

Back health in education

Author: LORNA TAYLOR

Lorna Taylor is a Chartered Paediatric Physiotherapist and ACPOHE member working in primary and early years education. She is an active campaigner for improved back health in the education sector. Here, she shares recent research relating to the back health of adults working in schools, identifies risk factors and suggests practical interventions to improve back health and wellbeing for teachers and teaching assistants.



The implications for ignoring back health are costly and far-reaching for employees, employers and society. For children, striving to reach their full potential and as our future workforce, the implications have a potentially greater impact. If their teachers and teaching assistants are absent due to ill health, this may have additional impact on the children's education. As a parent, the implications of an unsettled child, disrupted at school, is a concern, but fundamentally, I believe every member of staff, volunteer and pupil should be respected, valued and cared for.

A recent review carried out by the Work Foundation and the Teacher Support Network entitled "Healthy Teachers, Higher Marks?" reports that healthy teachers who are mentally and physically fit produce better exam results in their students. Dame Carol Black, who was instrumental in positively influencing the wellbeing of NHS staff, commented: "We know from research that whatever you are producing, whether that is machinery or healthcare, your product depends on the people who work for you. The product in education is the performance and education of children, therefore having your teachers healthy and well, both mentally and physically, is crucial".

PART 1: STAFF

BACKGROUND

Physiotherapists are familiar with anecdotal evidence of work related musculoskeletal disorders (MSDs) in education professionals, particularly because of the associated low working heights and the accompanying risks. Many are familiar with the challenge of low environments as parents or through our working practices.

The hazards of child friendly environments are often little considered in mainstream schools. Factors such as budget restrictions, pupil academic targets, limited understanding and/or belief in healthier working practices, together with cultural resistance to change in some schools, may be barriers to improving occupational health and ergonomics. However, as professionals, this allows us to be creative in our thoughts and approach and gives us a great opportunity for positive improvements in the health of staff and pupils.

Change is needed and it is important to look beyond the classroom. The concept of back health in education is an emerging one. Given the increasing number of children now experiencing back pain as technology and sedentary lifestyles take their toll on young, growing spines, this is something schools should be concerned about.



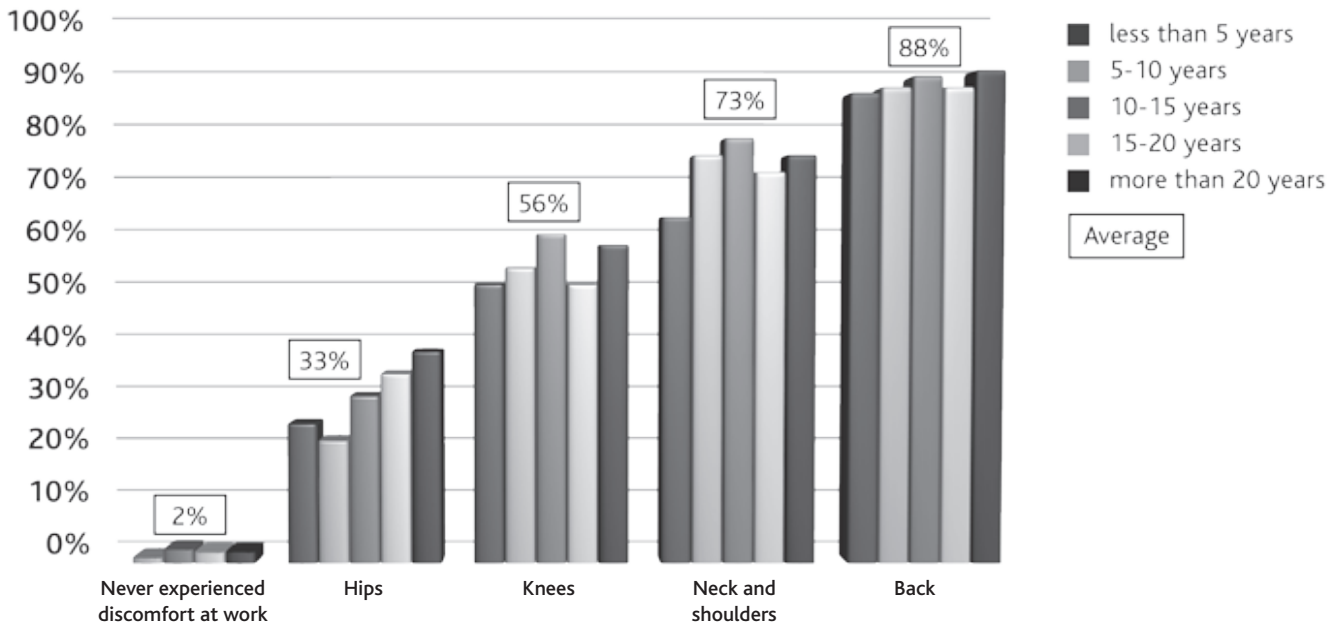
Above is a genuine school resource room, used daily. It is neither safe nor an effective use of teachers' time.

MSD risk factors

- 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

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

Figure 1: Reported career prevalence and type of work related MSD in relation to service years



With more than one million primary teachers, teaching assistants, nursery nurses and playgroup leaders and more than 20,000 primary schools and 29,000 nurseries/pre-schools, this is an area where occupational health professionals have great potential to influence change positively.

RECENT RESEARCH

- 55% of all teachers in locally maintained schools and academies in England took sick leave for a total average of 8.1 school days (Department of Education 2013). This equates to 4½ school 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 one 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 five 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 it is not provided and cover is sourced internally, pupils lose additional teacher and/or assistant time.
- A systematic review has found that the prevalence of self-reported MSD among schoolteachers ranges between 39%-95% (Erick & Smith 2011).

In 2011, I carried out a self-administered 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 schools and nurseries, entitled “Work-relevant musculoskeletal disorders in early years and primary teaching professionals”.

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

KEY FINDINGS

- Reported career prevalence of work-related MSDs – 98%.

- 88% reported experiencing back pain (Figure 1).
- 82% experienced MSDs once a week or more (Figure 2).
- 38% had been off work with MSDs.
- 70% had received treatment for their symptoms.
- 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% of respondents reported discomfort which they felt was work-relevant (caused or exacerbated) at some point in their career. The most prevalent was back pain (88%), followed by neck and shoulder pain (73%). These findings echo that of the Erick & Smith 2011 systematic review which reported 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 2: On average how often do you experience discomfort at work?

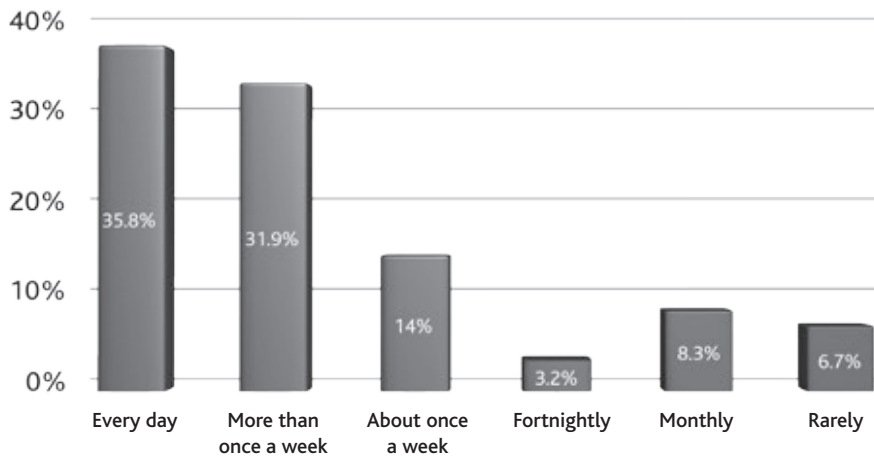


Figure 1 also highlights that the type of MSD reported is not dependent on service years. A similar level of back pain was reported by staff who had worked with young children for less than five years as it was in those who had worked more than 20 years, so it is not necessarily age related.

The majority of respondents (82%, Figure 2, columns 1-3) reported discomfort once a week or more. More than a third (36%) reported daily pain; 7% rarely experienced discomfort which they felt was work related.

Just over one-third, 38%, had been off work and 70% 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% of respondents had officially recorded their work-related discomfort, despite nearly half (48%) visiting their GP and 83% discussing it with friends and family. 11% did not mention their discomfort to anyone and only 1% contacted their union.

Figure 3 shows that 99.5% of respondents feel that work relevant musculoskeletal discomfort in the education profession is under-reported: 77% feel that it is accepted as part of the job, more than half (55%) are unaware of reporting systems in place and over a third (37%) because of fear of jeopardising a career.

The majority of open text responses suggested that people don't realise these pains are related to the work conditions as they come on slowly and they are unsure of cause. Other responses 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 that all money should be spent on the children and not staff discomfort.

Figure 4 shows the top three work activities which respondents felt caused or contributed to their discomfort were bending over low tables (91%), sitting on children's chairs (85%) and kneeling (71%).

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

- manual handling activities (lifting/carrying children, lifting off climbing equipment, for nappy changes, if children 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
- removing 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.

Figure 3: Reported reasons for under reporting of MSDs

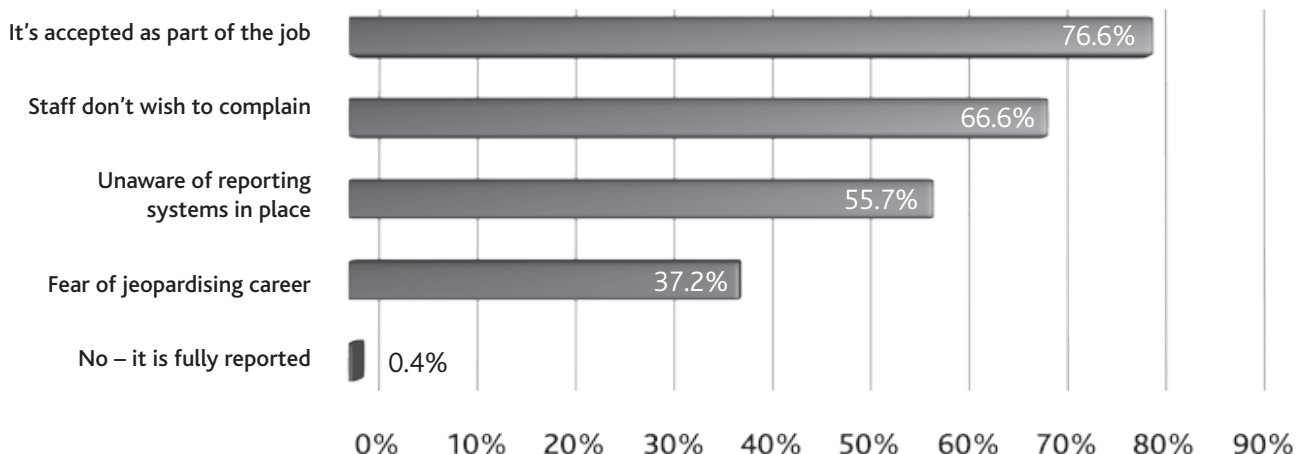
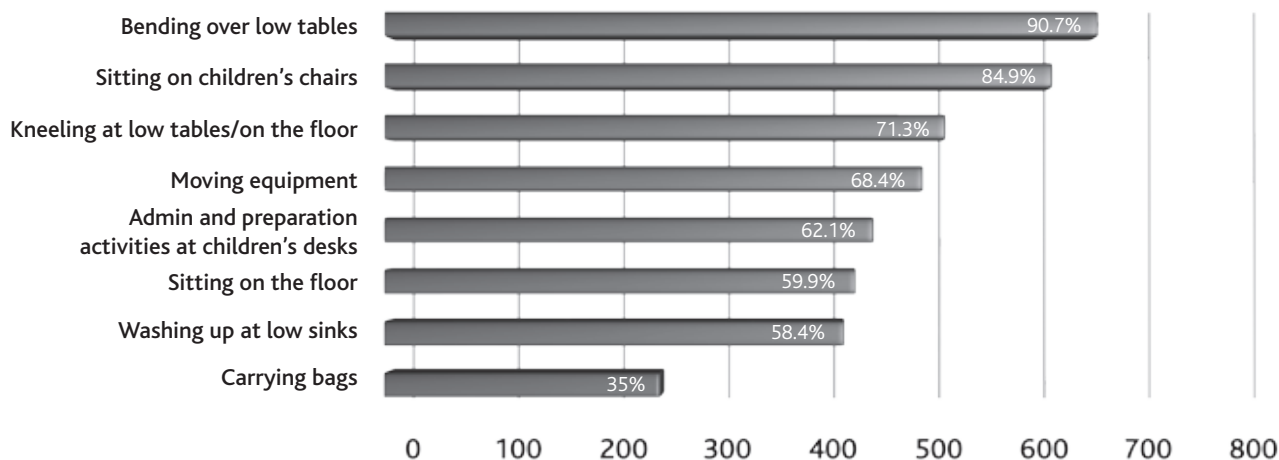


Figure 4: What activities at work cause you/your colleagues discomfort?



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

COPING STRATEGIES

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

Staff working in special needs really valued the manual handling training they received and felt that all other educational workers should receive it. Many respondents, in particular trainee teachers, felt that they should have access to improved information and training on manual handling, posture,

ergonomics, causes of MSDs and safer handling of equipment. Many said: "It is too late for me" or "You don't realise that smaller aches and pains you are regularly experiencing early in your career are contributing to serious long term damage".

Other coping strategies included staff discovering ways to manage symptoms, such as: "I bend my knees to pick things up", "I use a chair to wash up". Many agreed that simply avoiding certain activities was not the answer because "fewer staff are left to do

Classroom working practices



Classroom working practices



hazardous tasks, so are at more risk themselves”.

PSYCHOSOCIAL FACTORS

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

Presenteeism (working when genuinely ill when you should be at home recovering) 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 structure and workload. 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 demanding situations with large classes, a lack of education resources, curriculum changes and with limited reward for their work. These are important issues when considering an



effective approach. There are emotional demands of working with children and parents in addition to the pressures widely recognised by Ofsted assessment.

PERSONAL AND ENVIRONMENTAL FACTORS

A previous episode of back pain is a known risk for further episodes, so prevention of the first episode is important. Physical factors such as frequent bending, twisting, repetitive work, static postures, awkward or

uncomfortable postures, lifting, pushing, pulling are all observed in educational settings.

On average, 600 hours is spent sitting on children’s furniture every year. If you think of this as a workstation, then the HSE risk factors which include “sitting at a workstation for a long period of time if the workstation is not correctly arranged or adjusted to fit the person, combined with time in stooping, bending over or crouching (poor posture), stretching, twisting, reaching”

are present for long periods of the day. Ergonomically poor DSE workstation set-up and inappropriate seating may be factors for pupils and staff.

Environmental issues such as lack of space for movement and equipment storage are often present, as well as frequent needs to move furniture around.

Workplace culture and relationships might add to stress and anxiety. Rest breaks may be insufficient during the working day.

SCHOOLS HEALTH AND WELLBEING INITIATIVE

Drawing on research and identified risk factors, an injury prevention and wellbeing intervention pilot has been carried out in three primary schools. Head teachers were contacted through the Derby City Healthy Schools Team so that the pilot began where a supportive health and wellbeing culture was already embedded.

The HWB charter:

- 1 A Back/MSD Health Wellbeing Representative was assigned.
- 2 Staff training was given to explain the concept of MSDs and ergonomics, the importance of prevention and rehabilitation, with a Q&A and discussion on MSD challenges faced in school and at home.
- 3 A HSE Health and Safety (H&S) checklist for classrooms and workplace assessment was completed with the school representative (catering and office staff were included too). Playground and storage room assessments were also carried out.
- 4 A staff MSD helpline was available.
- 5 Jolly Back's BackChat training resource (An Essential Guide to Manual Handling, Back and Voice Care for Education Professionals) was viewed and self-assessment was completed by all staff. An annual

refresher was recommended.

- 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 were involved early on.
- 8 Jolly Back's staff 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 members. It can be seen on their respective websites.
- 10 Practical "posture improving" equipment was suggested and provided as necessary and as budgets allowed (for the classroom, staff room, office areas and playground).
- 11 MSD health was put on the staff meeting agenda each term to identify and discuss new issues – identify, reduce, control and review process. Each school's Back/MSD rep can be contacted any time and is familiar with onward referral.
- 12 Schools formulated their own MSD management policy.

A staff competition created discussion and helped consolidate learning and potential changes in behaviour and practice. Six-month and 12-month review meetings were held with the pilot schools.

Outcomes from the pilot are being assessed. Feedback so far is positive and includes: "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, I understand why my neck aches", "We

have been a Jolly Back school for over 18 months and have never had anyone off work with back pain".

CONTACT

I would welcome the opportunity to be in touch with any readers who are interested in this topic and who wish to know more and share good practice. For further advice and information, please see www.jollyback.com or email lorna@jollyback.com

REFERENCES

Bevan S (2012). The Impact of Back Pain on Sickness Absence in Europe.

Burford EV, Ellegast R (2014). Analysis of musculoskeletal workload of nursery teachers. *The Ergonomist* May 2014.

Chartered Institute of Personnel and Development /CIPD (2013). Employee Outlook: Focus on employee well-being.

Erick PN, Smith DR (2011). A Systematic Review of Musculoskeletal Disorders Among School Teachers. *BMC Musculoskeletal Disorders* 2011;12 (260).

HSE (Health and Safety Executive) (2014). Back pain in the workplace – Causes of pain. www.hse.gov.uk/msd/backpain

Samad NIA, Hashim Z, Abdullah H, Moin S, Tamrin SBM (2010). Prevalence of low back pain and its risk factors among school teachers. *American Journal of Applied Sciences* 7(5): 634-639.

USEFUL RESOURCE

Teacher Support Network – a helpline dedicated to schoolteachers and staff in FE and HE www.teachersupport.info

- In the next issue, Lorna will write about improving back health for children.