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Review Article

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Osteoarthritis, Prevention, Management, and Social Disadvantage Interactions: Retrospective Overview and Health Implications 2.00

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ABSTRACT

Osteoarthritis, a widespread disabling joint disease is often found to vary in its impact and outcome among those deemed affected and where age, gender, and genetics cannot commonly explain this. This report aimed to update what is known about the social context and its role as a possible osteoarthritis remediable determinant. Using the **PUBMED** data base and others, osteoarthritis studies published largely between January 1, 2020 and March 1, 2026 concerning possible social disadvantage linkages were sought and carefully examined. As well, data drawn from the researcher's repository were reviewed. The search results revealed a growing interest in this topic and that osteoarthritis can be observed to be negatively influenced in the face of one or more forms of persistent social deprivation or disadvantage. Yet, very few clinical trials prevail to either control for this or test the validity of this idea and apply these understandings to preventing excess suffering. In light of the increasing osteoarthritis burden, despite years of research, it appears that to maximize wellbeing for all, and to limit or obviate unwanted osteoarthritis associated health and disability costs, more resounding research and clinical work practices along with an inclusive focus on advancing public health equity in 'all' including social equity and the mitigation of all forms of social deprivation including perceived as well as actual injustices are strongly indicated.

Keywords: Aging, Disability, Economics, Equity, Evidence, Osteoarthritis, Social Deprivation; Social Disadvantage, Pain

Introduction

Osteoarthritis, the most common form of disabling arthritis remains widespread with data showing its rising prevalence as society ages, plus a surprising increasing presence in greater numbers in young adults, despite decades of research and public health interventions and multiple health services offerings. A pervasive multi-factorial painful chronic disease involving the whole joint that is incurable and challenging to treat or reverse effectively, its attendant social and human costs are incalculable. Affecting up to 55.7 percent of adults aged 18 years and over severe or moderate joint pain, this may yet be an underestimate in the event not all active cases have been observed. Commonly a progressively disabling condition of one or more freely moving joints such as the knee joint, cases suffering from osteoarthritis who may commonly experience intractable bouts of pain, stiffness, joint instability, a loss of mobility, and often, a steady decline in the ability to leave their homes or fail to do so if they have no health coverage, have multiple functional challenges, are reticent to be labeled disabled or are embarrassed by changes in body image and structure, plus low levels of physical endurance. However, despite efforts to categorize the disease in terms of its general features and possible determinants, the condition known as osteoarthritis appears non uniform in its manifestations, its target populations, responses to therapy, its degree of joint involvement and distribution, and locality [1-3]. Often attributed to age and/or injury [4], it now appears that factors other than biology alone, including those that can affect biology vicariously, may have a strong and clinically relevant bearing on the epidemiology and stage of and extent of the disease, and especially on its varied pathogenic pathways that may include one or more social factors among others, although not directly discussed by Hsu and Siwiec [5], Xu et al. [6], or Pandey et al. [7] and many others.

Consequently, while osteoarthritis joint disease and its eradication continues to be sought, the problems obstructing function in osteoarthritis that are most commonly attributed to impaired joint biomechanics and related secondary problems appear challenging to mitigate or fully comprehend in isolation when a case has perpetually faced ongoing or deleterious social exposures such as discrimination. Unsurprisingly, therefore, since humans are immersed in and affected by their surroundings and experiences most standard joint based treatments applied

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accordingly appear to be sub-optimally effective at best [7] even when resorting to surgery or pain-relieving narcotics. Moreover, even when surgery is indicated, and performed, results vary, and may well be influenced by adverse social determinants that prevail among other factors, even in 2026, such as a lower than desirable and unmet needs based socio economic status, safe housing, a lack of provider or organizational sensitivity in returning a post surgical or dependent long term out patient to an area of deprivation, and limited confidence building self care and resource opportunities [8, 9].

In reviewing some of our own experiences over time, it appears that without an understanding of whether or not one or more social determinants may be implicated in the osteoarthritis disease cycle among others, a universally favorable role for emergent genetic editing and particular cartilage repair approaches, along with dietary weight loss and exercise recommendations to offset osteoarthritis [10] predict pervasive problems of adherence to standard self care directives and others [11,12] and a resultant heightened disabling state and resource needs. Indeed, it appears without efforts to consider unequal social factors and their interaction with health status in general, it is clear osteoarthritis will continue to not only increase in prevalence but will occur at an earlier age than is presently acknowledged or desired across the globe [1,11,13]. This is partially because greater neighborhood disadvantage, stress, and social rupture and related challenges to self care are likely to prevail for some time to come [12,13].

In this regard, rapidly rising health care costs in many spheres of endeavor will reduce rather than foster healthy aging adults and upward mobility in our view especially if affordable or practical therapeutic solutions are viewed in isolation [9].

Research Questions

Accordingly, we strove to examine whether:

- There is any agreed upon linkage between social disadvantage in any form that should be identified and minimized to enable more effective osteoarthritis disability prevention and treatment response efforts among the younger and older adult? In particular, are social policy prevention programs and strides in advancing equity and economic support promising for averting the costs of osteoarthritis at any stage of the disease in some respect indicated? If so, what specific approaches are indicated? Finally is the association between social or area disadvantage and osteoarthritis where observed, uni- or bidirectional in selected cases?
- Careful early evaluation of adults who live in socially deprived neighborhoods be helpful for reducing osteoarthritis disability and its magnitude or should a routine scan of the ecology surrounding diagnosed individuals become routine?

According to the United States Healthy People 2030 arthritis objectives moderate and severe joint pain can make it harder for people to do daily activities and affect their quality of life. Moreover, because many adults with arthritis have severe pain, and this is more common in certain racial/ethnic groups, it is possible their condition requires intense scrutiny and solutions based on their multiple or unique related needs [16,17] rather than solely on generic directives.

In addition to possibly lower excess societal costs and provider demands, and foster a life of quality for a sufferer it seems those cases with disabling joint pain and unemployment status and a market of limited job options should be specifically targeted. Retraining costs should not be compounded moreover by efforts to re imagine employment that is stressful to the mind and body and may fail to help clients maintain their independence especially among those who have been socially deprived historically and where reparations remain in question [18].

This broad extrinsic interwoven social issue is however gaining traction and this article tries to summarize some observations as a possible realm of promise for future highly needed osteoarthritis mitigation efforts.

Rationale

As in previous decades, osteoarthritis currently poses an enormous challenge to many aging individuals worldwide, as well as tremendous challenges to health providers, plus immense hospital, and societal costs. At the same time, the disease may lower or limit life quality extensively and significantly, especially the ability to live independently in the community even among those who are younger than 60. But what produces the variations seen in osteoarthritis when age, gender, and joints are similar? For example, can limited health care access initiate a cycle of osteoarthritis damage that is not as easy to ameliorate when compared to the availability of high-level standard care if the adult under 60 years of age is suffering moderate or severe joint pain that can make it harder for them to perform daily activities, if they lack health care coverage or are unable to forego their stress inducing jobs. Many adults with arthritis especially those in severe pain are commonly those in traditionally disadvantaged racial/ethnic group, who may not be eligible for services or extended care needs.

Since outcomes for osteoarthritis sufferers', for example those in some disadvantaged American populations are significantly worse off than those who are disease free, and both standard treatments and surgery to replace a diseased painful joint is not always as effective in those with a poor health background due to preventable inequities, it appears a better understanding of what specific variables might be amenable to intervention in at risk individuals in the context of primary, as well as secondary and tertiary osteoarthritis preventive efforts, but are not a given. Also, quality of care may differ between the economically advantaged versus the disadvantaged, for example some Canadians can get expedited surgery, others not despite access for all. To address or clarify these issues it appears necessary to go beyond biology and genetics, and explore various other possible mediating aspects of osteoarthritis including the interaction between the environment and the person, including the socioeconomic and policy plus living environments.

Hypotheses

In accord with the possible role of social deprivation in the development of osteoarthritis [19], it is hypothesized there is a consistent cyclical linkage between the onset and progression of disabling osteoarthritis in the older population that can be mediated by perpetual social disadvantage and in multiple respects may hence be remediable.

Mechanisms of influence underlying social disadvantage and osteoarthritis disability may be multiple and multi layered including social and biological implications.

Unfortunately, many even in advanced countries struggle to receive adequate healthcare for themselves and their families and may have to work at one or more jobs that can cause joint dysfunction in its own right:

Methods

The desired data were sought largely using the PUBMED electronic data base when applying the key terms: "inequities and osteoarthritis", "osteoarthritis and disability", "osteoarthritis and social disadvantage", "socioeconomic status and osteoarthritis", "osteoarthritis and social deprivation". As well, the PubMed Central, Science Direct, and Google Scholar resource sites were reviewed for additional data. Articles published in the English language as full reports and pertinent to the current theme were sought. Excluded were articles that did not discuss osteoarthritis per se and some related social issue, for example those that discussed obesity and osteoarthritis in isolation, articles on the perception of possible therapies, or laboratory studies. Available data representing the time periods over which most osteoarthritis research has emerged [2000-2026] especially that representing 2020-2026 data reports were carefully reviewed. Those articles of potential relevance deemed pertinent in the present topic were downloaded and scrutinized further, then carefully organized and summarized in narrative form, given the lack of any uniform focus or diagnostic descriptions in most studies. All forms of clinical study as well as review articles as well as all forms of possible osteoarthritis as well as deprivation were deemed acceptable including intangible and tangible socially manifest inequalities, inequitable or absence of adequate disease management and prevention resources or the potential role of educational deprivation factors, alongside neighborhood and provider access deficits in the context of osteoarthritis development and/or outcomes, rather than the role of other more mainstream factors of salience in the disease cycle. Each article review focused on what was observed or not observed and what might be concluded as a result as well as possible implications for research and practice. PUBMED was selected as the key electronic data source of information given its widespread data repository and effective method of accessing relevant data.

Key Results

Even though this was a restricted review, and did not assess report quality, it was clear that osteoarthritis remains a topic of immense interest and is one that has been studied in multiple reports published since 2000 and before then. Of these, of the more than 136, 000 current PUBMED articles on the topic of osteoarthritis as of March 1, 2026, including highlighted osteoarthritis associations, very few speak to a role of inequities in this regard, even though all persistent inequities are conceivably of high clinical as well as research importance to examine, address, and rectify as indicated. This recommendation is indeed recounted by almost all current authors whether they studied similar or dissimilar aspects of the degree of relevance of one or more socially-related issues and encompassing the restriction of access faced by an individual in multiple spheres, including educations, occupational, or cultural interactions as well as neighborhood deficiencies [3,20,21] Unsurprisingly, and possibly due to poverty, discrimination or other disadvantages, social deprivation impacts appear to remain pervasive and are increasingly and widely acknowledged as a salient outcome determinant in various musculoskeletal conditions such as osteoarthritis [20].

This issue remains challenging to overcome however, as the bulk of epidemiological studies do not examine or document those potentially salient socially influential attributes to any degree, as regards the onset and progression of osteoarthritis [21,22].

Morgan et al. [23] found Individuals with lower socio economic status at the neighborhood level reported higher pain and decreased shoulder function both preoperatively and postoperatively, depite progressing post shoulder surgery. This suggests some joint surgeries may arise even though remedial factors rather than age or genetics are implicated. Fortunately, groups even in countries where efforts to reduce inequalities that limit equal access to knee and hip replacement surgery have been put forth note this is necessary to continue [24]. This is because those in the most deprived category not only appear to present with worse clinical signs, but are often offered more oral opioids than those who are more affluent [19,20]. In addition, if the patient undergoing joint replacement surgery comes from a deprived neighborhood, they appear to need more costly after care than those returning to a viable home. Moreover, simply discharging such patients into the same deprived community, must inevitably have demonstrable effects, even if follow up shows no excess 90 day re admittance burden, the impact of long-term deprivation may remain even if discounted by Mehta et al. [26] and with these persistent states of multi morbidity and less than optimal physical functioning ability [27,28]. Peoples et al. [27] assert lower socioeconomic status is a risk factor for poorer pain-related outcomes. Further, the neighborhood environments of disadvantaged communities can create an environment of increased stress and deprivation that adversely affects pain-related as well as other health outcomes. Indeed even if more deprived patients can achieve similar improvements in osteoarthritis surgery outcomes to those who are less deprived, it is still possible persistent deprivation or social gap inequity levels induce or foster osteoarthritis disability to a more profound degree at all joints than not [29,30]. This disease that is highly prevalent at the knee joint, and one where a high deprived percentage of cases are often found to be obese with apparent higher rates of modifiable cardiovascular disease risk factors and worse physical and behavioral health than controls may be those who had encountered some form of social disadvantage over time that changed body aging [29,31].

Kouraki et al. [32] who used path models to statistically test how social deprivation, and who support the premise of an adverse impact of a deficient education and possible related anxiety they found may manifest before an osteoarthritis diagnosis, as well as after. This group showed high degrees of social deprivation before their osteoarthritis diagnosis tended to predict greater limitations in activities of daily living after diagnosis. Although higher educational attainment before diagnosis may possibly protect against limitations in activities of daily living after diagnosis, other efforts to minimize adverse socially experienced deprivations in real time that may well impact on cognitive abilities, stress control, health behaviors and anxieties

were not mentioned. However, inequalities in socioeconomics alone appear to be increasing even in highly developed countries along with osteoarthritis and pain states [31,33]. On the other hand, even if the socially deprived tend to suffer more intently as a group, Michel et al. [34] and Hartnett et al. [35] report those who are more highly affluent appear to receive joint replacement surgery at higher rates than those categorized as being in the lower income strata.

In this regard, Rahman et al. [36] showed that even if surgery is forthcoming, a past deprivation experience tended to be significantly associated with an increased post operative length of stay, non-home discharge sites, emergency department visits, and readmissions This was a finding more stark than that of Edwards et al. [37], but one supported by Jordan et al. [38].

According to Pisarty-Alatorre et al. [39] current socioeconomic status does impact functional status, quality of life and disability amongst cases with osteoarthritis and more research to elucidate the relationships between childhood socioeconomic status indicators and osteoarthritis outcomes as assessed over the life course may prove useful in identifying those at risk for worse outcomes at an early age, a notion supported by Kemp et al. [40] and Sheth et al. [31, 42-45]

On the other hand, a failure to appreciate the potency of perpetual deprivation, low income and poor education [19] and discrimination [46] may further impact joint vulnerability, osteoarthritis risk and outcomes that negatively impact cognitions, expectations, self-perceptions, pain, narcotic use, and self beliefs [45-47] and possible mechanical loading excesses and obesity [48].

In short, even if a role for deprivation or discrimination or disadvantage is not mainstream to any degree, or disputed, actual data show a rise in the risk for osteoarthritis and poor outcomes in all parts of the globe, even if surgery, is forthcoming [41,45, 49-51]. There is some agreement social factors may have some deterministic influence in this regard, and when collectively termed social health determinants, include experiences of social disadvantage, socially mediated protective factors [46-48], low level educational exposures and related economic opportunities than those who reside in affluence. Moreover, the disadvantaged may not only suffer more but may be helped at the later disease stages rather than at ages covered by insurance.

Unfortunately, even though some progress has emerged in the last two decades or so, and sufficient cumulative research points to a negative role for social deprivation and resource access limitations in partially explaining osteoarthritis disease cycles and presentation, how this information can be duly applied towards mitigating osteoarthritis rates and severity plus costs remains problematic in 2026 where adult arthritis sufferers appeared to increase in number despite National Goals to reduce this from baseline. Hence, even when state of the art interventions are made available, they may be less potent or unable to reach desired outcomes readily in the face of persistent hardships [44,52] and a failure to optimize neighborhood environments [46,53] and assure timely equitable access [52,54,55].

Discussion

In examining the underpinnings of osteoarthritis prevalence rates particular, a clear gap exists in efforts to examine social deprivation influences and the degree to which lack of education and poorn health literacy prevail could be of high relevance not only in explaining osteoarthritis severity and distribution, but in the likelihood of acquiring the added risk of one or more comorbid health conditions and a greater challenge and cost post surgery in the face of related social deprivation histories [52,53,56]. Indeed, the role of inequality and one or more injustices that may have profound impacts on osteoarthritis risk and severity are rarely broached even where global efforts are made to advance this line of inquiry and have been implored too so.

Moreover, even where neighborhood inequities that affect health, the degree of commitment to addressing this possible upstream osteoarthritis determinant remains limited at best and many interventions focus on individual levels of tertiary treatment, regardless of individual capacity and basic safe living environments and access to needed resources. For example, promoting self management and walking and joint protection in an unsafe stressful disadvantaged living and occupational environment, along with limited access to needed supplementary resources such as assistive or joint protective devices.

To advance this line of inquiry we would like to propose more routine applications of the ecological perspective to examining osteoarthritis and intervening accordingly. This is because:
Most of these are designed to guide researchers and practitioners to systematically assess and intervene on one of 5 levels of influence:

- Intrapersonal factors
- Interpersonal processes and primary groups
- Institutional factors
- Community factors
- Public policy factors

At the same time, the program elements can be carefully selected to represent those most changeable and universal and desirable [66] and that may include remediation or extinction of

- Discrimination at all levels
- Educational Deficits
- Homelessness
- Limited/Fragmented Care/ Access
- Suboptimal Care Quality
- Poor Nutrition/Food Deserts
- Extent of Repetitive Work
- Lack of Resources, Funds to secure therapy, nutrients, or self-help devices [53].

At the same time, cognitive and mental health interventions, the provision of home safety modifications, as well as supportive therapeutic interventions for all may lower health costs and suffering.

Alternately, the absence of such efforts may worsen the heath and economic gap and limit self care approaches of remediation and prevention. As well, efforts that do not embrace those diverse social deprivation factors that may place citizens at risk regardless of age and can impair both health in general, as well

as osteoarthritis management, in particular [32, 56] will likely prove unsustainable in an era of fiscal restraints and budgetary limits on common 'good program efforts', including practitioner time and burnout due to complexity of demands [55].

In sum, to alleviate the current and future osteoarthritis burden, that seems inevitable, the interaction of the aging adult's needs, situational, and environmental factors including income and insurance [58-60] that can potentiate excess distress and pain, plus health disparities, enormous physical, social, occupational, and mental distresses, must be considered in parallel and intervened upon thoughtfully, comprehensively, in a timely as well as empathetic manner as indicated. However, while this idea is not novel and is consistent with social cognitive theory precepts that are well accepted as explanatory, behavioral and health intervention outcome attributes, unfortunately, this approach is not a mainstream one in any respect. Moreover, it is not directly mentioned explicitly in the 2024-2028 osteoarthritis action plan reported in 2024 by a large organization [61]. In addition, it is also not distinctly embedded in proposals for forthcoming studies of osteoarthritis post injury osteoarthritis prevention approaches at the knee joint [62]. However, it appears crucial to examine the evidence base in this regard carefully as per Rijk et al. [63] and translate what we do know and can apply into current practices, using more subjective and objective assessments that are deemed relative to the impacts of social situations.

At the same time, more consistent documentation, and discussions on equity associated health linkages and ramifications in health education training programs as well as in legal, ethical, and public health spheres of endeavor are also strongly indicated. To this end, osteoarthritis interventionists can help by remaining mindful not to overburden their disadvantaged clients, resources including possible environmental and occupational toxins as well as safety issues. As well, system level strategies, including personalized cultural understandings along with attempts to comprehend the lived experiences of disadvantaged groups is also of possible high salience, even if not well studied to date [44]. As per Booker et al. [64] it is not only salient to do this as far as explaining osteoarthritis pain experiences and intervention needs goes, but may also highlight other clinically relevant issues that may otherwise limit the goal of achieving optimal intervention outcomes such as feelings of low empowerment as well as perceived or actual discrimination and care injustices and unemployment [50,66]. Indeed, emerging data show resource deprivation alone and especially that which occurs early in life [40] is a significant observable contributor in its own right to perceived or actual osteoarthritis treatment inequities and outcomes [65] and possibly to both social as well as physical functioning [66].

Application

As per the state of knowledge in the current realm, we envision concerted multilevel strategies implemented across the lifespan by healthcare professionals, organizations or systems, policy makers and economists along with dedicated efforts to carefully examine and document social disadvantage attributes as this applies to osteoarthritis care and prevention will prove efficacious.

Moreover, doing all that is possible to improve the stressful experiences of cumulative social deprivation such as deficits in educational opportunities, health care access, racial discrimination, and implicit biases and others such as ageism is recommended [40,67-69,75,76].

In this regard, the three points offered by observations of Abuwa et al. [70] appear highly relevant as follows along with those of Levers et al. [71].

1. Osteoarthritis guidelines presently fail to clearly highlight the relevance of - as well as the support- needed in the context of efforts to care for all who are at risk or have confirmed osteoarthritis and this may partially reflect a failure to address its remediable social determinants.
2. Those clinicians caring for those with osteoarthritis who face disadvantages due to economic or other intersectional factors need to have access to high quality care resources and organizational support that can help obviate some degree of possible past disadvantages so their workload does not become unmanageable.
3. Developers could strengthen osteoarthritis guidelines by incorporating steps that ensure factors related to equity and social disadvantage are embedded in future frameworks and tools, and by including diverse persons with osteoarthritis on guideline development panels.

Closing Remarks

To improve osteoarthritis outcomes we conclude that there are immensely relevant social health determinants implicated in this regard that should be routinely sought and assessed in the context of efforts to advance the ability of the affected aging adult to live optimally [72].

Secondly despite a limited evidence base and bearing in mind not all parts of the globe may demonstrate extremes in social exposures or lack thereof laws to insure against public health costs of disadvantageous social exposures, exploitation, or discrimination should be strengthened [53,73]: In this regard we believe-

1. Social disadvantage in its multiple forms including resource deprivation is a potential predictor of limited provider access that induces both malnutrition and frailty, or obesity and inflammatory diseases, and sarcopenia in both cases.
2. Efforts to ensure equitable social resources and opportunities are put in place where indicated, across the lifespan, will lower the magnitude of human suffering attributable to osteoarthritis and its immense costs.
3. Allied efforts in education, occupational health and safety, housing and neighborhood safety and food security are paramount factors to target in many cases [6].
4. Osteoarthritis in turn, can impact social wellbeing and income negatively and significantly, thus immense efforts towards reducing its rate of progression are indicated to foster mobility and avert excess degradation.
5. A failure to address the role of social disadvantage in heightening osteoarthritis joint attrition, for example through inattention to repetitive work or unemployment situations, and its failure to be prominently examined and reported in clinical trials and others ensures we will not

have data that is sufficiently precise to avert a high degree of downward spiraling among the aging adult anytime soon unless concerted action is forthcoming.

6. To advance the goal of averting osteoarthritis degradation and to maximize opportunities for high levels of mobility and life quality, concerted research and clinical efforts to examine if any social deficiency prevails individually or collectively or both in affected adults and to intervene accordingly in this regard is essential
7. Educational programs that omit health literacy challenges and low physical activity participation due to safety issues are likely to fail.
8. To clearly establish the influence of social factors and others, a clear explanatory theory of the path from possible osteoarthritis causes and their outcomes, that includes bio–psycho–social–spiritual factors is strongly recommended [71]
9. Ample data shows that simply focusing on the detail of individual injury risk within a single cognitive framework leaves us less able to perceive the larger picture-and hence we often fail to improve injury death and morbidity rates as desired.
10. Metaphorically speaking, only the "tip of the injury iceberg" and other mechanistic pathways are likely implicated.

Indeed, while data are not compelling, it seems that like an iceberg, hidden factors below the surface of the 'water' aew illusive but may drive an injury and their recognition and deterrence requires vigilance, careful analysis and targeted evidence based intervention, such as social factors so as to avoid the failures and costs of faling to act preemptively and optimally.

This thought applies in our view very soecifically to the success of the Health People 2030 goal aimed to: "Reduce the proportion of [US] adults with arthritis who have moderate or severe joint pain' [https://odphp.health.gov/healthypeople]

The healthy People deade long goals and mission urges researchers such as those in osteoarthritis to step away from the overwhelming current disease focus etiology at the molecular biology level and where its remedy is strongly embedded in drug based or surgical solutions that largely fail to attenuate disability. On the other hand, allied efforts to level the social determinants of poor health may well impact a host of disease self care abilities and offer a higher chance of experiencing a meaningful life with limited suffering and less possible reliance solely on pharmacologic and surgical options. Early salient intervention, rather than generic recommendations, will predictably be significantly more effective than late life approaches in our view and reduce chances of placing some older adults in settings that are not health affirming or desired by them.

Key Points to Examine

- Whether addressing the environmental and sociological determinants hidden "below the water line" using a deprivation related index [27] can positively influence as well as impose significant constraints upon individual behaviors that are risky, while countering these as indicated.
- Whether a population approaches rather than an individual approach may prove more enlightening in the context of osteoarthritis prevention than reliance solely on intrinsic individual factors.

In addition, will a program of moderate effectiveness, acting on a broad array of factors at the lower levels of influence-e.g., a whole community level and increase the reach of an intervention and thus have a greater impact than more personal programs, which can only reach a small segment of the target community, usually the more affluent persons.

Take Home Messages

- Integral healthcare measures that address both the socio-economic and the physical determinants need to be employed, particularly for high-risk osteoarthritis groups such as the elderly, women, and thise wuth comorbid conditions [51]
- As well national public health authorities and the World Health Organization (WHO) should work together to improve its diagnosis and early treatment rates, while fostering awareness and education, strengthening international cooperation, and providing necessary medical assistance to less developed regions [73].
- Awareness-raising, early detection, effective management are essential to reduce the burden of osteoarthritis in the coming decades, especially among vulnerable groups expected to increase [74].

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