

Low back pain: Can we afford not to be person-centred?

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SHORT COMMUNICATION

1 Introduction

It is long known, that low back pain (LBP) is one of the most common causes of disability globally. It creates huge economic burden to every level of the society, not stressing only the economics of individuals and families, but also communities, industry and governments (Hoy, March, Brooks, Blyth, Woolf, Bain, Williams, Smith, Vos, Barendregt, Murray, Burstein & Buchbinder 2014). In Finland, LBP has been the top cause of disability from the 90's to today (GBD Compare n.d.). About 80% of persons are suffering from LBP at some point of their lives. 90% of LBP cases are nonspecific and benign. (Selkäliitto n.d.)

LBP can be divided into three categories based on duration of pain episode: acute LBP lasting less than 6 weeks, subacute LBP lasting 6-12 weeks and chronic LBP lasting over 12 weeks. Acute LBP is very common and most of the nonspecific cases heal by themselves with pain killers and by remaining normal active lifestyle. (Alaselkäkipu. Käypähoitosuositus 2017.) The problem arises, if the nonspecific LBP threatens to prolongate. Chronic or periodic LBP can limit everyday functioning of the person, cause work absence and increase the use of health care services and health care costs (Hagelberg & Valjakka 2008).

It is known, that previous episodes of LBP and other chronic conditions, like asthma, headache or diabetes are increasing the risk for LBP episodes, as well is the poor mental health. Also, lifestyle factors like obesity, poor level of physical activity and smoking are related to increased risk of LBP. Other issues related LBP are genetics and work-related factors, like awkward postures and heavy manual tasks. (Hartvigsen, Hancock, Kongsted, Louw, Ferreira, Genevay, Hoy, Karppinen, Pransky, Sieper, Smeets, Underwood 2018.)

There are several biophysical, psychological and social factors that have some or strong influence on LBP to get chronic, even the mechanisms of some are not clearly known. The role of biophysical impairments is yet unclear, but alterations in muscle size, composition and co-ordination are linked to LBP. Psychological factors, like anxiety, depression, catastrophising and low self-efficacy are related to increased risk of prolonged, disabling LBP. Social and societal factors, like low income or lower level of education are seen to increase the risk of chronic LBP. (Hartvigsen et al. 2018.) Finnish Käypähoitosuositus for LBP mentions also other issues slowing or preventing healing, like physically heavy work, poor work satisfaction, false beliefs about LBP, seeking or using multiple treatments and complaints and pending financial compensations concerning health issues. (Alaselkäkipu. Käypähoitosuositus 2017.)

2 Prevalence and burden of LBP in Finland

Finnish Terveystieteiden tutkimuskeskuksen (Terveystieteiden tutkimuskeskus) 2011 -research shows that prevalence of back pain has increased both with men and women, when comparing years 2000 and 2011 (Table 1). In year 2000, appr. 30% of men and 37% of women had experienced back pain during last 30 days. In the year 2011 these figures were 35% for men and 41% for women. The prevalence of LBP seems to increase among women with older age, which is not seen to happen with men. (Alaselkäkipu. Käypähoitosuositus 2017.)

According to NCCID (n.d., 1), concept of "burden of disease" means the human and economic costs that are caused from poor health. The concept bases on complex mathematical calculations (NCCID n.d., 3), that are not discussed in detail in this article. There are different measures that can be used to describe the burden of disease, one of them is DALY (Disability-Adjusted Life Year). One DALY presents loss of one year of "healthy" life; it measures the gap between the current health of status and the ideal, hypothetically achievable health situation without any disease and disability. DALYs are used to quantify the overall burden of certain condition and compare it between different countries or between different conditions. DALYs can be also used e.g. in Cost-Effectiveness -Analysis to support decision making in resource allocation in Social and Health Care, both in clinical and population levels. (Gold, Stevenson & Fryback 2002, 117,130; NCCDI n.d., 2-3.)

The calculation of DALY contains many parts, but if simplified, DALY is a sum of the Years of Lost Life (YLL) due to premature mortality and the Years Lost due to Disability (YLD). YLDs mean the loss of healthy years when living with the condition or its consequences (morbidity). The higher the DALYs, the higher is the overall burden of the condition. (Disability-Adjusted Life Year. WHO n.d.)

To the website of Institute of Health Metrics and Evaluation (IHME) is collected enormous amount of data concerning burden of diseases of 291 conditions, in 21 world regions. From the comparison tool for global burden of disease (GBD), we can see that in the year 2017 in Finland, the DALYs of LBP were 5,36% of total DALYs of all conditions of all age-groups. This might seem a small number, but as seen in figure 1, it is the second highest cause of DALYs after ischemic heart diseases (DALYs 9,86% of total DALYs of all ages) which are the cause of most premature deaths in Finland. If we limit the age of persons to 15-49 years, LBP rises to the biggest cause of DALYs (8,9% of total DALYs). (GBD Compare. IHME n.d.)

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JAMK Journal of Health and Social Studies

Provided by JAMK University of Applied Sciences

URN: <http://urn.fi/urn:nbn:fi:jamk-issn-2490-029X-15>

Citation: Varonen, K. (2019) Low back pain: Can we afford not to be person-centred?, JAMK Journal of Health and Social Studies, e20-e23.



Table 1. Incidence of back pain during past 30 days (%) according to Terveys 2011. (Alaselkäkipu. Käypähoitosuositus 2017)

	Year	30-44	45-54	55-64	65-74	75+	30+
Men	2000	27,4	30,0	29,1	32,8	38,7	30,0
	2011	34,9	36,1	34,2	33,9	32,2	34,5
Women	2000	30,6	35,4	40,3	42,5	41,4	36,5
	2011	36,9	39,7	41,6	45,6	47,5	40,7

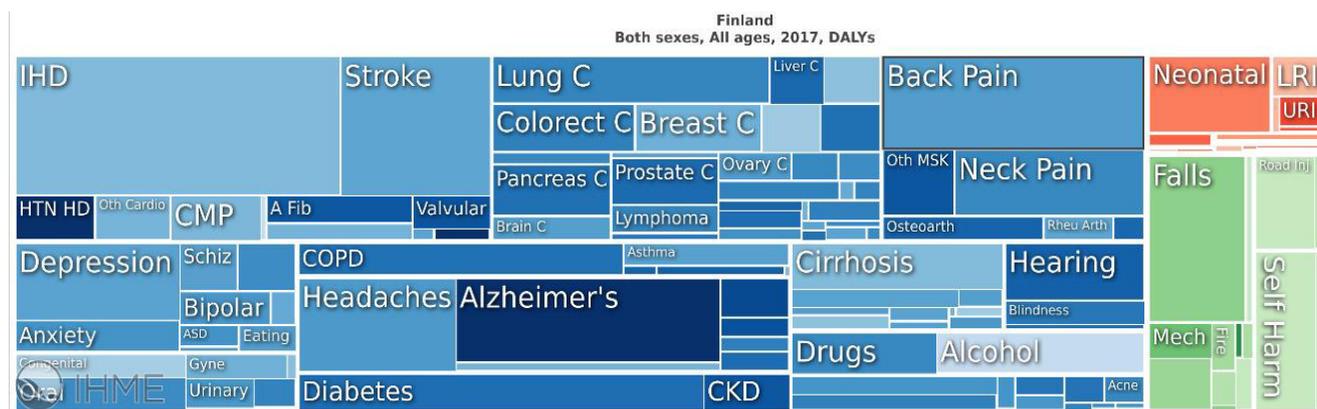


Figure 1. Percentage value of DALYS of diseases of total DALYS. (GBO Compare, IHME n.d.)

3 Cost of LBP

There are not many studies revealing the actual financial cost of LBP and those that are trying, are often focusing only direct medical health-care costs and indirect costs caused by work absence or productivity loss. Other possible direct and indirect costs, like transportation, visits to other practitioners or informal help are not reported, causing the evaluations of the costs often being underestimated. LBP's economic impact is seen comparable to other chronic conditions with high costs, like cardiovascular disease, mental health problems or cancer. (Hartvigsen et al. 2018, 2362.) Some estimations concerning Finland propose that in year 2012, back pain and other back related diseases caused over 2,1 million sickness benefit days, resulting 120 million euros of costs. Additionally, 26,600 persons were on disability pension due to back problems. Cost for this was 360 million euros a year. (Alaselkäkipu. Käypähoitosuositus 2017.) According to article published in website of University of Oulu (2018), in year 2016 costs for sickness allowance were over 100 million euros, and 21,000 persons were on pension due to pack problems, causing costs of 280 million euros a year. Some estimations for costs of LBP in society level have raised up to 600 million a year (Terveystalo 6.4.2013).

4 What is the problem then?

We very well know the risk factors of chronic LBP, as earlier noted, but why we still have these massive problems with population suffering LBP? When the threat of prolonged LBP is recognised, wider multi-professional, biopsychosocial assessment and rehabilitation should be implemented to ensure and improve the function of the person and to prevent the LBP to get chronic. (Alaselkäkipu. Käypähoitosuositus 2017.) There is quite strong evidence, that patient education and advice to maintain activity are the recommended non-medical first-line treatments

both in acute (less than 6 weeks) and chronic (over 12 weeks) LBP. Also exercise therapy and cognitive behavioural therapy are found to be effective in chronic LBP. If the person is not responding to first-line treatments, then psychological therapies, mindfulness-based stress reduction, relaxation exercises and other combinations of physiological and psychological treatment are recommended. (Foster, Anema, Cherkin, Chou, Cohen, Gross, Ferreira, Fritz, Koes, Peul, Turner & Maher 2018, 2370.) These issues are also recognised and recommended in Finnish Käypähoitosuositus for LPB (Alaselkäkipu. Käypähoitosuositus 2017).

The use of these best practice recommendations could improve health-care outcomes and even reduce health-care costs by decreasing the wasteful overuse of health-care resources. Still, passive treatments, like massage, spinal manipulation and acupuncture may often be used individually, even if they are recommended to be used only as additional treatments. Also, opioid treatments, surgeries, other invasive treatments and spine imaging, which should be used only after thorough consideration, are used widely and unnecessarily both globally (Foster et al. 2018, 2371), and in Finland (University of Oulu 2018).

Possible reasons for neglecting recommendations may be short consultation times, misconceptions or poor knowledge of professionals about recommendations and fear of medical malpractice. Also, the fear of losing harmonious relationship with patients may guide the actions of health-care professionals. (Foster et al., 2371.) This is alerting, since it is suggested that especially the first meetings with the health-care professionals may have critical effect on whether the rehabilitation process even starts or not (Holopainen, Piirainen, Heinonen, Karppinen & O'Sullivan 2018, 274).

In their study, Holopainen et al. (2018) describe the different phases or categories of rehabilitation processes of person with LBP and their conceptions about encounters with health-care professionals, like doctors or physiotherapists. During the rehabilitation process, it is important that person with LBP can be active participant in decision making, and

eventually take responsibility from one's own rehabilitation and well-being, instead of "dropping out from rehabilitation train" or being constantly guided or supported by health-care professionals. For this to happen, person-centred approach from professionals, acknowledging biopsychosocial factors, and recognition of the changing needs of the person with LBP during the rehabilitation process, is needed. (Holopainen et al. 2018.) This requires enough time for consultations, skills from professionals and continuity of care.

There is limited data concerning number of visits related to LBP in private health care or occupational health care, so let's look the situation from the perspective of primary health care. In year 2018, back pain was the third common reason for visiting health centre physician; over 100,000 patients and about 150,000 visits (THL 2019). Doctor appointments are often short and waiting times can be long. As seen in the study of Holopainen and others, worst case scenario is that there is no enough time for proper conversation and the person with LBP don't get heard, and they are left without adequate information about situation and possible future plan. This can leave the person scared, without answers to one's questions and alone with the pain, risking the rehabilitation process not to start. Person may also feel the need to seek help from other professionals, treatments or unnecessary spine imaging or other tests. (Holopainen et al. 2018, 271.) Magel, Kim, Thackeray, Hawley, Petersen and Fritz (2018, 994) noted in their study, that persons with LBP visiting less different physiotherapists, were less likely to end up surgeries and, also health care costs were reduced.

One way to tackle the problem in primary health care, could be the direct access to the physiotherapist without going to doctor first. According to Suomen Fysioterapeutit (2018), in 151 communities of Finland this opportunity was offered to persons with musculoskeletal problems, who don't have any "red flag"-symptoms to indicate more severe condition needing acute evaluation by doctor. Many communities also already plan to do so. Physiotherapists especially educated to this job may even have the right to grant few days of sick leave and recommend non-prescription medicines if needed and they can consult doctor. Direct consultations with physiotherapists are recognised to increase the effectiveness of health-care services and cost savings by decreasing sick days and by speeding up rehabilitation. It also shortens the queues for doctor appointments and give persons faster access to care. Yet, actual numbers about savings or stronger evidence of direct access by longer terms are still missing, which makes it difficult to do proper cost-effectiveness analysis. (Suomen Fysioterapeutit, 2018, 4-8.)

5 Conclusion and Discussion

Low back pain (LBP) is one of the most common causes to disability both globally and in Finland. 80% of persons suffer from LBP at some point of their lives. 90% of LBP cases are nonspecific and benign. If prolonged, LBP can cause limitations to persons functioning leading to work absence and increased use of health-care services and increased health-care costs. In Finland, sick leaves and disability pensions caused by back related problems cause the price tag of up to 400-600 million a year. Risk factors for prolonged LBP and slow rehabilitation are known. Many biophysiological, psychological and social and societal factors may affect the rehabilitation process. There are best practice guidelines for treatment of LBP, but still ineffective ways to treat LBP are used. Person's with LBP needs concerning e.g. information and support vary during the rehabilitation process. Recognition of these needs and answering to them is key point for rehabilitation process even begin or to be successful. Short

consultation times and professionals' lack of knowledge are some reasons not to follow the guidelines. In some communities, direct consultations of physiotherapists are offered to persons with musculoskeletal problems. Positive effects linked to this have been increase effectiveness of health-care services, better access to care and cost savings.

Moreover, there is only moderate evidence about the use of exercise alone or combined with education as preventative mean to LBP and even more insufficient evidence about the use of education alone, ergonomic programmes and external supports, like back belts or insoles. (Foster et al. 2018, 2368.) Not to understate the important meaning of health education and exercise in prevention of many other chronic conditions and some risk factors for LBP, we should set our stakes on improving health-care journey and effectiveness of rehabilitation process of those suffering LBP. Continuity of care and coherent management of rehabilitation processes may be very important aspects when concerning cost-effectiveness of health-care services. Only half of Finland's 311 communities (Kuntaliitto.fi) use the direct access to physiotherapy in primary health care. In those communities where it is used, the number of direct visits is quite low, only few hundreds a year. Partially this is because patients don't get guided to use the service. (Suomen Fysioterapeutit 2018, 4,11). Here we need to remember, that this number doesn't include other visits to physiotherapy. It is clear, that by better informing of health-care personnel about this service, and expertise of physiotherapists could be better utilised. Physiotherapists' consultation times are often longer, and this might enable the proper starting point for rehabilitation process.

Better co-ordination between health-care services, all primary-, private- and occupational-, employers and individuals could also increase savings by enabling different arrangements, like partial work hours or modification of work duties to support work ability of person with chronic LBP. Health-care professionals should also be educated more thoroughly to understand biopsychosocial framework and implement person-centred approach in their work. By this, maybe we could prevent unnecessary visits to health-care, surgeries, spine imaging and prolonged LBP episodes. Or at least we could better increase functioning of persons with LBP, possibly enabling getting back to active life and even back to work.

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