IN-DEPTH REVIEW

Relationships between work environments, psychological environments and psychological well-being

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Work environments appear to have both positive and negative impacts on the psychological well-being of workers. This paper reviews a number of models and theories that have addressed this issue. First, those aspects of the psychological work environment, which are thought to be most relevant to well-being, are described. Second, a number of models and theories are considered. How then is it possible to best understand how the work environment creates a psychological environment, which in turn may affect psychological well-being? While some of the available approaches are general and offer descriptive frameworks, others do attempt to explain the relationships between a more narrow set of work characteristics and well-being. Further, recent approaches focus on explaining emotional reactions at work and the role of the psychological contract. A sound understanding of work and well-being is still some way away. However, focusing on more specific kinds of well-being, taking account of other contextual influences, and looking at both the salubrious and harmful effects of the work environment are likely to bring about greater understanding.

Key words: Job characteristics; model; psychological well-being; stress; theory; work.

INTRODUCTION

Work environments have many properties that may affect both physical and psychological well-being. Here, the concern is to better understand those aspects of work environments which are thought to be important influences on the psychological well-being of workers. This paper will not give detailed consideration to evidence for the links between psychological conditions at work and well-being but, rather, focus on the way in which researchers have attempted to understand and explain how it is that work can have significant impacts on well-being.

For at least the last 30 years, empirical research and theory concerning work and well-being have tended to focus almost exclusively on the negative impacts of work on well-being and, more specifically, on the impact of work stress on health. There is much evidence to suggest that work can also have beneficial effects on both physical and psychological health and being in employment is generally less harmful than being unemployed. However, interest in these salubrious aspects of work appears to have waned as the negative and stressful aspects have come to dominate lay and professional thinking about work and well-being.

While much of the following discussion will reflect this shift in interest and focus on negative impacts of work on well-being, the importance of also considering the salubrious aspects of work will be restated.

THE MEANING OF WORK ENVIRONMENTS AND PSYCHOLOGICAL ENVIRONMENTS

The work environment can be thought of, simply, as the environment in which people work. As such, it is a very broad category that encompasses the physical setting (e.g. heat, equipment), characteristics of the job itself (e.g. workload, task complexity), broader organizational features (e.g. culture, history) and even aspects of the extra-organizational setting (e.g. local labour market condi-
tions, industry sector, work-home relationships). However, not all aspects of the work environment are equally important or indeed relevant when considering the psychological environment, and how this environment affects worker well-being will be discussed later. For the purposes of this discussion therefore focus will only be on those aspects of the work environment which, according to a number of theoretical positions, seem to be most important and relevant for psychological well-being.

The psychological environment can be thought of, more specifically, as those features of the work environment which are relevant to worker behaviour. By behaviour, the three related types of psychological phenomena are considered: affect (e.g. emotions, mood, psychological symptoms, affective disorders); cognitions (e.g. attitudes, perception, decision-making); and behaviours (e.g. effectiveness, absence, motivation). The psychological environment is therefore the set of those characteristics of work environment that affect how the worker feels, thinks and behaves. Here, the focus will be particularly on affective responses.

HOW PSYCHOLOGICAL ENVIRONMENTS ARE CREATED AND CONTAINED BY WORK ENVIRONMENTS

How the physical work environment creates the physical conditions that can affect physical health can often be fairly transparent. The presence of a noxious substance to which workers are exposed, for example, creates a relatively direct link between an aspect of the physical environment and a subsequent health problem. However, the way in which work environments create psychological environments is somewhat less transparent and less direct. Two issues are relevant here. First, a great number of aspects of the work environment could potentially affect psychological well-being because, as will be seen later in the discussion, the interpretations which workers make of their working conditions have a central role in producing psychological well-being. It is not therefore possible to state with certainty that particular aspects of work will necessarily have an impact on well-being as it depends crucially on the way in which work is perceived. The second issue is that it may often be the combination of a number of key work conditions present, which are important for psychological well-being. Any single work characteristic alone may not be particularly relevant but, rather, it is the total configuration of these characteristics. While this review is inevitably limited, numerous fuller reviews exist.1-4

The following describes some of the main psychological characteristics in the work environment which may be relevant to psychological well-being. The ways in which these characteristics have been thought to affect well-being will be discussed in the next section.

The physical setting

To what extent can the physical setting have direct effects on the psychological environment? The impact may be less direct and less marked than some of the other features of work environments that will be described later, but, nonetheless, they can be significant in particular kinds of work. Three kinds of influence will be considered here. First, aspects of work such as heat, noise, and lighting have been shown to affect a number of psychological processes in both direct and indirect ways. Noise, for example, may impair the cognitive performance of certain kinds of tasks.5 Second, the physical setting impacts on the level and nature of social interaction between co-workers. The design of open-plan offices, for example, and other aspects of the physical lay-out may determine the kinds of interactions that can take place.6 Third, the physical environment may offer more or less physical safety. Concerns about accidents or injury are likely to have some effect on psychological well-being.

Job characteristics

There have been numerous attempts to identify the key psychological features or characteristics of jobs. Characteristics that are thought to be important for well-being include qualitative and quantitative workload, the control or discretion workers have over the way they perform tasks, the level of task repetitiveness, and role ambiguity. The way in which jobs are designed, and the way they are designed in relation to technologies, is thought to be a major determinant of job characteristics.7 The work environment therefore creates these job characteristics through the way in which jobs are designed and organized and is thought to be one of the most important sets of influences on psychological well-being.

Broader organizational features

Jobs take place and workers work in a much broader organizational context in which the features may be relevant to well-being. Two will be discussed briefly. First, the structure of the organization. Structure includes the number of levels in the hierarchy and the way in which workers are deployed, such as teams, and the coordination between different parts of the organization may all play a role in constructing the psychological environment. The second feature is the organizational culture, which refers to the norms of behaviour and accepted ways of doing things. Culture may help to shape many aspects of the psychological environment including social support, working hours, and the acceptability of bullying or oppressive behaviours.

Extra-organizational factors

It has become increasingly recognized that in order to understand how work affects well-being, it is also necessary to understand how various situations outside work play a role in this relationship. These factors can be considered on three levels. First, on an individual level, it is clear that what is happening to a worker outside work can have a significant influence on their well-being in relation to work.9 For example, a worker who is
experiencing difficulties with relationships outside work, which are causing them considerable distress, may find dealing with problems at work more challenging than usual. The second level is the local community level where features such as local unemployment levels, transport, housing and healthcare provision may all play a role. It may be the case, for example, that in conditions of particularly high unemployment, working conditions, which may more usually be regarded as harmful and intolerable, become more acceptable given the scarcity of jobs. Last, the national economic climate may also be significant in influencing work and well-being relationships. Working in an industry sector that is particularly threatened, for example, is likely to increase feelings of job insecurity.

There are, therefore, numerous ways in which the work environment creates and contains psychological environments that may have significant influences on psychological well-being. Some of the ways in which researchers have attempted to understand and explain these links are as follows.

APPROACHES TO UNDERSTANDING HOW PSYCHOLOGICAL ENVIRONMENTS IMPACT ON PSYCHOLOGICAL WELL-BEING

As discussed earlier, many aspects of the work environment are likely to affect psychological well-being and are likely to do so in complex ways. It is, therefore, not surprising that many different theoretical approaches have been brought to bear on developing an understanding of such relationships. Here, some of the major approaches will be discussed, together with some more recent perspectives. The discussion will focus on the negative impacts of work on well-being through job satisfaction, which has also been widely studied.

General stress models

Perhaps the very first of these general stress models appeared more than 25 years ago and has come to be very widely used. The basic version of this model consists of a series of 'stressors', such as workload and role ambiguity, usually placed on the left hand side of the model, which are connected to a series of 'strains', such as mental health and absence, by arrows on the right hand side of the model. Between these stressors and strains are a number of variables that are thought to moderate the strength of the relationships between stressors and strains such as coping, personality, and social support.

While these models are widely used and are useful as general summaries, they do have a number of serious limitations. First, they are not explanations as such. Explanations attempt to define how and why work characteristics might have an impact on well-being, but these models aim to describe rather than help in the understanding of possible relationships. Second, many of the relationships they appear to describe have no or limited empirical support. Hence, while they do provide useful summaries, they have limited accuracy. Third, there are many ambiguities with the definitions and meanings of stressors and strains, which limit the usefulness of stress as an explanation of negative reactions to work conditions. General stress models, therefore, simply suggest that if some aspects of the work environment are perceived negatively they may have negative impacts on well-being.

This rather general and sometimes simplistic stress (or stressor–strain) approach clearly raises more questions than it answers. While the concept of stress remains popular, one trend in stress theory development has been towards more specific theories that tend to focus particular aspects of the processes involved or take a particular theoretical approach to the processes that link work and well-being. Examples include person–environment fit and effort–reward imbalance approaches.

Job demand–control model

Perhaps the best-known and most widely tested specific stress model was developed by Karasek. Known as the 'job demand–control' model, it posits that the relationship between job demands, or workload, and well-being depends on the level of control, or job decision latitude, the worker has over their job. According to the model, those jobs that have the most negative impact on health, are those that combine high demands with low control. The negative impact of high demands is moderated where there is also a high level of control. Jobs that have this particular combination are not, according to the theory, damaging to health but rather are 'active' jobs in which learning and development takes place. High job demands are not in themselves harmful, rather, it also depends on the level of control present.

While the considerable evidence that does exist is equivocal, where more specific approaches to defining and measuring control have been used (i.e. what type of control and over what?) they provide a little more support for the model.

The vitamin model

A broad approach to looking more generally at how the psychological features of any environment, including that of unemployed people, may influence psychological well-being is provided by Warr's 'Vitamin' Model. It is based on an analogy of the relationship between vitamins and physical health. Some vitamins, such as A and D, though essential for health, when consumed in large quantities are harmful. Other vitamins, C and E, which are also essential to health, can be consumed in large quantities with no ill-effects. Warr describes psychological features of the environment in terms of vitamins such that the presence of each in the environment is important for psychological well-being but their effects on well-being will vary as their level increases.

The nine environmental vitamins are listed in Box 1. While all of these in moderation are necessary for psychological well-being, some, such as externally
Box 1. The nine environmental features in Warr’s vitamin model identified as significant for psychological well-being

1. **Opportunity for control.** Discretion, decision latitude, independence, autonomy, job control, self-determination, personal control, absence of close supervision, participation in decision-making, absence of utilization.
2. **Opportunity for skill use.** Skill utilization, utilization of valued abilities, application of skills and abilities, required skills.
3. **Externally generated goals.** Job demands, quantitative or qualitative workload, time demands, role responsibility, time pressure at work, required concentration, conflicting demands.
4. **Variety.** Variation in job content and location, non-repetitive work, varied roles and responsibilities, skill variety, number of different job operations.
5. **Environmental clarity.** Information about the consequences of behaviour (e.g. availability of feedback), information about the future (e.g. absence of job future ambiguity), information about required behaviour (e.g. low role ambiguity).
6. **Availability of money.** Income level, amount of pay, moderate/high standard of living, absence of poverty, material resources.
7. **Physical security.** Absence of danger, good working conditions, ergonomically adequate equipment, safe levels of temperature and noise, absence of continuous heavy lifting.
8. **Opportunity for interpersonal contact.** Quantity of interaction (e.g. contact with others, adequate privacy), quality of interaction (e.g. good relationship with others, social support).
9. **Valued social position.** Cultural evaluations of status (e.g. social rank, occupational prestige), more localized social evaluations of in-company status or job importance, personal evaluations of task significance (e.g. meaningfulness of job or self-respect from the job).

generated goals (workload) and environmental clarity, at very high levels are assumed to be harmful to well-being. Others, such as the availability of money and valued social position, are, according to the model, unlikely to ever be detrimental to well-being even at very high levels.

The vitamin model is useful as a reminder of the range of environmental features that might be relevant and the fact that their relationship to well-being may not always be a linear one.

**Affective events theory**

Thus far, the theoretical approaches discussed have tended to focus on a relatively broad set of environmental features (or ‘stressors’ within stress models) and their effects on general psychological well-being. Affective events theory\(^{21}\) takes a slightly different stance by considering how specific events at work, rather than broad job characteristics, lead to specific emotional and behavioural responses. It is events, therefore, or things that actually happen at work, that affect well-being, not job characteristics in an abstract sense. In addition, what is experienced, at least in the short term, are specific emotions and not broad shifts in psychological well-being. This theoretical approach is consistent with the increasing interest in emotions at work.\(^{22,23}\)

**The psychological contract**

Finally to be considered is the psychological contract, most recently popularized by Rousseau,\(^{24}\) as a theoretical approach to understanding how the work environment may affect psychological well-being. The psychological contract essentially describes a worker’s beliefs about what they give to their employer (e.g. effort, commitment) and what they can expect in return (e.g. payment, respect, promotion). According to this approach, when a worker perceives that their employer has in some way violated this contract by not, for example, rewarding extra effort with promotion, strong negative emotions are produced which may have longer-term implications for well-being. Conversely, when the psychological contract is perceived as a fair one, psychological well-being is likely to be enhanced. The work environment within this approach is conceptualized as a set of beliefs that the worker holds about how the organization will respond to their work behaviours.

**DISCUSSION AND IMPLICATIONS**

How best can the relationship between the work environment, the psychological environment, and psychological well-being be understood? The answer would appear to be that there is no one best way. Stress models have numerous limitations and can sometimes appear to be little more than lists of work and person factors that may cause problems and a description of these possible problems. Models that are more specific appear to be useful for some workers in some situations. The vitamin model is a reminder of the numerous and complex nature of the relationships between the psychological environmental and well-being. Affective events theory and psychological contract approaches appear to be useful but for somewhat specific situations.
Three implications for understanding work and well-being

First, one essential way forward in understanding the links between the work environment and psychological well-being is to clarify precisely what requires explanation about psychological well-being. Different types of well-being phenomenon include specific and diagnosable mental health conditions (e.g. depression, anxiety disorder), mood states related to motivation (e.g. fatigue, tiredness), other mood states (e.g. depressed affect, boredom), and specific emotions (e.g. anger, resentment). Each of these types of phenomenon is likely to require a different kind of explanation and the challenge is to identify which one is likely to be most helpful.

A second way of developing understanding is to take into account the influence of various contexts on work and well-being relationships. Such contexts may include individual qualities and personality attributes of the worker and the particular conditions in that job or organization. A theory that helps understanding and intervention for a particular worker in one context may not be useful for other individuals in other contexts.

Lastly, returning to a point made earlier, work environments can have both positive and negative consequences for psychological well-being. Any comprehensive understanding of how work affects well-being must take into account both the salubrious and harmful influences of work on worker well-being.

REFERENCES