



Review

# Towards Understanding Post-Socialist Migrants' Access to Physical Activity in the Nordic Region: A Critical Realist Integrative Review

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**Abstract:** Experiences of, and access and barriers to, physical activity (PA) differ between individuals. This becomes perpetuated in a migration context. Although there is super-diversity between migrant groups, health research rarely accounts for this cultural diversity. More concerning, the matter of context is rarely scrutinized or juxtaposed with the specifics of certain ethnic groups. This integrative review assessed the evidence on post-socialist migrants' PA levels, constraints, and enablers for PA in the Nordic region. The results show that post-socialist female migrants have an especially high risk of being physically inactive. The qualitative work elucidates socio-cultural factors that impose specific constraints on females when attempting to engage in PA. Furthermore, in scrutinizing the context, Nordic nature (Friluftsliv) is a viable way for migrants to access PA with additional health benefits (e.g., mental). However, the Nordic environment also poses specific PA challenges, such as harsh winters. This can be understood by considering post-socialist migrants' prior use of, and attitude to, nature. The review highlights the importance of understanding specifics about both migrant groups and contexts through a critical-realist lens in the pursuit of providing PA opportunities. Future PA programs need to understand the contextual, sociohistorical, and cultural settings in which they and migrants are embedded.

**Keywords:** post-socialist migrants; physical activity; Nordic nature; mental health



**Citation:** Mickelsson, Tony Blomqvist. 2021. Towards Understanding Post-Socialist Migrants' Access to Physical Activity in the Nordic Region: A Critical Realist Integrative Review. *Social Sciences* 10: 452. <https://doi.org/10.3390/socsci10120452>

Academic Editor: Carlos Teixeira

Received: 13 October 2021

Accepted: 23 November 2021

Published: 25 November 2021

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## 1. Introduction

The current flow of migration has posed several challenges for host country governments in relation to public health initiatives. Migrants face several barriers in their migration journey and must re-establish social networks, learn a new language, and work towards inclusion in a new labor market. Another profound challenge is that migrants seem to partake in PA less than the host population. This has severe implications for both individuals and society. Lower rates of PA are associated with depression (Camacho et al. 1991; Rebar et al. 2015), lower self-esteem (Schmalz et al. 2007), lower optimism (Pavey et al. 2015), somatic health (Penninx et al. 2013), and severity of non-communicable diseases (Lee et al. 2012). In turn, depression impacts one's labor market outcomes (Fletcher 2013). In this regard, health can be considered an important marker of integration that relates to broader macro-outcomes (Ager and Strang 2008). In summary, maintaining adequate levels of physical fitness is important from both an individual and societal perspective. Consequently, migrants present as a particularly vulnerable group that risks exclusion from, and deprivation of, PA due to their resettlement process.

This review systematically analyzes the levels, barriers, and enablers for PA amongst post-socialist migrants in the Nordic region. The reason for this narrow scope is a theoretical exploration of understanding specific migrant groups in specific settings. Contemporary migration and health research effectively conflate migrant groups' various conditions, strengths, and barriers; similarly, it does so in regard to the host country's PA barriers and enablers. To further understand this, it is imperative to not only state the correlational

nature of PA levels and different groups, but to theorize on the *why*. In this review, we analyze the material through a critical-realist lens. The benefit of doing so is that critical realism addresses how structure and culture exert influences on actors, and how actors respond to this.

The research questions that guided the review were: (1) What are the current PA levels of post-socialist migrants in the Nordic region? (2) What factors restrain or enable post-socialist migrants' participation in PA? We focused on the latter because of its theoretical relevance. However, before proceeding, we account for the critical-realist approach and how we may understand post-socialist migration in the Nordic regions.

#### *Different Groups and Different Places—A Critical-Realist Conception*

Migrant groups differ considerably in terms of culture, language, ethnicity, and so on. Following the argument put forth by Masri et al. (2021), this paper takes its departure from a belief that "... the physical activity experiences differ between [CALD] groups ..." (p. 2). The most common migrant populations that have been systematically assessed and studied in health and PA contexts are African, Middle Eastern, and Asian (Osei-Kwasi et al. 2016; Ngongalah et al. 2018; Masri et al. 2021). However, a group that has yet to be systematically assessed is post-socialist migrants. Although post-socialist migration has been overlooked due to the 'Arab spring' and other current events located primarily in the Middle East, the post-socialist regions have an extensive history of emigration due to the former Soviet Union's dissolution in 1991.

While Masri et al. (2021) and Capercione et al. (2009) suggest that some cultural and religious barriers pose a unique challenge for Middle Eastern migrant populations, other factors may be relevant when considering post-socialist migrants. For instance, post-socialist migration has become characterized by labor migration and 'brain drain' (Mattoo et al. 2008). Many post-socialist migrants work seasonally and then return home to their families, which makes their migratory journeys rather different compared to those of other migrant populations (Ryan et al. 2009). Moreover, post-socialist migrants are reported to suffer from poorer health compared to the host population. These reports allude to deteriorating health over time, despite improvements in socioeconomic status (Ronellenfitsch and Razum 2004). Other evidence suggests that this group displays a high prevalence of mental illness (Kerkenaar et al. 2013; Morawa and Erim 2015) and stress (de Almeida Vieira Monteiro and Serra 2011) compared to other populations. For example, in France, it has been found that post-socialist female migrants report lower levels of overall health compared to other migrant populations (Vaillant and Wolff 2010).

Based on previous studies, we know that PA levels do differ between different groups—but why? These findings have been empirically established, but it has remained under-theorized how culture affects such patterns. Taking a theoretical approach, this review underscores the importance of attaching meta-theoretical principles to understand how culture and structural factors affect PA patterns. Specifically, we utilize the tenets of critical realism. Critical realists assert that there is a mind-independent world 'out there', but that knowledge is obscured by social, cultural, and historical filters. Specifically, the review is inspired by the work of Margareth Archer, whose notion of structure and agency is rooted in a belief that we must view structures as a priori the agency of individuals (Archer 1995). Individuals and structures are understood as analytically separate entities but must be analyzed in relation to each other, over time (Archer 1995). When answering *why* PA levels differ between groups, the critical realist answer to this lies (partially) in what structural influences may shape the individual in the pursuit of, or access to, PA. The individual is born into an ecology, previously shaped by socio-historical forces (Archer 2003). These influences exist in institutions, organizations, and culture, and influence the individual through situational mechanisms. Yet, they do not deterministically shape the individual's actions. The individual possesses agency and can pursue different actions when presented with opportunities (or constraints). Consequently, the structural influences a particular individual carries with her are negotiated with her agency, in particular in times

of change (Danermark et al. 2019). Undoubtedly, change is a core feature of migration, and critical realism has been suggested as an appropriate framework to overcome the stagnant structure–agency debate (Bakewell 2010).

The critical-realist conceptualization requires a brief background of post-socialist countries' PA patterns so as to understand the cultural and structural influences that may impinge on migrants' PA patterns. In general, it has been found that the post-socialist region struggles in maintaining adequate levels of PA. Mrazek et al. (2004) found that Russians, as compared to Germans, were more externally motivated and seemed to enjoy PA less. Not surprisingly, their PA levels were also lower. These generally lower PA levels have been corroborated elsewhere (Gehrmann and Wicker 2021; Luszczynska et al. 2004; Biernat and Buchholtz 2016; Steptoe and Wardle 2001). This reflects a trend in Europe where, for example, obesity is becoming more prevalent (Krzysztozek et al. 2019), but where post-socialist countries seem to be at greater risk (Berghöfer et al. 2008). These findings have partially been attributed to the decline of health care and the shifting meaning of PA in post-socialist countries (Mrazek et al. 2004). Other reasons may be attributed to the changing character of households; for example, marriage and cohabitation have been found to correlate with decreased PA for Russian young adults, where sex seems to play a factor (Kolosnitsyna et al. 2020).

A look back in history may elucidate how the meaning of PA has changed. Historically, the Soviet Union maintained a centralized sports system, with tight control of physical education curriculums, organized sports, and so forth. Sport was highly valued by the Soviet Union, and sports institutions enjoyed plenty of funding (Riordan 2009). The high status of Soviet sports was reflected in their international sporting success. However, after the Soviet Union's dissolution, the socialist system fell apart, and the sporting institutions crumbled as the funding faded (Gehrmann and Wicker 2021). Possibly, sports were no longer part of a national identity in the same way they had been. Invoking a critical-realist understanding of these structures means that, presumably, post-socialist migrants are structurally influenced by such socio-historical forces and events that have occurred over time.

More importantly, most research fails to account for the host society's context; this clearly has important implications, considering that sports practices and access to PA vary tremendously between countries. Here, we depart from the minority-oriented perspective and argue for a nuanced picture in which we propose closer scrutiny of the host context in terms of barriers and possibilities. For this review, we limited post-socialist migration to the Nordic regions. Invoking a critical-realist lens once again in a migration context, an important analytical aspect is to understand *who*, *how*, and *when* migrants gain access to PA and what influences this.

The reason for choosing the Nordic context is not arbitrary. Many post-socialist migrants emigrated to the North after the Soviet Union's dissolution and especially after the enlargement of the EU in 2004. Currently, Russian and Polish migrants are large minority groups in both Norway and Finland. Briefly situating the Nordic region from a PA perspective, some key elements should be mentioned. PA levels have increased exponentially since the 1960s in the Nordic regions (Fridberg 2010), and Nordic countries are reportedly some of the most physically active in Europe (Delaney and Keaney 2005). Importantly, sports confederations in the North are funded to a great extent to facilitate the inclusion of ethnic minorities in sport (Skille 2011). However, despite promising possibilities for PA and a cultural setting that pushes towards a healthy lifestyle, the health of post-socialist migrants has been reported as poor in the Nordic regions (Sungurova et al. 2006). The reason for this may be due to low levels of PA and other structural issues, such as barriers to health services (Czapka and Sagbakken 2016) and tedious labor (Czapka 2012).

In summary, the current review aimed to synthesize the research on post-socialist migrants' PA levels and barriers/facilitators in the North. The contributions are twofold. First, few, if any, reviews have assessed post-socialist migrants' PA levels and health in depth. Secondly, the contextual information that we consider provides us with further information on contextually specific barriers and facilitators. Here lies a key aspect: public health goals can only be achieved through careful contextual consideration. This must be done concerning certain groups' position in a given society. This position may differ between groups, which calls for more nuanced analyses than simply conceiving migrants as homogenous groups. Following this assertion, the review's purpose is to contribute towards theoretical development. That is, we attempt to understand the synergy between a specific context and a specific group.

## 2. Materials and Methods

Since the review's purpose was to theoretically develop our understanding of contextual factors in combination with specific ethnic groups, literature that was diverse in its methodology was included. Accordingly, an integrative review is appropriate because of its emphasis on synthesizing diverse literature. This approach is also consistent with the critical-realist conception of this review. Synthesizing health research in a (critical) realist fashion does not provide simple answers to complex questions. Instead, this conception assumes that the information needs to be underpinned by theoretical principles that explain the synergy between context, mechanisms, and outcomes (Pawson et al. 2005). We followed previous seminal works' guidelines on integrative reviews (Whittemore and Knaf 2005). This includes: (1) a clearly outlined problem identification; (2) a comprehensive literature search; (3) data evaluation which scrutinizes quality, informational value, and representativeness; (4) data analysis, including reduction, comparisons, and conclusions; and (5) presentation, including synthesizing the findings into a model suitable to the study purpose. Out of these stages, data evaluation is the most difficult, because an integrative review encompasses multiple methodologies and ontological assumptions. No work was excluded due to poor quality, but assessments were nevertheless made.

### 2.1. Inclusion Criteria

We included peer-reviewed articles and gray literature. Gray literature included dissertations, books, book chapters, and conference proceedings. The material could include both theoretical conceptualizations and empirical data. The material had to be at least partially concerned with migrants who were from a post-socialist country and had migrated into a Nordic country. It had to report on experiences and/or results about PA for these migrants. Moreover, articles that compared ethnic groups (including Eastern European) were included on the condition that results from the Eastern European group were distinguishable.

Articles that stated that their population stemmed from Eastern Europe were included. However, a cursory review revealed that the study needed a definition of post-socialist countries when this overarching label did not exist. In adopting such a definition, we borrowed from the UN's definition of Eastern Europe, including Belarus, Bulgaria, Czech Republic, Hungary, Moldova, Poland, Romania, Russia, Slovenia, and Ukraine. Additionally, informed by our understanding of the Nordic regions' migration context, we also chose to include the post-socialist countries Estonia, Latvia, Lithuania, Slovakia, and the countries of the former Yugoslavia. Emigration into the Nordic regions from the latter constitutes one of the most significant migration waves in Nordic history.

### 2.2. Exclusion

Articles were excluded if they aggregated migrant groups, if the research was conducted outside the Nordic regions, and if health without markers of actual PA was reported.

### 2.3. Search Strategy

Nine databases were searched: ASSIA, PsycINFO, PsycARTICLES, Russian National Sciences Citation, Pubmed, Scopus, Social Science Premium Collection, sportDISCUS, and Web of Science. In addition, we performed back and forward searches from relevant literature. No time restriction was imposed on the search. The search phrase was constructed in collaboration with an academic librarian. The full search phrase, as copied from Scopus, is below:

TITLE-ABS-KEY (migration\* OR integration\* OR acculturation\* OR assimilation\* OR segregation\* OR migrants\* OR immigrants\* AND sport\* OR leisure\* OR "physical activity\*" OR exercise\* AND Sweden\* OR Norway\* OR Denmark\* OR Finland\* OR Iceland\* OR Scandinavia\* OR nordic\*)

Abstracts and titles were scanned. If these did not mention migrants (or associated words) in conjunction with any sort of physical or mental health, PA, or leisure, they were excluded. All subsequent articles were read in full text to assess eligibility. The procedure is visualized in Figure 1.

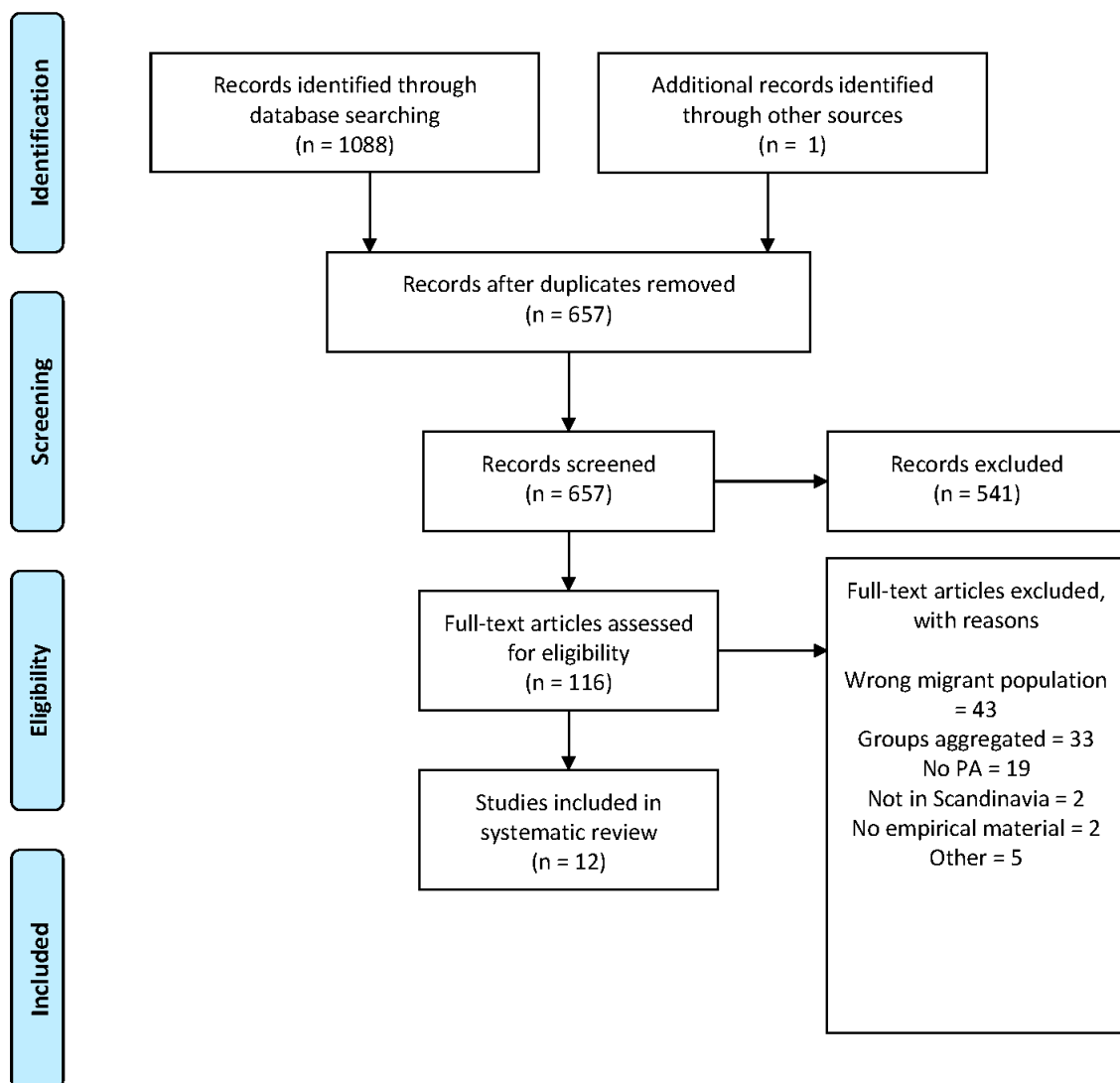


Figure 1. Flow chart of inclusion and exclusion of articles.

### 3. Results

The final articles included were methodologically, disciplinarily, and theoretically diverse. We outline the basic characteristics of these studies, summarize the themes, and finally synthesize them. The included articles are displayed in Table 1 below.

**Table 1.** Study description.

<b>Outcomes</b>	Due to the embeddedness of PA in Norwegian life, Poles experience pressure to culturally adapt. This results in increased PA.	Most cleaners found the intervention too time- and energy-consuming. Our respondent of interest highlighted previous PA experience as crucial.	The respondents of interest expressed clear socio-cultural factors at play, such as different use of nature in their home country compared to Norway.	The use of nature is physically passive and relaxing instead of used as a way for physical exercise.	In the early stages, Polish migrants reject Icelandic culture and reproduce Polish leisure patterns, which entails physical inactivity.
<b>Country</b>	Norway	Denmark	Norway	Norway	Iceland
<b>Sample</b>	37 Poles and 17 of their spouses in dyadic interviews	20 cleaners and five supervisors, out of which one originated from Serbia	14 female migrants out of which 2 were from Poland, 1 was from Latvia, 1 was from Russia, and 1 was from Bulgaria	Same sample as above	71 Poles
<b>Theory</b>	Relative Acculturation Extended Model (RAEM)	The socio-ecological model	No explicit theoretical framework adopted	Image of wilderness	Berry's integration typology
<b>Method</b>	Individual semi-structured interviews and dyadic semi-structured interviews	Semi-structured interviews and participant observation	Semi-structured interviews	Semi-structured interviews	Semi-structured interviews
<b>Purpose</b>	To study the transmission of cultural patterns and adaptation through leisure	To explore challenges and opportunities in a PA program for cleaners	To examine how nature can help migrant women's mental health	To explore interactions with nature amongst female migrants	Examine cultural integration through leisure and holidays
<b>Authors</b>	Kossakowski et al. (2016)	Lenneis and Pfister (2016)	Lorentzen and Viken (2020)	Lorentzen and Viken (2021)	Nowicka (2016)
<b>Outcomes</b>	Barriers include the Swedish climate, prior PA experience, and other time-consuming commitments.	The sports activities function as social and emotional safe spaces for Bosnians but are perceived as segregating by local federations.	Recruitment of the Yugoslavian migrants was hindered by linguistic barriers and failure to identify contact information.	Females are at greater risk for physical inactivity, while no differences are found between Swedes and male Yugoslavian and male Polish migrants.	Females are more physically inactive than men and Swedes but less inactive than other migrant groups. However, only Polish men display significantly higher BMI compared to Swedes.
<b>Country</b>	Sweden	Norway	Sweden	Sweden	Sweden

Table 1. Cont.

<b>Sample</b>	Seven former Yugoslavian female migrants	Representatives from seven Muslim organizations, out of which one was Bosnian	40 migrants from the former Yugoslavia and Finland	5600 migrants, out of which 148 were from Yugoslavia and 130 were from Poland	1966 migrants, out of which 568 were from Poland
<b>Theory</b>	No clearly outlined theoretical framework	Putnam's social capital theory	A person-centered (health) approach	No clearly outlined theoretical framework	No clearly outlined theoretical framework
<b>Method</b>	Semi-structured interviews	Semi-structured interviews and participant observation	Randomized controlled trial (RCT)	Cross-sectional observational data	Cross-sectional observational data
<b>Purpose</b>	To explore enablers and constraints for PA in Yugoslavian migrant females	To explore Muslim organization's role in using sports to integrate migrants into Norwegian society	To examine the feasibility of a health-promotion program's protocol	To examine the relationship between PA and migration status	To examine relationships between education, age, body mass index (BMI), and sedentary lifestyle
<b>Authors</b>	Sandström et al. (2015)	Walseth (2016)	Lood et al. (2015)	Lindström and Sundquist (2001)	Wändell et al. (2004)

### 3.1. Post-Socialist Migrants' Health and Levels of Physical Activity

In general, the findings were uniform in that post-socialist migrants reported engaging in less PA than host country individuals, with females being at most risk for high levels of physical inactivity (Carlsson et al. 2014; Wändell et al. 2004).

However, post-socialist migrant males tended to be more physically active than males in other migrant groups (Adebayo et al. 2020; Lindström and Sundquist 2001). The findings in regard to post-socialist migrant females' PA were inconsistent when compared to other migrant groups. For example, in one study, they were more physically active than Chilean, Turkish, and Iranian females (Wändell et al. 2004). In their final regression model, there was no significant relationship between BMI and country of birth (Poland, in this case) for females when controlling for PA; however, a strong relationship was found for Polish men ( $\beta = 0.77$ ). On the contrary, only 15% of Eastern European females in Carlsson et al.'s (2014) study were physically active. The only group to be less physically active was that of Middle Eastern women (10%). In contrast, Eastern European males were twice as physically active as Eastern European females. Yet, when assessing anthropometric measures, Eastern European females showed no significant differences compared to Swedish women despite being considerably inactive. Instead, Eastern European males showed a higher degree of poor anthropometric health indicators. However, when assessing the utility of BMI measures, Carlsson et al. (2014) point out that BMI does not differentiate between body fat and muscle, which may make interpretation of this particular measure more difficult.

### 3.2. Nordic Nature and Climate as Both an Opportunity and Barrier

Considering the importance of context for migrants' leisure and PA, one salient feature of the review was the emphasis on Nordic nature's availability (Lorentzen and Viken 2020, 2021; Kossakowski et al. 2016) and unavailability (Sandström et al. 2015).

Lorentzen and Viken (2021) explored interaction with Norwegian nature in a diverse group of migrants (including Polish, Bulgarian, Latvian, and Russian). They found that most of the respondents considered Norwegian nature to be an asset to their everyday lives. The interest in local nature ranged from domestic use, such as planting flowers, to advanced leisure activities, such as visiting the fjords. Yet, the results pointed towards a passive use of nature, in comparison to what we know of local Norwegians' use of nature.

Whereas skiing and hiking are popular activities amongst Norwegians, the use of nature for these migrants was primarily restricted to walking and more low-level PA. Still, nature provided the migrants with an easy, cheap, and accessible arena for PA. Moreover, in the same sample, [Lorentzen and Viken \(2020\)](#) found that the migrants' use of nature was connected to mental (and physical) well-being and acculturation. This can effectively be captured by one quote from a Bulgarian migrant:

*When I walk along the river, I am breathing fresh air, and [...] thinking [...] just positive! [laughter] It is very good for my health and for my body and for how I feel. [...] When I came to Norway, at first, I sat at home and tried to read something but did not understand [...] tried to watch television, did not understand. It was a very difficult period! But, afterwards, I came to nature. Nature helped me! Today, I feel very good, but last year I was so sad because I did not have friends, no Norwegian friends, no family, and I was alone at home [...] but nature helped me!*

Thus, nature serves as a cheap and easy way for migrants to engage in PA and combat other issues associated with migration, such as lack of social networks, linguistic barriers, and depression. Interestingly, many of the migrants also used nature to reconnect to their country of origin, for example, one Latvian migrant kept revisiting the sea because it invoked good memories of family and childhood back home. [Lorentzen and Viken \(2020\)](#) argued that this seemed to alleviate the migrants' stress and served to stimulate positive emotions.

However, a few barriers related to the climate did exist too. First, when living in rural areas in the home country, it was part of one's day-to-day life to engage in PA. On the contrary, life in urban cities abroad was perceived to be more dependent on conscious planning of PA in [Sandström et al.'s \(2015\)](#) sample. Secondly, the informants perceived the Swedish winter to be harsh and cold and to eliminate PA opportunities outside. While the participants perceived transport as an adequate way to get exercise, this too was hindered by the harsh Nordic climate. This seemed like a more salient problem for this Yugoslavian sample than other post-socialist migrant groups, indicating differing environmental experiences within the study sample.

### 3.3. Mental Health Benefits and Barriers

PA was perceived as important for one's mental health ([Walseth 2016](#); [Lorentzen and Viken 2020, 2021](#)), as mentioned in the section above.

[Walseth \(2016\)](#) explored ethnic minority sports clubs in Oslo, Norway, specifically Muslim organizations that offered leisure activities to Muslim youths. Here, a Bosnian organization appeared to be the largest. Much like [Lorentzen and Viken \(2020\)](#) explored how nature served as a platform in which migrants could reconnect to their homeland's practices and nature-related events, the football events had a function for the Bosnians in terms of physical and mental health in addition to working as a social safe-space. Specifically, as one respondent argued, these events allowed the Bosnians to share experiences from their home country.

However, while PA was connected to improvements in mental health ([Lorentzen and Viken 2020, 2021](#); [Walseth 2016](#)), one respondent in [Sandström et al. \(2015\)](#) pointed out that the existence of mental health issues in the first place serves as a profound barrier towards PA. Thus, while PA serves to improve mental health, it may be that mental health issues prevent the onset of PA for migrants. This was partially corroborated in [Kossakowski et al. \(2016\)](#), in which females, in particular, felt concerned about body images in local gyms. This was grounded in their perceptions and experiences in Poland, but they declared that this seemed less of a problem in Norway.

Finally, although [Walseth's \(2016\)](#) context seemed like an easy way for Bosnians to partake in PA and enjoy both social and mental health benefits from it, [Walseth \(2016\)](#) elucidated one issue with the organizational constellation of ethnic minority sports clubs. They are perceived as segregating migrants from the rest of the (Norwegian) society. The



Bosnian organizations' idea of their ethnic football club was not well received by the National Football Association.

Nowicka (2016) too explored the Polish diaspora in Iceland. While it seemed like the informants maintained a national identity and preserved traditions through this collective, Nowicka (2016) also discusses this in light of Berry's integration typology. It is argued that integration (maintaining one's own ethnic identity and interacting with the host society) is preferred, while rejection of host society culture (isolation or segregation) equals poorer adaptation and fewer mental health benefits (Berry 2005). Briefly summarized, Nowicka's (2016) results thus indicate that the latter occurs in Iceland. The differing results between Walseth (2016) and Nowicka (2016) lie in their conceptualization of integration. Whereas Walseth (2016) elucidates the importance of these clubs in terms of social bonding and mental health, Nowicka (2016) highlights how these clubs constrain further integration into the host society, with an emphasis on inter-ethnic contact.

### 3.4. Previous Sport Experience

The lack of previous sporting experience was identified as a significant barrier by both Sandström et al. (2015) and a Serbian respondent in Lenneis and Pfister (Lenneis and Pfister 2016). In the latter case, the respondent was one of the few female cleaners to partake in a work-site PA intervention adequately. Although she successfully managed to combine a demanding job with two children, the respondent pointed out that it seemed imperative to have previous PA experience to understand how to combine PA with other time-demanding things in life, such as a family. Likewise, Sandström et al. (2015) found that Serbian migrants who were disinclined to partake in PA indicated that they did not perceive PA as a fun activity, nor did they have the opportunity to explore PA and leisure to the extent that they felt it was something they enjoyed doing.

### 3.5. Language

Barriers towards PA were not only observed in respondents' narratives but also visible in the recruitment of participants to health promotion programs. In attempting to recruit a full sample from Finland and the Balkans, it took Lood et al. (2015) 2 months to complete procedures for the former, but 10 months to recruit an adequate sample for the latter. In assessing their methodology, Lood et al. (2015) stressed the need to accommodate migrants' linguistic preferences and use interpreters whenever possible.

Similarly, Poles in Iceland seemed reluctant to visit Icelandic sites, including swimming pools, which constitute the most popular site for PA in Iceland (Nowicka 2016). Nowicka (2016) declared that this was due to "cultural incompetence"; that leisure time was associated with relaxing at home and not culturally embedded in the same way for Poles as for Icelandic natives. Thus, Nowicka (2016) concluded that Polish leisure patterns are reproduced abroad.

## 4. Discussion

The availability of PA activities in the Nordic region may be a decisive factor when considering post-socialist migrants' opportunities for PA. This should be viewed juxtaposed with the specific and generic barriers/enablers that post-socialist migrants face in the Nordic regions. Here, the review has elucidated specific enablers by considering the Nordic climate and juxtaposed it with post-socialist migrants' experiences and preferences of PA.

In synthesizing the material, one finding stands out as particularly important. Post-socialist migrant females tend to be at greater risk of being physically inactive. This is evident in both descriptive and inferential statistics and females' narratives of why engaging in PA is difficult. Following Kossakowski et al.'s (2016) work, this taps into ideas of PA and body image, contingent on culture.

The importance of context and specific ethnic groups can be found elsewhere in the literature. For example, in Canada, a context resembling the Nordic region, Russian migrants discuss how the availability of exercise opportunities is more prevalent than

in Russia, where it is perceived as economically difficult to maintain a physically active lifestyle (Rich et al. 2015). Interestingly, multiple included works mention the heterogeneity between migrants' PA experiences as a limitation (Lorentzen and Viken 2020, 2021) or as part of the study's purpose (Lindström and Sundquist 2001). Although these group differences are present in the included works, because of research designs, the theoretical explanations as to *why* are limited. Sandström et al. (2015) chose to interview exclusively Yugoslavian women for this very reason. While their material is empirically dense and contains implications for policymakers, there is little theorization. Similarly, one of the few studies to explicitly address the importance of *host* context is that of Lorentzen and Viken (2021). Taking into consideration similar research in the US, the authors postulated that differences in natural environments support the idea that the Norwegian perspective must be explored too. In this regard, the work of Nowicka (2016) and Kossakowski et al. (2016) stands out as being the most contextualized and theoretically informed. Here, not only are generic barriers and enablers identified, but they are linked to sociohistorical and cultural factors.

Importantly, we argue that culture does not consist of isolated macro-phenomena (Vélez-Agosto et al. 2017). Instead, it permeates individual lives and is expressed at the embodied level. The historical and cultural setting one is embedded in serves as the individual's structure (Archer 1995). Within this, the individual's agency plays a key role. The individual does possess agency in the sense that she can choose to deviate from the cultural imprints and "do things differently". However, it is this point of reference we must start with: from birth, an individual is molded within a specific ecology, which is enacted upon.

This can be illustrated by synthesizing the key findings. For example, Nowicka (2016) and Kossakowski et al. (2016) showcase how cultural factors in Poland constrain PA. One example is gender and skewed body image, making females reluctant to visit gyms or swimming pools. Other research indeed shows that Eastern European countries' citizens are more concerned with PA for external reasons than motivated by "inner" reasons (Mrazek et al. 2004).

Drawing specifically from Kossakowski et al.'s (2016) work, the conditioning effect of the overarching Polish PA culture on females can be detected. This is a process with frequent interaction over time, where it is plausible that Polish females repeatedly encounter culturally contingent ideas about PA. Tentatively, these ideas are encountered through situational mechanisms, which reinforce and shape Polish females' structural foundation about PA and body image. As these Polish females encounter new ideas of PA (e.g., who is it for, how it is exercised), they contemplate their current situation and assess it against their needs and desires. In other words, in the interaction with the Norwegian structure, they are able to change the course of their PA patterns, leading Kossakowski et al. to conclude that these females were integrated into the mainstream Norwegian culture.

Another finding concerns age and declining PA. Whereas PA was marginally exercised back home in Poland, everybody (regardless of age) was perceived (by Polish migrants) as physically active in Norway (Kossakowski et al. 2016). This has been readily acknowledged as an emergent issue; for example, traditional activities such as Polish *sztekiel* (Bronikowska et al. 2011) have been suggested to provide a culturally relevant way to engage in more PA for the elderly. Other authors indeed assert that traditional activities maintain a high degree of authenticity and viability for elderly people (Kylasov 2019).

One example of the above is the review's emphasis on Nordic *friluftsliv*. This is a cultural and social concept that is dependent on the Nordic region's environmental opportunities, and can be considered a traditional activity, just like Polish *sztekiel*. *Friluftsliv* usually involves activities such as hiking, but also includes other cultural factors such as environmental connectedness (Beery 2013). Embracing nature and feeling connected to it seems more profound for Northern natives compared to other populations, including Eastern Europeans (Fränkel et al. 2019). Importantly, Nordic natives, regardless of age, are perceived to engage in *Friluftsliv*. The Nordic regions are not the only countries in the

world to possess diverse and PA-friendly nature. Yet, it is one of the few regions in the world to highlight its environment so explicitly as a PA-enabler (Gelter 2000).

This cultural difference in how nature is conceived of is part of why a critical-realist conception is analytically useful. Understanding that structural influences invoke specific ideas and connections to nature may also explain how, and why, certain individuals contemplate nature-related PA when presented with new opportunities or barriers.

In this case, *Friluftsliv* is a structure which seems to have been reinforced continually in the Nordic regions and can thus be said to be a relatively robust and enduring structure (Archer 1995). Through situational mechanisms, post-socialist migrants may become aware of the use of nature to such ends. In turn, the data here indicates that utilizing nature for PA does not seem to be embedded in the same way for post-socialist migrants, as indicated by the pragmatic use of nature made by several respondents (Lorentzen and Viken 2021). Other research from adjacent fields lends support to this, as the evolution of green spaces in post-socialist countries has changed during the past decades for the worse (Badiu et al. 2019). In contrast, Nordic inhabitants make great use of green spaces, a trend which has increased during COVID-19 (Venter et al. 2020). Yet, as the results revealed, the cold winters may also pose a potential threat to (some) post-socialist migrants' PA opportunities. While winter sports are of great importance in the Nordic regions (e.g., skiing), such sports are profoundly expensive, class dependent, and characterized by the necessity of having a certain skill set. Considering the latter, this entails a kind of cultural capital, which may not be readily available to migrants who are less used to winter sports. Socioeconomic disadvantages have been established as one of the strongest predictors of sport participation (Dollman and Lewis 2010), regardless of ethnic or national origins.

## 5. Conclusions

Post-socialist migrants are less physically active compared to the host population in the Nordic regions. This is more profound for females than males. One important reason for this seems to be that different regions have various ideas of PA, and various barriers towards PA. To further understand this, we must pay greater attention to both the migrant population under study, but also to the context in which we carry out our research. While some PA factors mentioned here are generic and exist for a broad range of individuals, others are more contextually specific. Specifically, this concerns the use of Nordic nature. While this seems an intuitive and easily accessible way to have PA, we must also understand post-socialist migrants' use of nature, and the culturally and socially shaped experiences of such. Here, we propose an explanatory framework based in critical realism to further understand why some migrants engage in some PA behaviors, while others do not.

**Funding:** This research received no external funding.

**Institutional Review Board Statement:** Not applicable.

**Informed Consent Statement:** Not applicable.

**Data Availability Statement:** Data is available from the author upon request.

**Conflicts of Interest:** The authors declare no conflict of interest.

## References

- Adebayo, Folasade A., Suvi T. Itkonen, Eero Lilja, Tuija Jääskeläinen, Annamari Lundqvist, Tiina Laatikainen, Päivi Koponen, Kevin D. Cashman, Maijaliisa Erkkola, and Christel Lamberg-Allardt. 2020. Prevalence and Determinants of Vitamin D Deficiency and Insufficiency among Three Immigrant Groups in Finland: Evidence from a Population-Based Study Using Standardised 25-HydroxyVitamin D Data. *Public Health Nutrition* 23: 1254–65. [CrossRef]
- Ager, Alastair, and Alison Strang. 2008. Understanding Integration: A Conceptual Framework. *Journal of Refugee Studies* 21: 166–91. [CrossRef]
- Archer, Margaret Scotford. 1995. *Realist Social Theory: The Morphogenetic Approach*. Cambridge: Cambridge University Press.
- Archer, Margaret Scotford. 2003. *Structure, Agency and the Internal Conversation*. Cambridge: Cambridge University Press.

- Badiu, Denisa L., Diana A. Onose, Mihai R. Niță, and Raffaele Laforteza. 2019. From 'Red' to Green? A Look into the Evolution of Green Spaces in a Post-Socialist City. *Landscape and Urban Planning* 187: 156–64. [\[CrossRef\]](#)
- Bakewell, Oliver. 2010. Some Reflections on Structure and Agency in Migration Theory. *Journal of Ethnic and Migration Studies* 36: 1689–708. [\[CrossRef\]](#)
- Beery, Thomas H. 2013. Nordic in Nature: Friluftsliv and Environmental Connectedness. *Environmental Education Research* 19: 94–117. [\[CrossRef\]](#)
- Berghöfer, Anne, Tobias Pischon, Thomas Reinhold, Caroline M. Apovian, Arya M. Sharma, and Stefan N. Willich. 2008. Obesity Prevalence from a European Perspective: A Systematic Review. *BMC Public Health* 8: 1–10. [\[CrossRef\]](#)
- Berry, John W. 2005. Acculturation: Living Successfully in Two Cultures. *International Journal of Intercultural Relations* 29: 697–712. [\[CrossRef\]](#)
- Biernat, Elżbieta, and Sonia Buchholtz. 2016. The Regularities in Insufficient Leisure-Time Physical Activity in Poland. *International Journal of Environmental Research and Public Health* 13: 798. [\[CrossRef\]](#) [\[PubMed\]](#)
- Bronikowska, Małgorzata, Michał Bronikowski, and Nadja Schott. 2011. You Think You Are Too Old to Play? Playing Games and Aging. *Human Movement* 12: 24–30. [\[CrossRef\]](#)
- Camacho, Terry C., Robert E. Roberts, Nancy B. Lazarus, George A. Kaplan, and Richard D. Cohen. 1991. Physical Activity and Depression: Evidence from the Alameda County Study. *American Journal of Epidemiology* 134: 220–31. [\[CrossRef\]](#)
- Caperchione, Cristina M., Gregory S. Kolt, and W. Kerry Mummery. 2009. Physical Activity in Culturally and Linguistically Diverse Migrant Groups to Western Society: A Review of Barriers, Enablers and Experiences. *Sports Medicine*. [\[CrossRef\]](#)
- Carlsson, Axel C., Per Wändell, Ulf Riserus, Johan Ärnlöv, Yan Borné, Gunnar Engström, Karin Leander, Bruna Gigante, Mai Lis Hellénus, and Ulf de Faire. 2014. Differences in Anthropometric Measures in Immigrants and Swedish-Born Individuals: Results from Two Community-Based Cohort Studies. *Preventive Medicine* 69: 151–56. [\[CrossRef\]](#) [\[PubMed\]](#)
- Czapka, Elżbieta. 2012. The Health of New Labour Migrants: Polish Migrants in Norway. In *Health Inequalities and Risk Factors among Migrants and Ethnic Minorities*. Antwerp: Garant, vol. 1, pp. 62–150.
- Czapka, Elżbieta Anna, and Mette Sagbakken. 2016. 'Where to Find Those Doctors?' A Qualitative Study on Barriers and Facilitators in Access to and Utilization of Health Care Services by Polish Migrants in Norway. *BMC Health Services Research* 16: 1–14. [\[CrossRef\]](#)
- Danermark, Berth, Mats Ekström, and Jan Ch Karlsson. 2019. *Explaining Society: Critical Realism in the Social Sciences*. New York: Routledge.
- de Almeida Vieira Monteiro, Ana Paula Teixeira, and Adriano Vaz Serra. 2011. Vulnerability to Stress in Migratory Contexts: A Study with Eastern European Immigrants Residing in Portugal. *Journal of Immigrant and Minority Health* 13: 690–96. [\[CrossRef\]](#) [\[PubMed\]](#)
- Delaney, Liam, and Emily Keaney. 2005. Sport and Social Capital in the United Kingdom: Statistical Evidence from National and International Survey Data. *Dublin: Economic and Social Research Institute and Institute for Public Policy Research* 32: 1–42.
- Dollman, James, and Nicole R. Lewis. 2010. The Impact of Socioeconomic Position on Sport Participation among South Australian Youth. *Journal of Science and Medicine in Sport* 13: 318–22. [\[CrossRef\]](#)
- Fletcher, Jason. 2013. Adolescent Depression and Adult Labor Market Outcomes. *Southern Economic Journal* 80: 26–49. [\[CrossRef\]](#)
- Fränkel, Silvia, Daniela Sellmann-Risse, and Melanie Basten. 2019. Fourth Graders' Connectedness to Nature—Does Cultural Background Matter? *Journal of Environmental Psychology* 66: 101347. [\[CrossRef\]](#)
- Fridberg, Torben. 2010. Sport and Exercise in Denmark, Scandinavia and Europe. *Sport in Society* 13: 583–92. [\[CrossRef\]](#)
- Gehrmann, Sebastian, and Pamela Wicker. 2021. The Effect of Regional and Social Origin on Health-Related Sport and Physical Activity of Young People in Europe. *European Journal for Sport and Society*, 1–18. [\[CrossRef\]](#)
- Gelter, Hans. 2000. Friluftsliv: The Scandinavian Philosophy of Outdoor Life. *Canadian Journal of Environmental Education (CJEE)* 5: 77–92.
- Kerkenaar, Marlies M. E., Manfred Maier, Ruth Kutalek, Antoine L. M. Lagro-Janssen, Robin Ristl, and Otto Pichlhöfer. 2013. Depression and Anxiety among Migrants in Austria: A Population Based Study of Prevalence and Utilization of Health Care Services. *Journal of Affective Disorders* 151: 220–28. [\[CrossRef\]](#) [\[PubMed\]](#)
- Kolosnitsyna, Marina G., Natalia A. Khorkina, and Marina V. Lopatina. 2020. Factors Affecting Youth Physical Activities: Evidence from Russia. *Мониторинг Общественного Мнения: Экономические и Социальные Перемены* 5: 578–601.
- Kossakowski, Radosław, Magdalena Herzberg-kurasz, and Magdalena Żadkowska. 2016. Social Pressure or Adaptation to New Cultural Patterns? Sport-Related Attitudes and Practices of Polish Migrants in Norway. In *Migration and the Transmission of Cultural Patterns*. Edited by Mucha Janusz. Kraków: Wydawnictwo, vol. 985, pp. 59–74.
- Krzysztożek, Jana, Ida Laudanska-Krzeminska, and Michał Bronikowski. 2019. Assessment of Epidemiological Obesity among Adults in EU Countries. *Annals of Agricultural and Environmental Medicine* 26: 341–49. [\[CrossRef\]](#)
- Kylasov, Alexey V. 2019. Traditional Sports and Games along the Silk Roads. *International Journal of Ethnosport and Traditional Games* 1: 1–10.
- Lee, I-Min, Eric J Shiroma, Felipe Lobelo, Pekka Puska, Steven N Blair, Peter T Katzmarzyk, and Lancet Physical Activity Series Working Group. 2012. Effect of Physical Inactivity on Major Non-Communicable Diseases Worldwide: An Analysis of Burden of Disease and Life Expectancy. *The Lancet* 380: 219–29. [\[CrossRef\]](#)
- Lenneis, Verena, and Gertrud Pfister. 2016. Playing after Work? Opportunities and Challenges of a Physical Activity Programme for Female Cleaners. *International Sports Studies* 38: 5–23. [\[CrossRef\]](#)

- Lindström, Martin, and Jan Sundquist. 2001. Immigration and Leisure-Time Physical Inactivity: A Population-Based Study. *Ethnicity and Health* 6: 77–85. [\[CrossRef\]](#)
- Lood, Qarin, Susanne Gustafsson, and Synneve Dahlin Ivanoff. 2015. Bridging Barriers to Health Promotion: A Feasibility Pilot Study of the 'Promoting Aging Migrants' Capabilities Study'. *Journal of Evaluation in Clinical Practice* 21: 604–13. [\[CrossRef\]](#)
- Lorentzen, Catherine Anne Nicole, and Berit Viken. 2020. Immigrant Women, Nature and Mental Health. *International Journal of Migration, Health and Social Care* 16: 359–72. [\[CrossRef\]](#)
- Lorentzen, Catherine Anne Nicole, and Berit Viken. 2021. A Qualitative Exploration of Interactions with Natural Environments among Immigrant Women in Norway. *International Journal of Health Promotion and Education*. [\[CrossRef\]](#)
- Luszczynska, Aleksandra, Frederick X. Gibbons, Bettina F. Piko, and Mert Tekozel. 2004. Self-Regulatory Cognitions, Social Comparison, and Perceived Peers' Behaviors as Predictors of Nutrition and Physical Activity: A Comparison among Adolescents in Hungary, Poland, Turkey, and USA. *Psychology & Health* 19: 577–93.
- Masri, Aymen El, Gregory S. Kolt, and Emma S. George. 2021. A Systematic Review of Qualitative Studies Exploring the Factors Influencing the Physical Activity Levels of Arab Migrants. *International Journal of Behavioral Nutrition and Physical Activity* 18: 1–16. [\[CrossRef\]](#) [\[PubMed\]](#)
- Mattoo, Aaditya, Ileana Cristina Neagu, and Çağlar Özden. 2008. Brain Waste? Educated Immigrants in the US Labor Market. *Journal of Development Economics* 87: 255–69. [\[CrossRef\]](#)
- Morawa, Eva, and Yesim Erim. 2015. Health-Related Quality of Life and Sense of Coherence among Polish Immigrants in Germany and Indigenous Poles. *Transcultural Psychiatry* 52: 376–95. [\[CrossRef\]](#) [\[PubMed\]](#)
- Mrazek, Joachim, Ludmila Fialová, Natalia Rossiyskaya, and Irina Bykhovskaya. 2004. Health and Physical Activity in Central and Eastern Europe. *European Journal for Sport and Society* 1: 145–60. [\[CrossRef\]](#)
- Ngongalah, Lem, Judith Rankin, Tim Rapley, Adefisayo Odeniyi, Zainab Akhter, and Nicola Heslehurst. 2018. Dietary and Physical Activity Behaviours in African Migrant Women Living in High Income Countries: A Systematic Review and Framework Synthesis. *Nutrients* 10: 1017. [\[CrossRef\]](#)
- Nowicka, Monika. 2016. Rejected or Transmitted Patterns? Leisure Time and Holiday Celebration: Case of Polish Immigrants in Iceland. In *Migration and the Transmission of Cultural Patterns*. Edited by Mucha Janusz. Kraków: Wydawnictwo, vol. 985, pp. 43–57.
- Osei-Kwasi, Hibbah Araba, Mary Nicolaou, Katie Powell, Laura Terragni, Lea Maes, Karien Stronks, Nanna Lien, and Michelle Holdsworth. 2016. Systematic Mapping Review of the Factors Influencing Dietary Behaviour in Ethnic Minority Groups Living in Europe: A DEDIPAC Study. *International Journal of Behavioral Nutrition and Physical Activity* 13: 85. [\[CrossRef\]](#)
- Pavey, Toby G., Nicola W. Burton, and Wendy J. Brown. 2015. Prospective Relationships between Physical Activity and Optimism in Young and Mid-Aged Women. *Journal of Physical Activity and Health* 12: 915–23. [\[CrossRef\]](#)
- Pawson, Ray, Trisha Greenhalgh, Gill Harvey, and Kieran Walshe. 2005. Realist Review—a New Method of Systematic Review Designed for Complex Policy Interventions. *Journal of Health Services Research & Policy* 10: 21–34.
- Penninx, Brenda W. J. H., Yuri Milaneschi, Femke Lamers, and Nicole Vogelzangs. 2013. Understanding the Somatic Consequences of Depression: Biological Mechanisms and the Role of Depression Symptom Profile. *BMC Medicine* 11: 129. [\[CrossRef\]](#)
- Rebar, Amanda L., Robert Stanton, David Geard, Camille Short, Mitch J. Duncan, and Corneel Vandelandotte. 2015. A Meta-Analysis of the Effect of Physical Activity on Depression and Anxiety in Non-Clinical Adult Populations. *Health Psychology Review* 9: 366–78. [\[CrossRef\]](#)
- Rich, Kyle, Laura Misener, and Dan Dubeau. 2015. 'Community Cup, We Are a Big Family': Examining Social Inclusion and Acculturation of Newcomers to Canada through a Participatory Sport Event. *Social Inclusion* 3: 129–41. [\[CrossRef\]](#)
- Riordan, James. 2009. Russia/The Soviet Union. In *Routledge Companion to Sports History*. New York: Routledge, pp. 557–68.
- Ronellenfitch, Ulrich, and Oliver Razum. 2004. Deteriorating Health Satisfaction among Immigrants from Eastern Europe to Germany. *International Journal for Equity in Health* 3: 1–10. [\[CrossRef\]](#)
- Ryan, Louise, Rosemary Sales, Mary Tilki, and Bernadetta Siara. 2009. Family Strategies and Transnational Migration: Recent Polish Migrants in London. *Journal of Ethnic and Migration Studies* 35: 61–77. [\[CrossRef\]](#)
- Sandström, Elin, Ingrid Bolmsjö, and Ellis Janson. 2015. Attitudes to and Experiences of Physical Activity among Migrant Women from Former Yugoslavia: A Qualitative Interview Study about Physical Activity and Its Beneficial Effect on Heart Health, in Malmö, Sweden. *AIMS Public Health* 2: 194–209. [\[CrossRef\]](#)
- Schmalz, Dorothy L., Glenn D. Deane, Leann L. Birch, and Kirsten Krahnstoever Davison. 2007. A Longitudinal Assessment of the Links between Physical Activity and Self-Esteem in Early Adolescent Non-Hispanic Females. *Journal of Adolescent Health* 41: 559–65. [\[CrossRef\]](#)
- Skille, Eivind Å. 2011. Sport for All in Scandinavia: Sport Policy and Participation in Norway, Sweden and Denmark. *International Journal of Sport Policy* 3: 327–39. [\[CrossRef\]](#)
- Stephoe, Andrew, and Jane Wardle. 2001. Health Behaviour, Risk Awareness and Emotional Well-Being in Students from Eastern Europe and Western Europe. *Social Science & Medicine* 53: 1621–30.
- Sungurova, Yulia, Sven Erik Johansson, and Jan Sundquist. 2006. East—West Health Divide and East—West Migration: Self-Reported Health of Immigrants from Eastern Europe and the Former Soviet Union in Sweden. *Scandinavian Journal of Public Health* 34: 217–21. [\[CrossRef\]](#)

- Vaillant, Nicolas, and François-Charles Wolff. 2010. Origin Differences in Self-Reported Health among Older Migrants Living in France. *Public Health* 124: 90–98. [[CrossRef](#)]
- Vélez-Agosto, Nicole M., José G. Soto-Crespo, Mónica Vizcarrondo-Oppenheimer, Stephanie Vega-Molina, and Cynthia García Coll. 2017. Bronfenbrenner's Bioecological Theory Revision: Moving Culture from the Macro into the Micro. *Perspectives on Psychological Science* 12: 900–10. [[CrossRef](#)]
- Venter, Zander S., David N Barton, Vegard Gundersen, Helene Figari, and Megan Nowell. 2020. Urban Nature in a Time of Crisis: Recreational Use of Green Space Increases during the COVID-19 Outbreak in Oslo, Norway. *Environmental Research Letters* 15: 104075. [[CrossRef](#)]
- Walseth, Kristin. 2016. Sport within Muslim Organizations in Norway: Ethnic Segregated Activities as Arena for Integration. *Leisure Studies* 35: 78–99. [[CrossRef](#)]
- Wändell, Per Erik, Sari Ponzer, Sven-Erik Johansson, Kristina Sundquist, and Jan Sundquist. 2004. Country of Birth and Body Mass Index: A National Study of 2000 Immigrants in Sweden. *European Journal of Epidemiology* 19: 1005–10. [[CrossRef](#)]
- Whittemore, Robin, and Kathleen Knaf. 2005. The Integrative Review: Updated Methodology. *Journal of Advanced Nursing* 52: 546–53. [[CrossRef](#)]