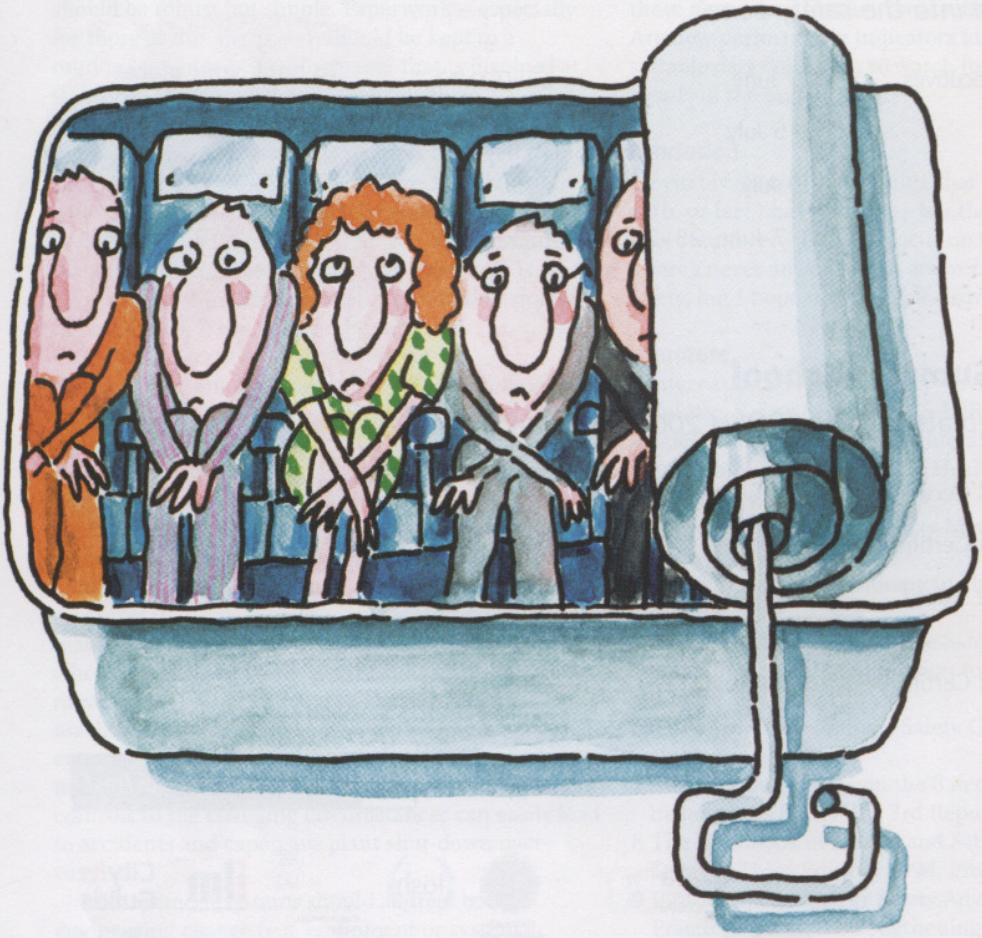
This time it's personal

THE WORLD OF WORK HAS UNDOUBTEDLY changed over the last 20, 10, or even five years. Technological developments mean workplaces are now more mobile and flexible, and provide easy access to information via increased team-working, cross-functional work, the growth in call centres, and the move away from hierarchical management structures.

This change in work practices has brought with it a change in the design of workplaces, with open-plan offices now the norm in many organisations. Improvements to physical working conditions have led to expectations, among employees, of comfortable, well-lit workplaces, where the temperature is acceptable, and physically damaging hazards, such as excess noise, are not present.

Work environments that are structurally and culturally designed to facilitate preferred work practices will be rewarded with a positive difference to employee health and sense of well-being, argues **Karen Coomer**.



So, what is the impact on the psychological health and well-being of workers in open-plan environments? Do features such as interior plants, matching décor, music, and comfortable areas for relaxation help reduce stress levels and increase productivity, or are generic, clear-desk policies and large, open-plan spaces for everyone – regardless of the type of work that they do – in any way justified?

The environment and stress

Occupational stress is a subject that has led to much research and debate. The generally agreed approach to the definition and study of stress is defined by Cox[1] as psychological and takes into account the interaction between the person, their environment, and psychosocial factors. The HSE's stress management standards[2] are an example of a practical tool designed around this definition, with the emphasis on a risk-assessment approach to the reduction of work stressors. In the field of environmental psychology, too, theoretical models have been developed in relation to the effects of environmental conditions on behaviour. They can be summarised as follows:

1 Stimulation provided by the environment around us can heighten autonomic activity, such as increased blood pressure and heart rate, and this is known commonly as **arousal**. How it affects our behaviour depends on the source of stimulation, which can be pleasant or unpleasant. Noise is an example of an environmental factor which can increase arousal and affect behaviour.

2 When the amount of information received from the environment is exceeded by our capability to process that information, **overload** can occur, resulting in fatigue, irritability, and

frustration. These, in turn, can lead to 'tunnel vision' thinking – ignoring any stimuli that distract from the task in hand. This includes ignoring colleagues and avoiding eye contact or workplace banter in order to get on with the task. Part-time workers are at particular risk of this, for obvious reasons. At the other extreme, a monotonous working environment can lead to under-stimulation, which increases the desire for arousal and excitement.

3 Being able to alter our perception of the environmental stimulus we are exposed to is called **adaptation theory**. The ability to screen out distractions in an open-plan environment is a good example of this.

4 **Behaviour constraint** relates to the perceived loss of control over the environment, or the anticipation of a factor that may restrict our freedom. If actions to regain control are unsuccessful, learned helplessness can develop, which can affect mental outlook in the workplace and lead to symptoms of stress and depression.

Give me some room

Personal space has two primary purposes: protection, in that it serves as a buffer against feeling the stress response; and communication, in terms of the quality of relationships and the level of intimacy we choose to have with another person. Open-plan offices require employees to work in close proximity with colleagues, so it can be difficult to avoid interpersonal contact, or maintain privacy. Establishing visible territories and personalising workspaces by displaying personal photographs, children's drawings, cartoons, and other personal objects, is common. This is an important concept, in that such personalisation leads to personal attachment, increased personal control, and a sense of responsibility for the workspace or machine. This is worth bearing in mind, given the trend for 'hot-desking', clear desks, and mobile workforces that move from one workspace to another.

Anyone who has been to a zoo recently will have noticed that cages have now largely been replaced with natural habitats, which enable the animals to have some control over their behaviour – to be on view if they want, or remain out of sight. The key reason for this change was concern for the animals' psychological and social well-being; zoos were keeping animals alive but were failing to make them flourish. If we liken this concept to an open-plan office, the ability to adjust the workplace to a variety of work environments, e.g. the availability of meeting rooms and zoned areas, has been shown to have a positive effect on both job satisfaction and group cohesiveness – very similar to animals in a zoo.[3]

Interestingly, job satisfaction appears to be an indicator of satisfaction with the work environment. Environmental psychologists have found that the way employees see themselves is affected by the way they judge or evaluate their workplace. Those who perceive themselves as professionally successful show a greater appreciation of the same environment as those who perceive themselves as professional failures.[4] This may help explain why some employees, despite risk assessments and consequent changes, remain unsatisfied with their work environment.

The combination of excessive social interaction, lack of control, and limited personal space can expose employees to over-stimulation. This evokes feelings of irritation and frustration due to overload and arousal, which can ultimately result in employee dissatisfaction and withdrawal. With highly complex jobs, where concentration is crucial, an Australian study[5] found that distraction is a major problem in open-plan offices. Low perceived privacy and the inability to screen out distractions can result in poor performance and negative attitudes. Tactics that employees used to cope included wearing headphones, and relocating to quiet spaces (therefore emphasising the importance of the availability of dedicated private areas). Mundane work, however, which requires little cognitive effort, can benefit from environmental stimulation, such as bright lights, strong colours, and music.

Noise

Health and safety professionals are fully aware of the physical effects of noise but what about its effects on mental health? Anyone who has ever travelled on public transport within earshot of loud mobile phone conversations will not be surprised to learn that research has shown that listening to unwanted conversations is a major irritant for workers.[6] Introducing music into the workplace to mask unwanted sound does improve satisfaction, and has been reported in studies[6] to provide a pleasant atmosphere, if the noise was no higher than 48dB. This was recognised during the Second World War, when it was common practice in Britain's factories to pipe music on to the shop floor through loudspeakers to increase morale and help alleviate the monotony of work tasks. Indeed, there was even a BBC radio programme 'Music while you work', which was transmitted twice a day.[7] However, one person's pleasant music could be another's tuneless cacophony, so personal headphones are routinely used in recognition of this.

As with the issues of personal space, perceived control can reduce the effects of a stress-related response. Not being able to see or understand where the noise is coming from is more annoying than predictable noise – thus, a person who operates a noisy machine but who can control the noise is less annoyed by it than other people exposed to the same noise.

Aesthetics

Many workplaces with open-plan office arrangements have zoned areas for relaxation, eating, and informal meetings. This is beneficial to employees' psychological health, especially where there are small spaces provided, as they create a sense of refuge, enabling users to survey the surroundings but still enjoy partial concealment. Indoor plants are often used to create zoned areas, and there is evidence to suggest that they also have a positive effect on human health and well-being, particularly in windowless areas.[8]

More than a hundred years ago, Florence Nightingale observed how patients recovered much more successfully when they could see 'nature' out of a window, and there is now a large body of evidence that suggests that the environment in which a patient recovers in hospital can promote healing and reduce pain and stress.[9] This has led to interest in restorative spaces in workplaces, particularly designed to provide opportunities for rest, recovery and contemplation. Involuntary attention to such design elements as moving water, aquariums, and window views has been shown to facilitate recovery from mental fatigue caused by overload. This is due to stimulation of the parasympathetic nervous system, which gives rise to a calming effect. With the forthcoming ban on smoking areas in England, areas like these could possibly help smokers in the workplace relax.

Window views and being able to see daylight are, as already mentioned, very important, so placing employees who spend the majority of their time at their desks near windows instead of in the middle of a room may result in more satisfied employees. However, individual control over opening and shutting windows, and the provision of blinds to reduce glare, are also considered important.

In relation to space, the layout and design of the workplace also influence the emotional and behavioural response of an employee. From a psychological viewpoint physical design is not simply a matter of functional purpose – it also has symbolic meaning. The use of certain colours,

textures and furniture can convey messages of care, efficiency, cleanliness and comfort. The hospitality and retail industries are very aware of this, and seek to encourage consumers to not only purchase a product but also to have a positive experience. However, overall tidiness is considered more important than décor with regard to the effect of visitors feeling comfortable and welcome. It appears that an intermediate level of tidiness, with organised stacks of paperwork, has been evaluated as being significantly more welcoming and friendly than overly tidy or untidy offices.[10]

Conclusion

Research on the psychology of the environment indicates that the prevention of stress associated with environmental factors is possible and involves a number of practical options:

- Designated private spaces, use of headphones, and smaller open-plan offices to create environments where the flow of information, noise and other interruptions is reduced. Freedom to choose to work from home (without distractions) can also provide a solution.
- Introducing the concept of nature into the workplace to help employees relax and recover from mental fatigue. This can be as simple as installing plants, or as complex as building a roof-top garden, or a water feature. Obviously, encouraging employees to have breaks away from their work in the first place is necessary to capitalise on these beneficial effects.
- Changing the way the environment and, consequently, the work content is interpreted, and then successfully adapting to the situation, is another solution. Hot-desking may well be a successful way of working for employees who travel, or expect to be mobile, but it may be less successful for employees who expect to work in one place and want to establish a feeling of security by personalising their work space. ■

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