Lessons in back care...

When the workplace is the classroom, there are back care issues – for staff and pupils

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BACKGROUND

As professionals, we are familiar with anecdotal evidence among education professionals about the musculoskeletal disorders they experience at work. This is understandable because of low-level working heights and the associated risks. We are also often familiar with working at challenging low environments first hand, be it as parents or through our working practices.

These "child" environments, together with the added factors of budget restrictions, pupil academic targets, limited understanding of healthier working practices, and cultural resistance to change in some schools, perhaps lead to little consideration in mainstream schools of the ergonomics of safer manual and handling. However, for us as professionals, safer systems of manual handling can be created leading to positive improvements in the health of staff and pupils.

The concept of back health in education is an emerging one and slowly gathering momentum. In the author's experience, an increasing number of children are now experiencing back pain because technology and sedentary lifestyles are starting to take their toll on young, growing spines.

The potential implications for ignoring back health are potentially costly and far-reaching for employees, employers and society. For children, striving to reach their full potential and as our future workforce, the possible implications have a potentially greater impact. If their teachers and teaching assistants are absent, this, too, may have an additional impact on their education.

With more than one million primary teachers, teaching assistants, nursery nurses and playgroup leaders (Labour Force Survey 2009/10) and more than 20,000 primary schools and 29,000 nurseries/pre-schools, it is certainly an area where we, as professionals, could have significant positive influence.

ABSTRACT

This article explores the findings of recent research relating to the back health of both staff and pupils, identifies risk factors for both groups and suggests practical interventions to improve back health and wellbeing for teachers, teaching assistants and children.

The HSE has identified musculoskeletal disorders (MSDs) as a priority because, although "they have the potential to ruin people's lives and impose heavy costs on employers and society, things can be done to prevent or minimise MSDs and prevention measures are cost effective".

RECENT RESEARCH

Staff

- 55% of all teachers in locally maintained schools and academies in England took sick leave for a total average of 8.1 days (Department of Education 2013) this equates to 4½ days per teacher.
- In 2011-2012, 2.2 million teaching days were lost due to sickness absence.
- There is a risk of short term problems turning into long term absence. In the UK, once a person has been on incapacity related welfare benefits for a year, they are statistically more likely to die than return to work (Bevan 2012).
- MSDs in education professionals decrease productivity at work due to sick leave, absenteeism and early retirement (Erick & Smith 2011). As the retirement age increases, this may have implications for staff and schools.
- The number of 5 GCSE A*-C grades attained in a given school decreases when more supply teachers are needed (Department of Education and Skills 2006). Supply cover is costly and not afforded by all schools, but if not provided and cover is provided internally, pupils lose additional teacher and/or assistant time.
- A systematic review has found that the lifetime prevalence of self-reported MSDs among schoolteachers ranges between 39% and 95% (Erick & Smith 2011).

In 2011, the author carried out an anonymous questionnaire with Voice – the union for education professionals – and the National Union of Teachers to gain an overview of the situation and challenges experienced in UK school and nurseries, titled: "Work related musculoskeletal disorders in early years and primary teaching professionals".

In total, 705 questionnaires were received (436 paper, 269 online). The age group of children worked with was 48% (333) infants, 31% (215) pre-school, and 21% (147) juniors.

What are musculoskeletal disorders (MSDs)?

MSDs, as defined by the Health and Safety Executive (HSE), "include problems such as low back pain, joint injuries and repetitive strain injuries of various sorts". Areas which can create a risk include (HSE):

- repetitive and heavy lifting
- bending and twisting repeating an action too frequently
- uncomfortable working position
- exerting too much force
- working too long without breaks
- adverse working environment (e.g. hot/cold)
- psychosocial factors (e.g. high job demands, time pressures and lack of control)
- not receiving and acting upon reports of symptoms quickly enough.

KEY FINDINGS

- Reported career prevalence of work related MSDs was 98% (Figure 1).
- 88% reported experiencing back pain (Figure 1).
- 82% experienced MSDs once a week or more (Figure 2).
- 38% had been off work.
- 70% had received treatment to ease their symptoms (NHS, private or both).
- Only 8% had officially recorded it.
- 99.5% thought work related MSDs in the education profession were under reported (Figure 3).
- Work activities causing discomfort were: 91% bending over low tables; 85% sitting on children's chairs; 71% kneeling at low tables/on the floor (Figure 4).

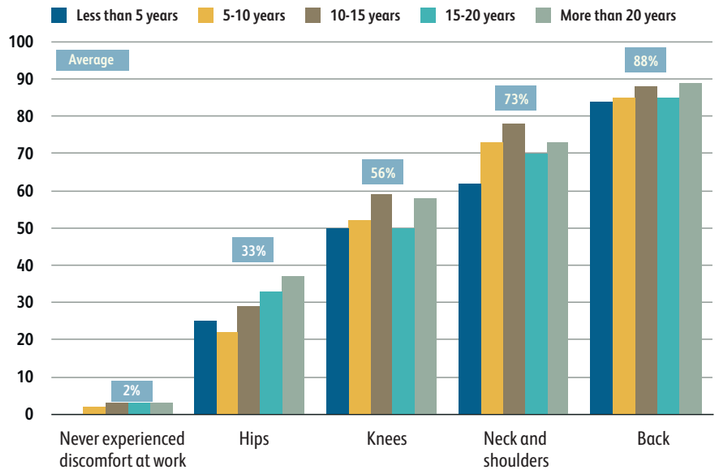
In all, 98% (690) of respondents reported discomfort that they felt was work related (caused or exacerbated) at some point in their career. The most prevalent discomfort reported was back pain (88% / 614), followed by neck and shoulder pain (73% / 511). These findings echo those of the Erick & Smith (2011) systematic review which reported that the most prevalent body sites for pain are the back, neck and upper limbs.

In addition to the above, open responses included discomfort in the arms, wrists, feet and ankles. Several respondents had received hip, knee and back surgery to reduce their pain – two reception staff members in their 30s had undergone back surgery.

Figure 1 also highlights that the type of MSD reported is not dependent on service years. A similar level of back pain was reported by staff who had worked with young children for less than five years as it was in those who had worked for more than 20 years, so it is not necessarily age related.

The majority, 82% (559), of respondents reported experiencing discomfort once a week or more. Over a third (36% / 245) reported daily pain; 7% (46) rarely experienced discomfort which they felt was work related.

FIGURE 1 Reported career prevalence and type of work related MSD, related to service years



Just over two-thirds, 38% (263) had been off work and 70% (483) had received treatment to ease their pain – either self-financed/private, NHS or, in a quarter of cases, both. Private treatment included physiotherapy, chiropractic, osteopathy, acupuncture, massage, podiatry and orthopaedic surgery.

Only 8% (57) of respondents had officially recorded their work related discomfort, despite nearly half (48% / 327) visiting their GP and 83% (559) discussing it with friends and family; 11% (76) did not mention their discomfort to anyone and only 1% (9) contacted their union.

Why are MSDs in education under reported?

The graph in Figure 3 demonstrates why 99.5% (686) of respondents feel that work related musculoskeletal discomfort in the education profession is under reported: 77% (528) feel because it is "accepted as part of the job", over half (55% / 384) because they are "unaware of reporting systems in place" and, alarmingly, over a third (37% / 256) because of "fear of jeopardising career".

The vast majority of open responses suggested "people don't realise these pains are related to the work conditions – comes on slowly and unsure of cause".

Others included:

- that they are often considered age or stress related
- "it is not taken seriously by many people"
- "hidden problems are not seen as important"
- "reminded that there is no money"
- "made to feel ALL money should be spent on the children and not staff discomfort".

The graph in Figure 4 shows the top three work activities that respondents felt caused/

FIGURE 2 Reported frequency of MSDs

On average, how often do you experience discomfort at work?

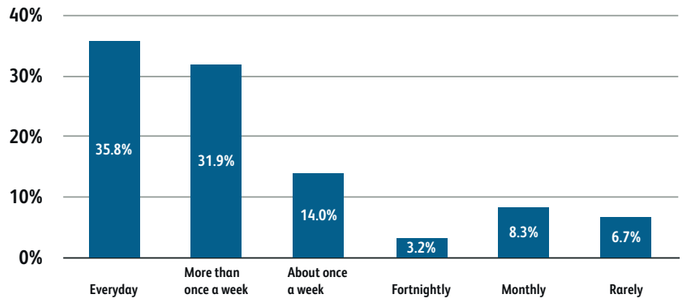
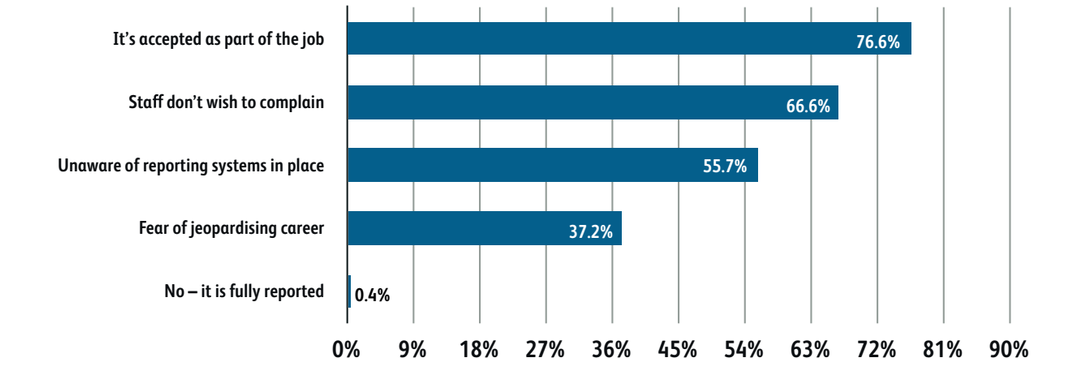


FIGURE 3 Reported reasons for under-reporting of MSDs



contributed to their discomfort: 91% (635) bending over low tables; 85% (594) sitting on children's chairs; and 71% (499) kneeling.

In addition to the above, other job tasks associated with their discomfort included:

- manual handling activities (lifting/carrying children – off climbing equipment, for nappy changes, if they have fallen)
- putting up/preparing displays
- working at child height computers or bent over laptops in class
- standing all day
- constantly picking things up from the floor
- moving heavy boxes from above head height
- working at low fixed height whiteboards
- physically assisting children with special needs and/or unpredictable behaviour
- being outside for long periods in the cold and wet.

The Erick & Smith (2011) systematic review concluded that the work tasks of schoolteachers often involve the significant use of "head down" posture, such as frequent reading, marking of assignments and writing on a backboard/whiteboard.

Nursery teachers also perform a variety of tasks combining basic hygiene childcare and teaching duties that require sustained mechanical load and constant trunk flexion. During the ErgoKiTa Project, Burford and Ellegast (2014) found teachers in nursery schools experienced upper body postures with trunk flexion greater than 20 degrees for at least 16% of an eight-hour shift. The load bearing activities were noticeably higher in nurseries, especially when associated with carrying children aged under three, where loads of 10-20kg were frequently encountered by staff.

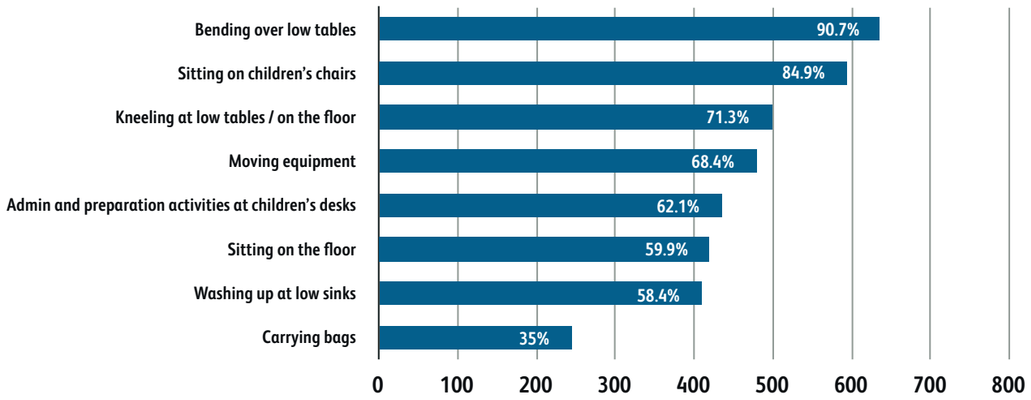
COPING STRATEGIES

Many staff said they could no longer sit on the floor. Some worked part-time as a supply teacher rather than accept a full-time contract, some moved to work with older children and others were forced to take ill-health retirement. Several paid for regular treatment: "I visit my physiotherapist every two months (since 2000)".

Staff, especially those working in the areas of special needs, really valued the manual handling training they received and felt all teaching and support staff should receive it. Many respondents felt they and, in particular, trainee teachers should have access to improved information and training (manual handling, posture, ergonomics, causes and equipment). Many said: "It is too late for me" or "You don't realise that smaller aches and pains you experience regularly early in your career are contributing to serious long term damage".

Other coping strategies included: "I bend my knees to pick things up", "I use a chair to wash up". But many agreed that just avoiding the activity was not the answer as that left "fewer staff to do hazardous tasks, so are at more risk themselves".

FIGURE 4 What activities at work cause you/your colleagues discomfort?



EXAMPLES OF WORKING PRACTICES:

BIOPSYCHOSOCIAL FACTORS

Increasingly, research has found that biopsychological factors such as high workloads/demands, high perceived stress level, low social support, low job satisfaction and monotonous work have been positively associated with MSDs among schoolteachers (Samad *et al* 2010; Erick & Smith 2011; CIPD 2013).

Interestingly, presenteeism (working while experiencing health, disability or psychological challenges) may account for up to 50% more working time lost than absence as staff are less productive, have an increased risk of making mistakes and recovery time can be lengthened. Presenteeism is more likely in organisations that have seen major changes in organisational restructure and workload increases. It is significantly more common in women with the most common reason being "not wanting to let your team down" (CIPD 2013).

Education professionals often work in stressful conditions with contributory factors such as large classes, a lack of education resources, constant curriculum changes and often limited reward for their work. These are important considerations when considering an effective approach. In response to research findings and the identification of risk factors for injury, Derby City Healthy Schools Team is carrying out an injury prevention and wellbeing intervention pilot in three local primary schools. Head teachers were contacted so a supportive culture could be embedded at the outset.

The pilot consisted of the following interventions;

1. A Back/Musculoskeletal (MSK) Health Wellbeing Rep was identified.
2. Staff training was given to explain the concept of MSK health and ergonomics, the importance of prevention and rehabilitation, with a Q&A and discussion on MSK challenges faced in school and at home.
3. A HSE H&S checklist for classrooms/workplace assessment was completed with the school rep (catering and admin staff were included, too). Playground and storage room assessments were also carried out.
4. A staff MSK advice/helpline.
5. A training resource was provided (BackChat: An Essential Guide to Manual Handling, Back and Voice Care for Education Professionals). The suggested assessment was completed by all staff,

Summary of risk factors for school staff

- Previous episode of back pain – prevention is important.
- **Physical factors:** frequent bending, twisting, repetitive work, static postures, awkward or uncomfortable postures, lifting, pushing, pulling.
- Approximately 600 hours spent sitting on children's furniture every year. HSE states risk factors include "sitting at a workstation for a long period of time if the workstation is not correctly arranged or adjusted to fit the person, stooping, bending over or crouching (poor posture), stretching, twisting, reaching".
- **Environmental:** lack of space in schools – for movement and equipment storage. Poor workstation set up (for pupils and staff).
- **Workplace culture/emotional:** stress and anxiety, insufficient rest – lack of time for staff breaks.

PRACTICAL EQUIPMENT SUGGESTIONS:

▲ Compact seat and lowers to 41cm

▲ Mobile sand/water tray

▼ Mobile low chair with height adjustable back rest

▲ BackPal

▲ Mobile, secure ICT storage

▲ Changing table with steps, sink at adult height

▲ Stool to assist with standing and sitting

▲ A lightweight sensory stool

▲ Training resource

with a recommended annual refresher.

6 Presenteeism was discouraged and rest breaks were encouraged.

7 Cumulative strain injury was recorded in the accident book and appropriate H&S and OH professionals contacted and involved early on.

8 A self-assessment could be completed by those with discomfort to track personal changes.

9 Information on external professional organisation support was supplied – Teacher Support Network (offering emotional wellbeing and counselling), union advice and support. Both the NUT and Voice now provide good practice guidance on classroom ergonomics and back health for their members, which is available on their respective websites.

10 Practical "posture improving" equipment was suggested and provided as necessary and as budgets allowed (for the classroom, staff room, admin areas and playground).

11 MSK health was put on the staff meeting agenda each term to identify and discuss new issues. The Back/MSK rep for each school can be contacted any time and is familiar with onward referral.

12 Schools formalised their own MSK management policy

Six-month and 12-month review meetings were held/are planned with a staff competition to prompt discussion and help consolidate learning and potential changes in behaviour and practice.

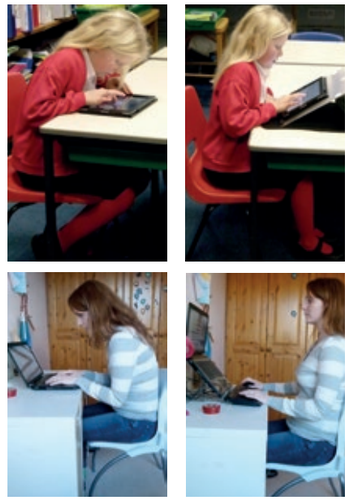
Comments so far include: "Staff morale has greatly improved", "We now run staff Pilates classes", "It's changed my practice, I also now think about pupils' posture, too", "It's been a light bulb moment, and I understand why my neck aches".

AND NOW FOR THE CHILDREN...

Paediatric physiotherapy forums are showing an increasing number of discussions from physiotherapy departments across the country looking at setting up back pain classes for children, such are the numbers of children and young people now being referred for treatment. Back pain in children leads to absence from school and potentially loss of concentration and reduced academic attainment. Further studies are required within this area.

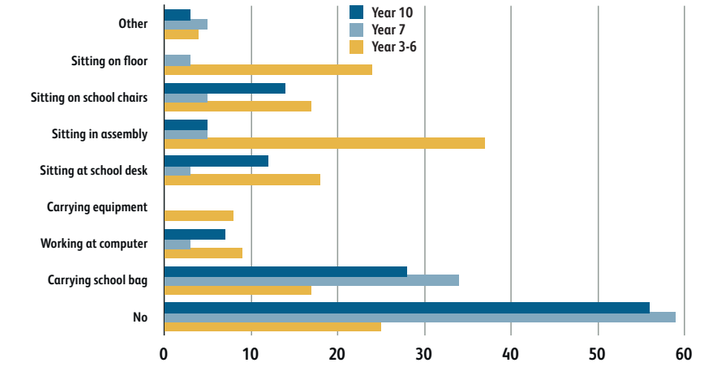
Recent research (Webb 2013) found that 72% of primary school pupils reported back and/or neck pain in the past year and 36% in the week before the questionnaire. A total of 64% of the secondary school-aged pupils reported back and/or neck pain in the past year and 33% in the past week. A total of 89% of pupils questioned had not reported their back/neck pain to anyone, but 78% wanted teaching on how to keep their backs healthy.

Some examples of poor and improved posture can be seen below.



Above: a more upright spine posture and healthy sitting can be achieved through using a tablet and laptop stand, separate mouse and keyboard. However, children should be encouraged to use seating correctly including effective use of a back rest.

FIGURE 5 Risk factors reported by children



There is most definitely a growing interest in children's ergonomics, be it from concerned parents as young people's IT use increases at home and at school, or as a result of companies wishing to supply equipment and furniture. Either way, it is certainly an area that warrants further investigation in terms of intervention and outcomes.

The author is aware of a valuable new free e-learning course – Healthy Working MOVE – developed by Cardinus Risk Management in conjunction with the Health & Safety Laboratory. Healthy Working MOVE explains to young people how using electronic devices, carrying schoolbags and adopting different postures when working and relaxing can affect their bodies. It teaches them how to use technology in a healthy, comfortable and safe way. There is a version for primary, secondary and post-18 young people and free advice sheets for teachers and parents. It takes about 20 minutes to complete and can be accessed via **www.ergonomics4kids.com**

This is a superb resource. It would be a real asset to schools and benefit pupils and families enormously if Healthy Working MOVE could be promoted and accessed via every school website. It is definitely worth a look!

For further advice and information or to express an interest in the topic, or share experiences, email **lorna@jollyback.com**

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