer och processer. I kontrast ser ett substans-ontologiskt perspektiv individen som en självständig enhet med inneboende egenskaper. Fysisk aktivitet betraktas då som något som påverkar individen direkt, oberoende av kontexten, med fokus på att mäta och förändra beteende snarare än på att förstå beteendet i relation till omgivningen. Att använda ett substans-ontologiskt perspektiv innebär att forskningen riktar uppmärksamheten främst mot individens egenskaper, prestationer och förändringspotential, utan att nödvändigtvis beakta det sammanhang där beteendet uppstår. Om sammanhanget uppmärksammas görs det vanligen som en bakgrundsfaktor eller en yttre påverkan, snarare än som en integrerad del av individens beteende, på samma sätt som individen betraktas som en separat enhet med egenskaper som kan mätas och förändras oberoende av sin kontext.

Strategier för ’ökad fysisk aktivitet’ i skolan har fått stor uppmärksamhet det senaste decenniet bland aktörer och forskare, såväl i Sverige som internationellt. Dessa strategier betonar ofta holistiska initiativ som sträcker sig från individnivå till systemnivå, och

integrerar läroplaner, skolkulturer, materiella strukturer, policyer, elev- och personalgrupper samt omgivande lokalsamhälle och sociopolitiska landskap. Inom sådana strategier förespråkas ofta ekologiska ramverk och teorier, med fokus på samspelet mellan individuella handlingar och bredare sociala och miljömässiga faktorer. Hur dessa ramverk förstås och tillämpas varierar dock beroende på vilken akademisk diskurs, vilket fält eller vilken disciplin forskningen är förankrad i. Forskningen utgår ofta från antingen ett substans-ontologiskt eller ett relationellt ontologiskt perspektiv. Något som framför allt skiljer sig mellan dessa perspektiv är hur begreppet *agency* förstås och hanteras. Inom viss forskning används agency som en variabel för att förklara eller förstå social handling. I sådan forskning ställs agency ofta mot struktur, där den centrala frågan är om struktur eller agency är mest avgörande för att bestämma eller forma olika handlingar och aktioner. En sådan konceptualisering medför ofta en tendens att se agency som en inneboende egenskap och förmåga hos människor, något som besitts, vilket får till följd att människor uppfattas som mer eller mindre agentiska som individer. En alternativ syn är att se agency som ett samskapat fenomen – något som uppnås genom samspelet mellan personliga egenskaper och förmågor och de resurser, möjligheter och begränsningar i den omgivande miljön. En sådan konceptualisering av agency betonar vikten av både individuella aktörer och kontextuella dimensioner i formandet av handlingskraft.

Viss forskning pekar på en bristande kritisk granskning av antagandet att skolor automatiskt fungerar som effektiva arenor för att främja hälsopolitiska mål inom folkhälsostrategier. Ekologiska teorier har ofta använts för att hantera den komplexitet som präglar skolsystem. Kritiska perspektiv som inkluderar frågor om makt, jämställdhet och rättvisa, ställs dock sällan i förgrunden inom dessa teoretiska inramningar. Denna kritik tas också upp i avhandlingen. Inom området rörelse och fysisk aktivitet har samhällskritisk teori förflyttat fokus från enbart fysiologiska, biomedicinska eller prestationsbaserade förståelser till mer nyanserade analyser av hur fysisk aktivitet är socialt konstruerad och upplevd. Denna förskjutning är särskilt betydelsefull i skolmiljöer, där fysisk aktivitet ofta är en del av bredare utbildningsmässiga, kulturella och politiska agendor. Forskning som utgår från samhällskritisk teori undersöker hur fysisk aktivitet i skolan reproducerar eller utmanar dominerande ideologier kopplade till kön, etnicitet, funktion och klass. Dessa aspekter behöver granskas kritiskt även i framtida forskningsinitiativ, särskilt i takt med att forskare och andra aktörer alltmer förespråkar inter- och transdisciplinära samarbeten.

Avhandlingen utgår från ett metaperspektiv som undersöker mönster avseende hur skolkontexter framställs inom olika akademiska diskurser. Fyra vetenskapliga artiklar, förankrade i dessa olika akademiska diskurser och perspektiv, fungerar som illustrationer

av vad som kan förstås genom att de ställs bredvid varandra och jämförs (på engelska: *juxtaposition*). Denna jämförelse gör det möjligt att identifiera mönster och dra lärdomar. Artiklarna bygger på tre delstudier: en etnografisk studie kombinerad med en sociala nätverks-enkät, en tvärsnittsstudie baserad på enkäter, accelerometerdata och nationella register, samt en systematisk forskningsöversikt som utvärderar mätmetoder för skolkontexter. Kombinationen av olika metodologier och angreppssätt utgör ett innovativt och interdisciplinärt tillvägagångssätt för att studera fysisk aktivitet under skoldagen bland högstadieelever, med särskilt fokus på den svenska kontexten. Artiklarna och deras respektive metodologier och resultat presenteras kortfattat, men framförallt ligger fokus på vad som händer när de ställs bredvid varandra.

Resultat och analys

Avhandlingens fyra artiklar har ställts bredvid varandra med syftet att analysera de narrativ och framställningar som används för att främja fysisk aktivitet i skolkontexter. Fysisk aktivitet förstås här som ett medel för att förverkliga politiska, utbildningsmässiga, hälsorelaterade, miljömässiga, kommersiella och personliga mål – på både institutionell och individuell nivå. Tre analytiska komponenter har använts för analysen: (i) målen varierar beroende på kontext, (ii) det finns flera möjliga vägar att nå dem, och (iii) olika intressenter påverkar både process och resultat. Med utgångspunkt i dessa analytiska komponenter genererades tre retoriska mönster genom vilka skolkontexter konstrueras i relation till ungas fysiska aktivitet. Det första mönstret framställer skolan som en *(in)effektiv bakgrund*, där miljön ses som ett verktyg för att påverka individers beteenden i linje med folkhälsopolitiska mål – ofta genom riktade insatser för att förändra vanor. Det andra mönstret fokuserar på *meningsskapande* hos elever och lärare, där pedagogiska praktiker formar attityder till fysisk aktivitet, främjar livslångt lärande och kulturell förståelse, samt meningsfull delaktighet. Det tredje mönstret beskriver skolkontexter som *förtryckande eller förstärkande*, och undersöker hur maktstrukturer kan utmanas för att främja jämlikhet och rättvisa möjligheter till fysisk aktivitet genom stöd och strukturförändring. Mönstren relaterar på olika sätt till praktiker inom interventionsforskning, samt till pedagogisk och kritisk forskning.

Artiklarna kopplas även till fyra element som de flesta akademiska diskurser framhåller som viktiga, men som de förhåller sig till på olika sätt beroende på ontologiskt perspektiv. Dessa fyra element är: (i) eleverna och organisatoriska grupper som ledning, undervisning, stöd och administration; (ii) formella strukturer som policyer, riktlinjer, läroplaner och lokaler; (iii) sociokulturella och immateriella aspekter som skolans miljö och etos; samt (iv) bredare nätverk som nationella utbildningssystem, lokalsamhällen och

familjer. Alla fyra element behandlas i alla fyra artiklar, men relationen mellan dem förstås på olika sätt: från att betrakta dem som separata områden till att betona deras sammanflätning. En mer detaljerad bild av artiklarna presenteras i avhandlingen, och hur dessa förhåller sig till mönstren och elementen.

Diskussion

I avhandlingen undersöktes hur olika retoriska mönster inom forskning om fysisk aktivitet i skolkontexter speglar och utmanar etablerade akademiska diskurser, med särskilt fokus på interventionsforskning samt pedagogisk och kritisk forskning. De tre retoriska mönster som analysen resulterade i förhåller sig på olika sätt till dessa akademiska diskurser. Interventionsforskning fokuserar främst på att undersöka skolkontexter som en *(in)effektiv bakgrund*, med hjälp av linjära angreppssätt och substans-ontologiska perspektiv för att förutsäga faktorer i skolmiljön som påverkar implementeringsframgång. Pedagogisk forskning fokuserar främst på att undersöka skolkontexter utifrån ett *meningscentrerat perspektiv*, med cirkulära (ibland linjära eller icke-linjära) angreppssätt och relationella perspektiv för att förstå villkorande element och fenomen i skolmiljöer. Kritisk forskning fokuserar i stor utsträckning på skolkontexter som *förtryckande och förstärkande*, ofta med cirkulära och icke-linjära angreppssätt samt relationella perspektiv, i syfte att frigöra och dekonstruera villkorande maktstrukturer i skolmiljön.

Avhandlingen tar inledningsvis upp att forskningen om fysisk aktivitet under de senaste decennierna främst rymts inom ett biomedicinskt paradigm där fokus till stor del har legat på effektivitet hos evidensbaserade, interventionistiska strategier, vilka i stor utsträckning vilar på ett substans-ontologiskt perspektiv. I kontrast till detta tar huvuddelen av artiklarna i avhandlingen sin utgångspunkt i ett relationellt ontologiskt perspektiv på fysisk aktivitet i skolan. Här betonas samspelet mellan aktörer, deras kontextuella kulturer och hur agency tar form inom detta samspel. Det är viktigt att understryka att flera av artiklarna rymmer en mångfald av perspektiv – exempelvis hur interventionsforskning kan integreras med kritiska och pedagogiska angreppssätt. Detta påvisar en möjlighet att ibland förena och kombinera olika angreppssätt från skilda akademiska diskurser, och att kritiska teorier inte nödvändigtvis behöver begränsas till det som traditionellt betraktas som kritisk forskning. Spänningar och konflikter kan istället ses som möjligheter till utveckling, då de synliggör olika perspektiv och betydelsefulla frågor för aktörer inom samma forskningsområde. Det finns också tillfällen när olika perspektiv och angreppssätt inte är förenliga. Dessa spänningar och konflikter lyfts också fram i avhandlingen, bland annat genom att använda etnografiska metodologier som exempel. Detta påminner oss om att alla angreppssätt inte är kompatibla med alla paradigmatiska

antaganden och alla metodologier, vilket visar på hur viktigt det är att motivera vad som gör forskning meningsfull och av god kvalitet. I avhandlingen problematiseras dessutom den ofta förekommande uppdelningen mellan ’kvalitativ’ och ’kvantitativ forskning, för att istället rikta fokus på de filosofiska antaganden som ligger till grund för metodologierna, snarare än i metodologierna i sig.

Trots de gränser och uppdelningar mellan akademiska diskurser och deras gängse metodologier som beskrivits, så visar de retoriska mönster som genererats i avhandlingen att gränserna även kan överskridas. Strävan efter att göra skolkontexter mer *effektiva*, *meningsfulla* och *rättvisa* för ungas fysiskt aktiva liv står inte nödvändigtvis i konflikt med varandra – snarare kan dessa ambitioner samexistera. Pedagogisk och kritisk forskning har potential att stödja interventionsforskning genom att synliggöra hegemoniska, normativa och förtryckande aspekter av fysisk aktivitet, samt de meningsskapande processer som är inbäddade i fysiskt aktiva och idrottsliga kulturer. Detta bidrag begränsas inte enbart till att omdefiniera vad fysisk aktivitet är eller hur rörelse konceptualiseras, utan öppnar även upp för alternativa forskningsfrågor, processer och metodologier som förespråkas inom olika akademiska diskurser. Det är dock mycket viktigt att poängtera att framtida initiativ för ungas fysiska aktivitet i skolmiljöer behöver balansera den överrepresentation av effektivitetsfokus som präglar tidigare och nuvarande forskning, med en lika stor uppmärksamhet på meningsfullhet och rättvisa.

Avslutningsvis diskuteras i avhandlingen potentiella utrymmen för att ompröva och utmana forskning om fysisk aktivitet i skolkontexter. I dessa utrymmen blir gränserna mellan akademiska diskurser mer porösa, vilket medför att interventionsforskning, pedagogisk forskning och kritisk forskning kan samexistera. Sådan samexistens behöver inte innebära upplösning av gränserna mellan akademiska diskurser, utan kan bidra till produktiv spänning, där deras olika logiker och värden kan samspela och berika varandra. Trots förekomsten av spänningar finns en tydlig potential för produktiv dialog, vilket öppnar upp för mångdimensionellt tänkande och kan inspirera till nya forskningsinitiativ. När dessa perspektiv närmar sig varandra med ett reflexivt förhållningssätt kan de berika varandra och bidra till mer holistiska förståelser av vad som utgör *effektiv*, *meningsfull* och *rättvis* förändring. Hur vi konceptualiserar agency och utvecklar samskapande metodologier är centralt för framtida forskningsmiljöer. Dessa etablerade, men alltmer relevanta begrepp erbjuder produktiva vägval för att vidga forskningen om fysisk aktivitet i skolan. Genom att uppmärksamma skolsammanhanget ur flera perspektiv, öppnas nya möjligheter att överbrygga paradigm och stärka både relevansen och genomslagskraften i forskningen. Avhandlingen erbjuder inte en färdig lösning, utan en ingång till inter- och transdisciplinärt samarbete – en inbjudan att leka med och föreställa sig en framtid formad av dialog, reflexivitet och gemensamt utforskande.

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I can’t carry it for you, but I can carry you.

Borrowing this line from Samwise Gamgee in *The Lord of the Rings*, an analogy first introduced to me by a dear colleague, it captures the depth of companionship and support. I too have felt carried by many throughout this journey. Although this thesis bears my name, it is the result of collective effort, built on teamwork and contributions, both visible and behind the scenes, from colleagues at GIH and beyond. Their support, insights, and encouragement have been invaluable, and I am deeply grateful.

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Sara Hoy
Saltsjö-Boo & Färnsviken, August 2025

Appendices

Appendix A

GIH PHYSICAL ACTIVITY & BRAIN HEALTH

Välkommen att medverka i en forskningsstudie för skolor och skolungdomar

Under läsåren 2021/22 och 2022/23 genomför Gymnastik- och idrottshögskolan, GIH, en studie med elever och skolor från i årskurs 7-9. Syftet är att undersöka hur skolan kan bidra till regelbunden fysisk aktivitet för skolungdomar.

Projektet innebär att de deltagande skolorna strävar efter att realisera det den svenska läroplanen uttrycker kring fysisk aktivitet: *"... Skolan ska även sträva efter att erbjuda alla elever daglig fysisk aktivitet inom ramen för hela skoldagen". (Lgr 2011, rev. 2022)*

Kunskapen om i vilken utsträckning och på vilka sätt skolor lever upp till denna ambition är mycket begränsad. Detta projekt syftar till att undersöka hur skolor tar sig an ambitionen att erbjuda alla elever fysisk aktivitet inom ramen för hela skoldagen. Vilka möjligheter och hinder finns avseende skolans organisation, styrning och ledning? Vilka möjligheter och hinder finns avseende skolmiljön, bland annat med avseende på schemaläggning, lokaler, skolgård och skolans närmiljö? Vilka pedagogiska utmaningar är förknippade med ambitionen, t ex med avseende på att en del elever redan är mycket fysiskt aktiva medan andra är i stort sett inaktiva. Forskningsdata samlas in med hjälp av observationer, intervjuer, dokumentanalyser och eventuellt också fysiska aktivitetsmätningar.

Du får detta brev då din skola har tackat ja till att delta i studien. Samtliga elever och personal i klassen/skolan får detta brev.

Vad innebär det att delta?

Forskare kommer under skolåret även att bedriva observationer på skolan och informella samtal kring rörelsevanor kan förekomma. Du kan även bli inbjuden till att medverka i intervjuer och/eller enkäter och så vidare under forskningsperioden. Om du blir tillfrågad om att bli intervjuad, tar intervjun omkring 15-45 minuter, den omfattar framförallt frågor kring relationen till fysisk aktivitet i och utanför skolan samt hur skolan kan jobba med rörelse. Intervjun kan genomföras enskilt, i par eller i liten grupp. Intervjun spelas även in, transkriberas och avidentifieras, för att sedan sparas på en säker server (se nedan information om hur dina uppgifter hanteras och skyddas). Om du blir tillfrågad om att svara på en enkät tar den omkring 15 minuter att svara på, och även den omfattar framförallt frågor kring relationen till fysisk aktivitet i och utanför skolan samt hur skolan kan jobba med rörelse.

Vill du delta? Viktigt

Om du får frågan att delta i studien får du (och dina vårdnadshavare om du är skolungdom) skriva under samtyckesformulär.

Risker

Risker kopplande till detta forskningsprojekt bedöms vara minimala. Vår erfarna forskningspersonal månar om att alla deltagare i vår studie ska få en så bra upplevelse som möjligt och anpassar samtliga delar så att alla deltagare ska känna sig bekväma.

Försäkring

En särskild personskadeförsäkring från Kammarkollegiet gäller när du deltar i denna studie. Denna försäkring ger ett ändamålsenligt försäkringsskydd för samtliga forskningspersoner som deltar.

Hur kan du få information om studiens resultat?

Forskarna kommer fortlöpande att informera om studiens resultat på vetenskapliga konferenser och i vetenskapliga tidskrifter. Denna information kommer att ges på gruppnivå, vilket betyder att inga resultat från enskilda individer kommer att presenteras. En kort populärvetenskaplig rapport kommer även att skickas till samtliga deltagare efter att resultaten är sammanställda.

Konfidentiellt och frivilligt

Medverkan i undersökningen är givetvis frivilligt och du kan när som helst avsluta ditt deltagande utan att förklara varför. Om du avslutar och vill att dina svar ska tas bort så gör vi det. Alla dina uppgifter som du lämnar hanteras konfidentiellt (se "hur skyddas dina uppgifter" nedan. Om du vill avbryta ditt deltagande ska du kontakta den ansvariga för studien (se nedan).

Har ni frågor? Kontakta oss gärna!

Håkan Larsson (ansvarig forskare för studien): hakan.larsson@gih.se

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Hemsida: https://www.gih.se/hjarnhalsaiskolan

Dataskyddsombud på GIH nås på gdpr@gih.se

Hur skyddas dina uppgifter?

I undersökningen kommer vi att samla in följande uppgifter om dig som deltagare; kontaktuppgifter och information som dig som deltagare och vårdnadshavare. Intervjuer och anteckningar kommer att spelas in, sparas digitalt och sedan transkriberas. Enkätsvar kommer att hanteras digitalt. Dina svar avidentifieras och sparas på en säker server (se nedan).

All data i studien är avidentifierad, vilket betyder att vi ersätter dina personuppgifter med en kodsiffra. Kopplingen mellan personuppgifter och kodsiffra finns i en kodlista. Under all analys används endast kodsiffran. Bara personer som arbetar med studien har tillgång till kodlistan, som förvaras inlåst på GIH. Ingen information som kan härledas till dig som person kommer att ges ut till någon annan än dig själv. Informationen kommer inte användas för andra ändamål utan ert godkännande.

Samtliga pappersloggar och samtyckesformulär kommer att förvaras inlåsta vid institutionens arkivskåp vid GIH. Digitalt sparade uppgifter och data förvaras avidentifierat på en säker server på GIH som endast ansvariga forskare och forskningspersonal har tillgång till. Övriga forskare i projektgruppen kommer ha tillgång till en kopia av data via en delad mapp i en molnlösning som säkras av GIH. För identifiering av data används deltagarnummer. Kopplingen mellan nummer och personuppgifter beskrivs i en kodlista som förvaras inlåst. Data och kodlista är endast tillgängliga för ansvarig forskare och andra medarbetare enligt denna ansökan. Om tredje man hanterar data kommer personuppgiftsbiträdesavtal tecknas för att skydda personuppgifterna enligt gällande förordningar.

Dina personuppgifter och övriga uppgifter om dig som samlas in skyddas av bestämmelser om sekretess enligt offentlighets- och sekretesslagen, vilket innebär att ingen obehörig får ta del av uppgifterna. Personuppgiftsansvarig för denna studie är GIH. Då GIH är en statlig myndighet skyddas personuppgifter och all data enligt lagstiftningen om allmänna handlingar, myndigheters arkiv och offentlig statistik. All information sparas i 10 år. GIH behandlar personuppgifter i enlighet med Europaparlamentets och rådets förordning (EU) 2016/679 (General Data Protection Regulation, GDPR)). Enligt EU:s dataskyddsförordning har du rätt att kostnadsfritt få ta del av de uppgifter om dig som hanteras i studien, och vid behov få eventuella fel rättade. Du kan också begära att uppgifter om dig raderas samt att behandlingen av dina personuppgifter begränsas. Om du vill ta del av uppgifterna ska du kontakta projektansvarig forskare Håkan Larsson: hakan.larsson@gih.se telefon: 08-120 538 28. Dataskyddsombud nås på gdpr@gih.se. Om du är missnöjd med hur dina personuppgifter behandlas har du rätt att ge in klagomål till Integritetskyddsmyndigheten, IMY, som är tillsynsmyndighet.

Appendix B

Intervjuguide för elever

Intervjuer kan genomföras både enskilt, i par eller i en liten grupp. Informationsbrev och samtycke ges och skrivs under innan intervju sätt igång och spelas in.

- **Presentation**
  - Jag presenterar mig själv och projektet väldigt kort. Intervjupersonen får presentera sig
  - I presentationen ska gärna ingå
    - Hur länge vederbörande gått på skolan
    - Bor personen nära eller långt ifrån skolan, hur tar man sig vanligtvis till skolan
    - Intressen, fysisk aktivitet, idrott eller liknande utanför skolan
    - Inomhus/utomhus?
    - Vanor kring rörelse i familjen?

- **Daglig rörelse i skolan – enligt Lgr 11** *("… sträva efter att erbjuda alla elever daglig fysisk aktivitet inom ramen för hela skoldagen.")*
  - Hur uppfattar du detta uppdrag skolan har?
  - Vad kan skolor/denna skola göra för att förverkliga detta? Vilka är möjligheterna? Vilka är utmaningarna?

    Här lyfts vid behov upp frågor kring:
    - Var, när och vem som ska göra vad?
    - Vad/vilka påverkar möjligheter/hinder till rörelse?
  - Finns det specifika policys, projekt eller andra initiativ kring fysisk aktivitet/rörelse (och ev hälsa?) på just din skola som du känner till?

- **Hur rör du dig nu på högstadiet, jämfört med när du gick på mellanstadiet?**

- **Om du skulle röra på dig mer under skoldagen, hur skulle du vilja gör det?**

- **Hur är du fysiskt aktiv i relation till andra elever?**

  Här lyfts vid behov upp frågor kring:

  - Om/När du är fysisk aktiv, gör du det helst själv, eller med en eller flera kompisar?
  - Hur influerar kompisar på om man rör på sig eller inte?

- **Skolpersonalens rörelsevanor (idéer/värderingar av rörelse)? Påverkar dessa dig i någon utsträckning?**

- **Finns det någon annan du tycker att jag bör intervjua/träffa?**

Tack för din medverkan ☺

Appendix C

Intervjuguide för skolpersonal

Intervjuer kan genomföras både enskilt, i par eller i en liten grupp. Informationsbrev och samtycke ges och skrivs under innan intervju sätt igång och spelas in.

- **Presentation**
  - Jag presenterar mig själv och projektet väldigt kort. Intervjupersonen får presentera sig, med fokus på vilken uppgift hen har på skolan, både formellt och informellt (eventuella mer eller mindre outtalade förväntningar)
  - I presentationen ska gärna ingå
    - Utbildning
    - Hur länge vederbörande jobbat på skolan, med nuvarande uppgifter
    - Eventuellt tidigare arbete på andra skolor

- **Daglig rörelse i skolan – enligt Lgr 11** *("... sträva efter att erbjuda alla elever daglig fysisk aktivitet inom ramen för hela skoldagen.")*
  - Hur uppfattar du detta mål/uppdrag?
  - Vad kan skolor/denna skola göra? Vilka är möjligheterna? Vilka är utmaningarna?

    Här lyfts vid behov upp frågor kring:
    - Var (den fysiska miljön), när (schemat) och vem som ska göra vad (organisationsaspekten)
    - Vad/vilka påverkar möjligheter/hinder till rörelse
      - utanför skolan (yttre kontext/aktörer)?
      - inom skolan (inre kontexten/aktörer)?
      - hur projekt/initiativ är utformade (karaktär av FA-initiativ)?
  - Finns det specifika policys, projekt eller andra initiativ kring fysisk aktivitet/rörelse (och ev hälsa?) på just denna skola?

- **Elevernas rörelsevanor och idéer/värderingar av rörelse**
  - På skolan (ex transport till skolan, under skoltid med lektioner och raster, samt i anslutning till skolan)?
  - I relation till andra elever?
  - På fritiden?

- **Personalens rörelsevanor, och idéer/värderingar av rörelse?**

- **Hur ser den sociala miljön (samarbeten, nätverk och kommunikation) kring rörelse/FA ut inom skolans organisation?** (Om den inte 'finns', hur skulle den hypotetiskt kunna se ut om du fick välja?)

  Här lyfts vid behov upp frågor kring:

  - Hur ser tillgång till kunskap och information om fysisk aktivitet på skolan? Vem får du denna av/ger du denna till? Vilka är 'dina' nyckelpersoner?
  - Hur involveras olika personer? Hur fungerar kommunikation och relationer i organisationen när det kommer till FA/rörelse?
  - Kan du beskriva dina arbetsrelationer med dina kollegor (ev specifikt kring FA/rörelse)?

- **Finns det någon annan du tycker att jag bör intervjua/träffa?**

Tack för din medverkan ☺

Appendix D

Fältanteckningar *datum, år, skola*
Namn på forskare

Dessa förslag är till störst del baserade på Spradley (1980), specifikt i kombination med "Beskrivande frågematris".

Fyra typer av fältanteckningar är presenterade här, baserat på Spradley (1980): 'Condensed Account', 'Expanded Account', 'Analysis & Interpretation', och 'Fieldwork Journal'.

Fältanteckning, deltagande observation	**Vem och var har observerats?**	**Datum, tid och forskare**	**Nivå av deltagande** Passiv – aktiv, eller mittemellan	**Språk** Vems röst är det som antecknas? Sammanfattad eller vidare-utvecklad Verbatim? Citat?

Personlig fältdagbok (reflektioner, tolkningar och eventuell analytiska aspekter)
Här skriver du som enskild forskare dina egna reflektioner, tankar, känslor och så vidare. Men även de anteckningar som karaktäriseras av analyser och tolkningar.

Anteckning	**Kommentarer**

Referenser
Spradley, J. P. (1980). *Participant Observation*: Holt, Rinehart and Winston.

Appendix E

Skolpersonals uppfattning av fysisk aktivitet och rörelseaktiviteter under skoldagen för elever i årskurs 7 till 9

Vi önskar din hjälp med att förstå hur skolpersonalens engagemang i fysisk aktivitet och rörelseaktiviteter för elever i årskurs 7 till 9 under skoldagen uppfattas och genomförs. Denna enkät är en del i forskningsprojektet *Regelbunden fysisk aktivitet hos ungdomar i skolan – hur får vi det att ske?* vid Gymnastik och Idrottshögskolan (GIH). Mer information om studien hittar du i det informationsbrev du mottagit i samband med enkäten, information som du behåller. Målet är att öka kunskapen om fysisk aktivitet under skoldagen och att utforska faktorer som kan bidra till genomförande av rörelseaktiviteter för elever i årskurs 7-9, även benämnt som högstadieelever i enkäten.

Denna enkät tar cirka 15 minuter att fylla i. Den är uppdelad på 6 kortare delar, med totalt 33 frågor. Din medverkan är frivillig och dina svar är konfidentiella. *Basera dina svar på frågorna utifrån din uppfattning av det senaste året.*

Samtycke till att delta i projektet

Jag har fått skriftlig information om studien och har haft möjlighet att ställa frågor. Jag får behålla den skriftliga informationen.

Jag samtycker till att delta i projektet Regelbunden fysisk aktivitet hos ungdomar i skolan – hur får vi det att ske?

☐ Ja

Del 1: Bakgrund I följande del kommer du att få frågor om din bakgrund.

Vänligen ange ditt kön:

- [ ] Kvinna
- [ ] Man
- [ ] Annat

När är du född?

[ ] - [ ] - [ ]

I vilket land är du född?

[ ]

Hur många procent har du arbetat på skolan under det senaste året? Vänligen ange i genomsnitt.

- [ ] Mindre än 50%
- [ ] 50-75%
- [ ] Mer än 75%

Hur många år har du arbetat på din nuvarande skola?

- [ ] Mindre än 1 år
- [ ] 1-5 år
- [ ] 6-10 år
- [ ] 11-25 år
- [ ] 16-20 år
- [ ] 21 år eller fler

Hur många år har du arbetat på skolor totalt?

- [ ] Mindre än 1 år
- [ ] 1-5 år
- [ ] 6-10 år
- [ ] 11-25 år
- [ ] 16-20 år
- [ ] 21 år eller fler

Vilka av följande årskurser från 7 till 9 arbetar du med på din nuvarande skola? Markera samtliga svarsalternativ som stämmer in.

- [ ] Årskurs 7
- [ ] Årskurs 8
- [ ] Årskurs 9

Har du en lärarexamen eller annan högskoleexamen? Här kan du kryssa för flera svarsalternativ.

- [ ] Nej
- [ ] Grundskolelärare åk 1-7
- [ ] Grundskolelärare åk 4-9
- [ ] Mellanstadielärarexamen
- [ ] Högstadielärarexamen
- [ ] Ämneslärarexamen
- [ ] Yrkeslärarexamen
- [ ] Specialpedagogexamen
- [ ] Annan examen, vänligen ange vilken/vilka

Vilken är din huvudsakliga roll på skolan?

- [ ] Skolledning
- [ ] Administratör
- [ ] Elevhälsoteamet
- [ ] Lärare
- [ ] Mentor
- [ ] Annan, vänligen specificera

Om du är lärare, i vilka ämnen undervisar du? Här kan du kryssa för flera svarsalternativ.

- [ ] Är inte lärare
- [ ] Bild
- [ ] Biologi
- [ ] Engelska
- [ ] Franska
- [ ] Fysik
- [ ] Geografi
- [ ] Hem- och konsumentkunskap
- [ ] Historia
- [ ] Idrott och hälsa
- [ ] Kemi
- [ ] Matematik
- [ ] Musik
- [ ] Religionskunskap
- [ ] Samhällskunskap
- [ ] Slöjd
- [ ] Spanska
- [ ] Svenska
- [ ] Svenska som andraspråk
- [ ] Teknik
- [ ] Tyska
- [ ] Annat ämne, vänligen specificera

Om du är lärare, är du behörig/utbildad lärare i de ämnen du undervisar i?

- [ ] Ja
- [ ] Nej
- [ ] Delvis
- [ ] Är inte lärare

Jobbade du på din nuvarande skola under läsåret 2021-2022?

- [ ] Ja
- [ ] Nej

Del 2: Kommunikation på jobbet I det här delen kommer du att få frågor om dina professionella relationer och nätverk med kollegor på din skola. Främst gäller det relationer som rör all skolpersonal som direkt interagerar med eller indirekt hanterar högstadieelever. Som en påminnelse kommer namnen du anger och din identitet att hållas konfidentiella eftersom namnen omvandlas till nummer för att bevara anonymiteten.

Vem har du spenderat mest tid med på jobbet under det senaste året? Vänligen ange från 0 upp till 7 personer. För varje person, ange deras för- och efternamn. Ange "Ingen" om antalet personer är 0.

	1	2	3	4	5	6	7
För- och efternamn							

Vilka kollegor på din skola har du främst diskuterat frågor rörande högstadieelever med under det senaste året? Vänligen ange från 0 upp till 7 personer. För varje person, ange deras för- och efternamn. Ange "Ingen" om antalet personer är 0.

	1	2	3	4	5	6	7
För- och efternamn							

Vilka kollegor på din skola har du haft diskussioner med om fysisk aktivitet/rörelseaktiviteter för högstadieelever under det senaste året? Vänligen ange från 0 upp till 7 personer. För varje person, ange deras för- och efternamn. Ange "Ingen" om antalet personer är 0.

	1	2	3	4	5	6	7
För- och efternamn							

Vilka kollegor på din skola har du gått till för att få råd om högstadieelevers fysisk aktivitet/rörelseaktiviteter under det senaste året? Vänligen ange från 0 upp till 7 personer. För varje person, ange deras för- och efternamn. Ange "Ingen" om antalet personer är 0.

	1	2	3	4	5	6	7
För- och efternamn							

Del 3: Fysisk aktivitet och rörelseaktiviteterI den här delen kommer du att få frågor kring dina uppfattningar och erfarenheter om fysisk aktivitet och rörelseaktiviteter.

Hur definierar du fysisk aktivitet? Detta är en öppen fråga, vänligen beskriv nedan.

Hur viktigt är fysisk aktivitet… 1 = Inte viktigt, 2-3 = Lite viktigt, 4 = Till viss del viktigt, 5-6 = Ganska viktigt, 7 = Mycket viktigt

	1	2	3	4	5	6	7
… för dig personligen?	☐	☐	☐	☐	☐	☐	☐
… för din generella hälsa?	☐	☐	☐	☐	☐	☐	☐
… för ditt sociala liv?	☐	☐	☐	☐	☐	☐	☐
… för ditt familjeliv?	☐	☐	☐	☐	☐	☐	☐
… din känsla av lokal gemenskap (community)?	☐	☐	☐	☐	☐	☐	☐
… för dig professionellt?	☐	☐	☐	☐	☐	☐	☐

I vilken utsträckning upplever du att din skola... 1 = Inte alls, 2-3 = I liten utsträckning, 4 = I viss utsträckning, 5-6 = I ganska stor utsträckning, 7 = I stor utsträckning

	1	2	3	4	5	6	7
... tycker att fysisk aktivitet är viktigt för högstadieelever under skoldagen?	☐	☐	☐	☐	☐	☐	☐
… prioriterar fysisk aktivitet för högstadieelever under skoldagen?	☐	☐	☐	☐	☐	☐	☐
… stödjer skolpersonal i att genomföra fysisk aktivitet för högstadieelever under skoldagen?	☐	☐	☐	☐	☐	☐	☐
… schemalägger tillräckligt med tid för fysisk aktivitet för högstadieelever under skoldagen?	☐	☐	☐	☐	☐	☐	☐
… uppmuntrar högstadieelever till fysisk aktivitet för under skoldagen?	☐	☐	☐	☐	☐	☐	☐

På vilka sätt tycker du att fysisk aktivitet / rörelseaktiviteter värdesätts eller inte värdesätts under skoldagen för elever i årskurs 7-9? Detta är en öppen fråga, vänligen beskriv nedan.

Hur ofta skulle du säga att du prioriterar fysisk aktivitet / rörelseaktiviteter i ditt arbete med högstadieelever under en skoldag? 1 = Aldrig, 2-3 = Sällan, 4 = Ibland, 5-6 = Ofta, 7 = Alltid

1	2	3	4	5	6	7
☐	☐	☐	☐	☐	☐	☐

Var genomför du fysisk aktivitet / rörelseaktiviteter för högstadieelever i ditt arbete? Välj ett eller flera alternativ.

- ☐ Ingenstans
- ☐ Klassrum
- ☐ Raster
- ☐ Idrott och hälsa-lektioner
- ☐ Särskilda evenemang/besök
- ☐ Före/efter-skolanaktivitet
- ☐ Aktiv transport till/från skolan
- ☐ Familj/Lokal gemenskap (community)
- ☐ Annat, vänligen specificera

När du genomför rörelseaktiviteter för högstadieelever i ditt arbete, hur skulle du beskriva dessa aktiviteter? Detta är en öppen fråga, vänligen beskriv nedan.

Finns det möjligheter för elever att vara delaktiga i planering och/eller ledning av dessa rörelseaktiviteter?

- ☐ Ja
- ☐ Nej
- ☐ Vet ej

Del 4: Förmåga att genomföra fysisk aktivitet och rörelseaktiviteterI den här delen kommer du att få frågor om dina uppfattningar om förmågor som behövs för att genomföra fysisk aktivitet och rörelseaktiviteter för högstadieelever under skoldagen. Med förmågor menar vi till exempel sådant som rör kunskap, kompetens, och tilltro till din egen förmåga att genomföra och engagera högstadieelever i rörelseaktiviteter.

I vilken utsträckning upplever du att du har tillräckligt med... 1 = Inte alls, 2-3 = I liten utsträckning, 4 = I viss utsträckning, 5-6 = I ganska stor utsträckning, 7 = I stor utsträckning

	1	2	3	4	5	6	7
… kunskap för att planera rörelseaktiviteter för högstadieelever?	☐	☐	☐	☐	☐	☐	☐
… kunskap för att genomföra rörelseaktiviteter för högstadieelever?	☐	☐	☐	☐	☐	☐	☐
… tillit till din egen förmåga att utföra rörelseaktiviteter för högstadieelever?	☐	☐	☐	☐	☐	☐	☐
… tillit till din egen förmåga att engagera högstadieelever i rörelseaktiviteter?	☐	☐	☐	☐	☐	☐	☐

Hur skulle du beskriva de kunskaper du upplever krävs för att kunna genomföra rörelseaktiviteter gör högstadieelever under skoldagen? Detta är en öppen fråga, vänligen

Del 5: Uppfattningar kring riktlinjer i läroplanen för fysisk aktivitet i svensk skolaFöljande del fokuserar på dina uppfattningar om den svenska riktlinjen för rörelse som är inskriven i den allmänna läroplanen (Lgr 11, rev. 22): "...skolan ska också sträva efter att ge alla elever daglig fysisk aktivitet inom ramen för hela skoldagen...".

Vad är din uppfattning om den ovan beskrivna riktlinjen för fysisk aktivitet? I vilken utsträckning är riktlinjen… 1 = Inte alls, 2-3 = I liten utsträckning, 4 = I viss utsträckning, 5-6 = I ganska stor utsträckning, 7 = I stor utsträckning

	1	2	3	4	5	6	7
… tydlig och lätt att förstå	☐	☐	☐	☐	☐	☐	☐
… uppnåelig / realistisk	☐	☐	☐	☐	☐	☐	☐
… lika viktig som andra/övriga riktlinjer i läroplanen	☐	☐	☐	☐	☐	☐	☐

Innan den här studien, kände du till riktlinjen för fysisk aktivitet för svensk skola?

☐ Ja

☐ Nej

Om ja på fråga 30, vem har informerat dig om denna riktlinje för fysisk aktivitet? Du kan välja ett eller flera alternativ.

- ☐ Svarade nej på fråga 30
- ☐ En lärare
- ☐ Skolledning
- ☐ Skoladministratör
- ☐ Idrottslärare
- ☐ Annan, vänligen specificera

Del 6: Ditt eget deltagande i rörelseaktiviteter och fysisk aktivitet I den här delen kommer du att få frågor om dina fysiska aktivitetsvanor och prioritet av rörelseaktiviteter.

Om din aktivitet varierar under året, försök ta något slags genomsnitt. Fråga 32 handlar om regelbunden motion och träningsaktiviteter som gör att du blir andfådd och svettas medan fråga 33 handlar om måttligt ansträngande fysisk aktivitet som får dig att andas något kraftigare än normalt t.ex. promenader i rask takt, trädgårdsarbete, cykling eller simning.

Hur mycket tid ägnar du en vanlig vecka åt fysisk träning som får dig att bli andfådd, till exempel löpning, motionsgymnastik eller bollsport?

- ☐ 0 minuter/ingen tid
- ☐ Mindre än 30 minuter
- ☐ 30-59 minuter (0,5-1 timme)
- ☐ 60-89 minuter (1-1,5 timmar)
- ☐ 90-119 minuter (1,5-2 timmar)
- ☐ 2 timmare eller mer

Hur mycket tid ägnar du en vanlig vecka åt vardagsaktiviteter, till exempel promenader, cykling eller trädgårdsarbete? Räkna samman all tid.

- ☐ 0 minuter/ingen tid
- ☐ Mindre än 30 minuter
- ☐ 30-59 minuter (0,5-1 timme)
- ☐ 60-89 minuter (1-1,5 timmar)
- ☐ 90-149 minuter (1,5-2,5 timmar)
- ☐ 150-299 minuter (2,5-5 timmar)
- ☐ 5 timmar eller mer

Hur mycket sitter du under ett normalt dygn om man räknar bort sömn?

- ☐ Mer än 15 timmar
- ☐ 13-15 timmar
- ☐ 10-12 timmar
- ☐ 7-9 timmar
- ☐ 4-6 timmar
- ☐ 1-3 timmar
- ☐ Aldrig

I vilken utsträckning är fysisk aktivitet / rörelseaktiviteter en prioritet i ditt eget dagliga liv? 1 = Låg prioritet, 2-3 = Ganska låg prioritet, 4 = Måttlig prioritet, 5-6 = Ganska hög prioritet, 7 = Hög prioritet

1	2	3	4	5	6	7
☐	☐	☐	☐	☐	☐	☐

Detta är slutet på enkäten.Om du har ytterligare kommentarer som rör studien eller om fysisk aktivitet för högstadieelever under skoldagen i allmänhet, vänligen beskriv dessa nedan.

Övriga kommentarer

Appendix F

GIH | FYSISK AKTIVITET & HJÄRNHÄLSA

Du och dina klasskompisar är inbjudna att medverka i en unik forskningsstudie för skolungdomar!

Under höstterminen 2019 genomför Gymnastik- och idrottshögskolan, GIH, en stor studie på 1000 elever i årskurs 7. Syftet är att undersöka samband mellan fysisk aktivitet, kost och hälsosamma hjärnfunktioner (psykisk hälsa och tankemässiga förmågor). Resultaten från studien kommer ligga till grund för rekommendationer till skolor om vilken typ av rörelse och kost som ungdomar behöver för att må så bra som möjligt och för att lära sig bättre i skolan.

Du får detta brev då din skola har tackat ja till att delta i studien. Samtliga elever i din klass bjuds in till att delta, och får detta brev. Totalt erbjuds elever från 74 klasser i årskurs 7 att delta i denna forskningsstudie. *Din skola/klass är inplanerad att komma till GIH (dag, datum, månad)*

Projektet omfattar alla elever oavsett funktionsförmåga. Kontaktpersonerna på respektive skola anmäler eventuella funktionsnedsättningar till oss i förväg så att vi kan anpassa respektive del så att alla kan delta. Det går även bra att kontakta oss direkt så berättar vi mer om testerna och möjliga anpassningar.

PRESENTKORT SOM TACK FÖR HJÄLPEN!
Som tack för hjälpen får du ett presentkort på 300 kr när du är klar med alla mätningar och lämnat tillbaka dina aktivitetsmätare. Det gäller i ett flertal affärer (https://www.anygift.se/guldpresentkortet).

VAD INNEBÄR DET ATT DELTA? På undersökningsdagen får ni genomföra följande delar:

1. Du och dina klasskompisar kommer till GIH klassvis med en eller flera lärare med tåg eller buss.
2. Information om dagen och mellanmål
3. Kognitionstester (ett slags minnestest som görs individuellt på en dator). Du och dina klasskompisar får inte reda på era resultat och kan inte jämföra resultat med någon annan.
4. Du genomför ett konditionstest där du ska cykla på en spinning cykel i ungefär åtta minuter. Du får välja om du vill byta om och duscha.
5. Du får en aktivitetsmätare som mäter hur du rör dig – du ska bära den under sju dagar. Dessutom mäter vi vikt, längd och kroppssammansättning (detta sker individuellt i avskilt med kläder).
6. Du får fylla i ett frågeformulär om dina hälsovanor och göra en kostregistrering (en typ av matdagbok som du sedan fyller i hemma under två dagar).
7. Lunch i GIH:s restaurang
8. Du och dina klasskompisar är klara för dagen och åker hem med tåg/buss

En vecka efter undersökningsdagen lämnar du in aktivitetsmätaren som du använt under en vecka till kontaktpersonen på din skola som skickar tillbaka den till oss.

Dina resultat från nationella proven i svenska och matematik samt betyg från dessa skolämnen i årskurs 6/7 kommer att samlas in i efterhand från Statistiska centralbyrån. Resultaten används för att undersöka eventuella samband mellan fysisk aktivitet och studieresultat.

VILL DU DELTA? VIKTIGT: För att delta i studien måste du och din/dina vårdnadshavare skriva under samtyckesformulären som finns i det här brevet.
Lämna in de ifyllda formulären till: (lärarens namn) senast: (datum).

Risker

Vi förstår att man kan tycka att det är obehagligt att väga och mäta sig, och att vissa frågor kan vara känsliga att svara på. Vi månar därför om deltagarnas integritet genom att genomföra vissa delar i ett avskilt rum (vikt och längdmätning). Vi använder även studieskärmar mellan datorerna för att skydda deltagarnas uppgifter. Du kan bli svettig av konditionstestet, men eftersom du kommer att cykla på en relativt låg intensitet så återhämtar du dig inom någon minut och hälsorisker är minimala. Vår erfarna forskningspersonal månar om att alla deltagare i vår studie ska få en så bra upplevelse som möjligt och anpassar samtliga delar så att alla deltagare ska känna sig bekväma.

Försäkring

En särskild personskadeförsäkring från Kammarkollegiet gäller när du deltar i denna studie. Denna försäkring ger ett ändamålsenligt försäkringsskydd för samtliga forskningspersoner som deltar.

Hur kan du få information om studiens resultat?

Forskarna kommer fortlöpande att informera om studiens resultat på vetenskapliga konferenser och i vetenskapliga tidskrifter. Denna information kommer att ges på gruppnivå, vilket betyder att inga resultat från enskilda individer kommer att presenteras. En kort populärvetenskaplig rapport kommer även att skickas till samtliga deltagare efter att resultaten är sammanställda.

Till vårdnadshavare Du/ni kommer att få fylla i ett kort frågeformulär som skickas till den e-post adress du angivit på samtyckesformuläret. Det är frivilligt att svara och alla dina uppgifter hanteras konfidentiellt (se "hur skyddas dina uppgifter" nedan).

Konfidentiellt och frivilligt

Vi hoppas att du vill vara med i undersökningen men det är givetvis frivilligt att delta och du kan när som helst avsluta ditt deltagande utan att förklara varför. Om du avslutar och vill att dina svar ska tas bort så gör vi det. Alla dina uppgifter som du lämnar hanteras konfidentiellt (se "hur skyddas dina uppgifter" nedan. Om du vill avbryta ditt deltagande ska du kontakta den ansvariga för studien (se nedan).

Har ni frågor? Kontakta oss gärna!

E-post: hjarnhalsabarn@gih.se
Telefon: 08-120 538 11
Hemsida: https://www.gih.se/hjarnhalsaiskolan

Gisela Nyberg (ansvarig forskare för studien): gisela.nyberg@gih.se

Karin Kjellenberg (doktorand) karin.kjellenberg@gih.se

Andra medverkande forskare: Örjan Ekblom: orjan.ekblom@gih.se

Dataskyddsombud på GIH nås på gdpr@gih.se

Hur skyddas dina uppgifter?

I undersökningen kommer vi att samla in följande uppgifter om dig som deltagare; kontaktuppgifter (erhålls från skolan) och personnummer (samlas in i pappersform på samtyckesformuläret), information som du som deltagare och vårdnadshavare lämnar till oss digitalt i frågeformulären, deltagarens kostregistrering och kognitionstester som hanteras och sparas digitalt. Data från rörelsemätare sparas först lokalt på mätaren och laddas sedan ner digitalt. Information om din vikt, längd, kroppssammansättning, pubertetsutveckling, samt resultat från konditionstestet loggas först på papper och sedan digitalt.

All data i studien är pseudonymiserad, vilket betyder att vi ersätter dina personuppgifter med en kodsiffra. Kopplingen mellan personuppgifter och kodsiffra finns i en kodlista. Under pågående studie faller kodlistan under personuppgiftslagen (PUL). Under all analys används endast kodsiffran. Bara personer som arbetar med studien har tillgång till kodlistan, som förvaras inlåst på GIH. Efter studien förstörs kodlistan. Ingen information som kan härledas till dig som person kommer att ges ut till någon annan än dig själv. Informationen kommer inte användas för andra ändamål utan ert godkännande.

Samtliga pappersloggar och samtyckesformulär kommer att förvaras inlåsta på Åstrandlaboratoriet samt Hjärnlabbet vid GIH. Digitalt sparade uppgifter och data (digitaliserade loggar från vikt, längd, kroppsammansättning och konditionstest, data från frågeformulär, kostregistrering, kognitionstester och data från rörelsemätare) förvaras avidentifierat på en säker server på GIH som endast ansvariga forskare och forskningspersonal har tillgång till. Övriga forskare i projektgruppen kommer ha tillgång till en kopia av data via en delad mapp i en molnlösning som säkras av GIH. För identifiering av data används deltagarnummer. Kopplingen mellan nummer och personuppgifter beskrivs i en kodlista som förvaras inlåst. Data och kodlista är endast tillgängliga för ansvarig forskare och andra medarbetare enligt denna ansökan. Då Livsmedelverket förvaltar hemsidan med kostregistrering och frågeformulär kommer ett personuppgiftsbiträdesavtal tecknas för att skydda personuppgifterna enligt gällande förordningar.

Registerdata om deltagares resultat från nationella proven i svenska och matte samt betyg från dessa skolämnen 2019/2020 kommer att samlas in från skolverket. Statistiska central byrån (SCB) lämnar ut dessa uppgifter i avidentifierad form efter sekretessprövning om SCB bedömer att det finns stöd att behandla uppgifterna.

För att digitalt leverera ersättning (presentkort) kommer deltagarens e-postadress att skickas till presentkortsföretaget (Goyada) per e-post i en låst fil. För att skydda personuppgifterna enligt gällande förordningar tecknas ett personuppgiftsbiträdesavtal med företaget. För att kunna skicka ut SMS påminnelser till deltagarna kommer även en tjänst för detta att användas (SMS teknik) och även här kommer ett personuppgiftsbiträdesavtal tecknas med företaget för att skydda personuppgifterna enligt gällande förordningar.

Dina personuppgifter och övriga uppgifter om dig som samlas in skyddas av bestämmelser om sekretess enligt offentlighets- och sekretesslagen, vilket innebär att ingen obehörig får ta del av uppgifterna. Personuppgiftsansvarig för denna studie är GIH. Då GIH är en statlig myndighet skyddas personuppgifter och all data enligt lagstiftningen om allmänna handlingar, myndigheters arkiv och offentlig statistik. All information sparas i 10 år. GIH behandlar personuppgifter i enlighet med Europaparlamentets och rådets förordning (EU) 2016/679 (General Data Protection Regulation, GDPR) och enligt PUL (PUL 1998:204). Enligt EU:s dataskyddsförordning har du rätt att kostnadsfritt få ta del av de uppgifter om dig som hanteras i studien, och vid behov få eventuella fel rättade. Du kan också begära att uppgifter om dig raderas samt att behandlingen av dina personuppgifter begränsas. Om du vill ta del av uppgifterna ska du kontakta projektansvarig forskare Gisela Nyberg: gisela.nyberg@gih.se telefon: 08-120 538 11. Dataskyddsombud nås på gdpr@gih.se. Om du är missnöjd med hur dina personuppgifter behandlas har du rätt att ge in klagomål till Datainspektionen, som är tillsynsmyndighet

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Full articles

Article 1

Hoy, S., Thedin Jakobsson, B., Lunde, C., & Larsson, H. (2025). Negotiating adolescents' physically active life during the school day. *Frontiers in Sports and Active Living*, *7*. https://doi.org/10.3389/fspor.2025.1505189

Article 2

Hoy, S., Lunde, C., Larsson, H., Ekblom, Ö., Helgadóttir, B., & Nyberg, G. (2025). Matrices of (dis)advantage – school segregation and social inequities in adolescent physical activity from an intersectionality approach. *Sport, Education and Society*, 1–17. https://doi.org/10.1080/13573322.2025.2531381

Article 3

Hoy, S., Norman, Å., Larsson, H. & de la Haye, K. (Submitted manuscript). Combining social network analysis and ethnography to better understand staff and teachers' implementation of daily physical activity in secondary school.

Article 4

Hoy, S., Lunde, C., Ringberg, M., Helgadóttir, B. & Norman, Å. (Manuscript). How to measure context? A systematic review and a psychometric and pragmatic analysis of quantitative measurements for factors influencing implementation in school settings.

Schools are often portrayed in research as ideal arenas for promoting physical activity among young people, both internationally and in Nordic contexts. Yet, behind this seemingly straightforward idea lies a complex web of assumptions, values, and norms. The way physical activity and school settings are framed across academic discourses significantly shapes how change is imagined and pursued. Different research traditions approach this challenge in distinct ways: some focus on interventions to increase movement, others emphasize learning and meaning-making, while critical scholars interrogate power relations and advocate for emancipation. These approaches rest on divergent understandings of reality, knowledge, and ideals, which in turn shape how school environments are conceptualized, and construct our awareness of what physical activity is, how it should be studied, and why it matters.

This PhD thesis contributes by analyzing how school contexts are articulated across discourses in the pursuit of promoting physically active lives for young people. Through a meta-reflection on four individual articles, it integrates diverse studies and methodologies to critically explore how different forms of knowledge interact, and the implications this interaction entails. If certain perspectives are left out, it can shape and constrain which policies and innovations are considered relevant or even imaginable, potentially narrowing both research and decision-making in physical activity promotion. Rather than offering definitive solutions, the thesis invites dialogue across disciplines, fostering space for more nuanced, multidimensional approaches to address *effectiveness*, *meaningfulness*, and *equity*. It calls for attuned inter- and transdisciplinary collaboration, where different logics and values can coexist in productive tension.

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