The relationship between leadership support, workplace health promotion and employee wellbeing in South Africa

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SUMMARY

Leadership support has been identified as an essential component of successful workplace health promotion (WHP) programs. However, there is little research in this area and even less theoretical conceptualization on ways in which leadership support for WHP is related to improved employee wellbeing. In this paper, we developed and tested a model of leadership support for WHP and employee wellbeing outcomes using employer and employee data gathered from 71 South African organizations. A theoretical model based on social exchange theory was developed.

It was hypothesized that perceptions of company commitment to health promotion mediates the relationship between leadership support, the provision of WHP facilities and employee wellbeing. A hierarchical structural equation modeling technique was used to test the model. We determined that leaders' support for WHP was important insofar as they also provided health promotion facilities to their employees. No direct relationship was found between leadership support alone and employee wellbeing.

Key words: employee; health promotion programs

As the global increase in chronic diseases of lifestyle continues to place a burden on individuals and organizations, notable interest in the workplace as a site for health promotion has emerged. The growing body of research in this area has provided some encouraging findings on the effectiveness of workplace health promotion (WHP) programs from both an individual and organizational health perspective. In particular, evidence of a positive return on investment for organizations offering WHP (e.g. Chapman, 2005) has provided impetus to many businesses to offer these programs to their workers, and national surveys have established that WHP has gained traction in the USA and in South Africa (Fielding and Piserchia, 1989; Linnan *et al.*, 2008; Sieberhagen *et al.*, 2011).

The role of senior management support has been cited as an essential contributing component in the adoption and success of WHP and research on this topic is gaining prominence in the literature. In particular, there appears to be a

role for leadership to support WHP through creating a health promotion climate that integrates health into organizational strategy. For the purposes of this paper, leadership support is defined as leaders' involvement in, and promotion of, activities, policies and practices that encourage the development of such a climate. There is a small but growing body of research addressing the development of measurement instruments, including the Worksite Health Climate Survey and the Leading by Example (LBE) instrument (Barrett *et al.*, 2005; Della *et al.*, 2008). Such research lends rigor to the field, allowing researchers and practitioners to evaluate and monitor the contribution of organizational leaders to the establishment of workplace health improvement facilities and healthy workplace practices. There is also growing evidence of leadership support resulting in improved health outcomes (Dellve *et al.*, 2007; Lemon *et al*., 2009).

These findings support the notion that leadership support is a necessary precondition for the allocation of resources to enable WHP interventions (Noblet and Rodwell, 2010). The focus on leadership has also enabled a move away from the more traditional WHP perspective which has been criticized for placing the onus for behavior change exclusively on the individual worker leaving out the importance of social, environmental and policy influences on health (Noblet and Rodwell, 2010).

Over and above the pragmatic requirements of WHP, leadership support is necessary at a more symbolic level as well.

Senior managers exert a strong influence on all aspects of organizational functioning and gaining the support of top management for WHP sends out a message that management understands the importance of employee health and is prepared to devote considerable time and resources to identify and address priority health issues. Employees are unlikely to become involved in, or support, organizational health-related initiatives if they feel managers are only superficially interested in the program and are not genuine in their attempts to enhance employee health [(Noblet and Rodwell, 2010), p. 176].

At a theoretical level, company concern about employee wellbeing can be thought about within the context of social exchange theory (SET), one of the leading conceptual paradigms underpinning our understanding of employee attitudes and behaviors (Cropanzano and Mitchell, 2005). While there are a range of differing approaches to

this theory, there is general consensus that social exchange may be defined as a 'series of interactions that generate obligations' [(Cropanzano and Mitchell, 2005), p. 874].

SET has been applied successfully in many contexts and is based on three key tenets: first, the rules and norms of exchange. These refer to the parties' implicit or explicit assumptions and expectations regarding the exchange. *Reciprocity* is the best known rule of exchange (Cropanzano and Mitchell, 2005). It refers to a sense of obligation on the part of the employee to respond in kind to the treatment he/she receives. Based on such treatment, workers develop particular types of beliefs about the extent to which the organization appreciates their input and 'cares about their wellbeing' [(Eisenberger *et al.*, 1986), p. 501]. Such beliefs then influence employees' organizational attitudes and behaviors.

The second tenet is the resources of exchange—love, status, information, money, goods and services (Foa and Foa, 1974). Within the organizational context, these are generally reduced to two resources—economic and socio-emotional. The provision of health promotion facilities within organizations and a leadership climate that promotes employee wellness involve both types of resources. They constitute economic resources, in the sense that the organization is providing a service to employees, and socio-emotional resources, in that they signal the message that employees are valued and cared for by the organization.

The third tenet is social exchange relationships. Two types of exchange relationships exist (Wayne *et al.*, 1997). The first refers to exchanges between the leader and his/her supervisor, often referred to as leader–member exchange relationships. Although our paper deals with leadership, this is not the exchange to which we are referring, as we do not explore leadership relationships in any dyadic form. The second type of social exchange is between the employee and employer, and it is this exchange that is relevant for this study. Social exchange interactions of this type progress when employers take care of employees producing positive results for both groups (Cropanzano and Mitchell, 2005). Positive results usually refer to effective work behavior and positive employee attitudes (Cropanzano and Mitchell, 2005). In this case we argue that the notion of positive results can be extended to incorporate aspects of employee wellbeing. Employers are increasingly concerned about rising mental health costs as well as

the productivity decrements that may result from poor employee wellbeing (Goetzel *et al.*, 2002). It therefore seems probable that this is an exchange which they would value. Specifically, we propose that a perception of company commitment to the promotion of employee health mediates the relationship between the provision of WHP programs and policies, leadership support for WHP and employee wellbeing.

In summary, the role of leadership in WHP is widely acknowledged. The rationale for such support is generally based on pragmatic considerations of resource allocation and the need for top-level support for changing unhealthy work design and practices. Additionally, on a more symbolic level, leaders' views and actions regarding WHP constitute an indicator for employees of organizational care and concern. At an empirical level, there is still a dearth of studies but the research that does exist is promising. Measures of support for WHP are being developed and validated (e.g. Barrett *et al.*, 2005; Della *et al.*, 2008), thus providing needed tools to advance research in the area. Results of studies that have used such tools to evaluate leadership impact have supported the contention that leadership has a role to play in creating an organizational culture of health and wellbeing. There is, however, very little theorizing in the health promotion literature on the way in which organizational leadership contributes to that culture. We therefore utilized SET, as a theoretical framework, to hypothesize relationships between leadership support, provision of WHP programs and policies, perceptions of company commitment to health promotion and employee wellbeing.

These hypothesized relationships are depicted in a theoretical model presented in Figure 1. Starting at the far right of the model, employee wellbeing is a form of domain-specific wellbeing relevant to the workplace (Warr, 2007). Van de Voorde *et al.* (Van de Voorde *et al.*, 2011) distinguish between three dimensions of employee wellbeing—happiness, health and relationship wellbeing. In the present study, work-related happiness is operationalized as job satisfaction; work-related health is operationalized as burnout, specifically emotional exhaustion (Warr, 2007) and relationship wellbeing is operationalized as harmonious work relationships between colleagues and managers.

In line with SET, the mediating variable is a form of perceived organizational support, operationalized as perceptions of company commitment to health promotion. The independent variables in the model are the extent to which workplace WHP programs and policies are provided and leadership support. The WHP programs and policies of relevance to employee wellbeing are those that address psychosocial risk factors in the workplace. These include work stress, work–life imbalance and the lack of participation in decision-making/lack of control. We focused on the provision of WHP programs and policies that addressed these risk factors. Leadership support refers to leadership commitment to and engagement in health promotion.

Thus, the aim of this study is to assess the mediating role of employee perceptions of company commitment to health promotion on the relationship between provision of WHP programs and policies, leadership support for worksite health promotion and employee wellbeing.

In postulating a mediation model it is traditional to consider the four steps outlined in Baron and Kenny's (Baron and Kenny's, 1986) seminal paper. However, the process can be simplified in the context of a structural equation model (SEM) where mediation can be established by demonstrating the presence of the indirect path between
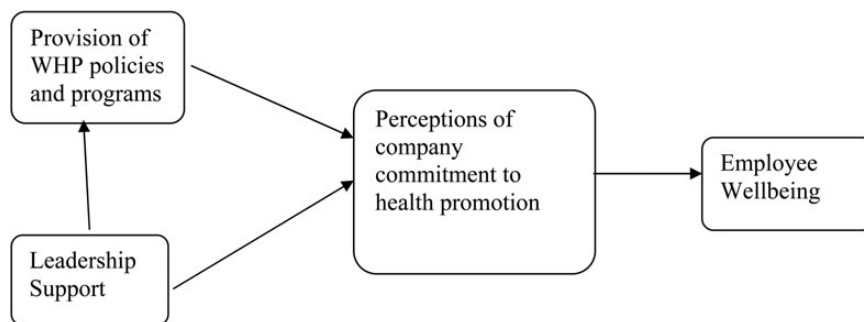

Fig. 1: Theoretical model linking leadership support, provision of WHP facilities and employee wellbeing.

the independent variable and the dependent variable via the mediator (Preacher and Hayes, 2008). This step requires a direct relationship between the independent variable and the mediator and a direct relationship between the mediator and the dependent variable. All three of these effects can be estimated within the framework of a SEM. Given the structure of the mediation model presented in Figure 1, the following hypotheses were tested.

(1) There is a direct relationship between leadership support and the provision of WHP programs and policies.
(2) There is a direct relationship between leadership and perceptions of company commitment to health promotion.
(3) There is a direct relationship between provision of WHP programs and policies and perceptions of company commitment to health promotion.
(4) There is a direct relationship between perceptions of company commitment to health promotion and employee wellbeing.
(5) There is an indirect relationship between the provision of WHP programs and policies and employee wellbeing, mediated by perceptions of company commitment to health promotion.
(6) There is an indirect relationship between leadership and employee wellbeing, mediated by perceptions of company commitment to health promotion and partially mediated by provision of WHP programs and policies.
(7) There would be no direct relationships between either leadership or provision of WHP programs and policies and employee wellbeing.

It is important to note that as the two independent variables in the mediation model are both measured at the organizational level (level 2 in the MSEM model), only this level of analysis is of primary interest. All the hypotheses above apply to the organizational level of the model only.

METHOD

The data for this research were drawn from a cross-company survey of health promotion in South Africa, termed the *Healthy Company Index*. The *Healthy Company Index* was launched in late September 2010 when the largest South African health insurer, Discovery Health, announced it would publicly recognize companies that had best

practice programs promoting healthy lifestyles for their workers, leadership support for these wellness initiatives and a workforce with positive health habits. To be recognized as a 'healthy company', an organization needed to document its commitment to employee wellness by providing programs and facilities supporting good health, demonstrating leadership commitment to the cause and allowing a survey of its employees that gathered data on workers' health status.

To ensure a minimum level of statistical credibility, only companies with 50 or more employees were eligible to participate. Other than this criterion, organizations self-selected for inclusion in the research. The study protocol was approved by the Human Research Ethics Committee (Medical) of the University of the Witwatersrand.

Sample

Participating employers

Initially, 108 companies registered for the initiative. Of these, 37 did not comply with the eligibility criteria (did not provide employee data or had too low response rates) and were excluded from the study. The results presented here are for the 71 remaining companies. In terms of the size of the employing companies, about one-third (32.4%, $n = 23$) were large (>400 employees), just under half (47.9%, $n = 34$) were medium sized (100–400 employees) and the remainder (19.7%, $n = 14$) were small organizations (<100 employees). The mean and range of the number of respondents per organization in each of these categories was 48.9 (35–65) for small companies, 94.8 (59–184) for medium companies and 329.0 (99–1323) for large companies.

Employee characteristics

A total of 11 472 employees from the 71 companies participated in the research. The majority of respondents were female (58.5%), white (53.4%), highly educated (73.9% advanced beyond a high school diploma), had management or professional jobs (54.3%) and were on average 36.3 years of age.

Measures

Employer survey

An Organizational Health Assessment was sent to a manager designated by the participating company as responsible for WHP. The survey

inquired about the company's health promotion facilities and its programs and policies related to worker health promotion. The 'facilities survey' was modeled after the National Worksite Health Promotion Survey administered by the US Department of Health and Human Service and organizational assessment tools developed by Emory University as part of a study of workplace programs funded by the US National Heart, Lung and Blood Institute (Pratt *et al*., 2007). The 'facilities survey' addressed a range of health promotion facilities, programs and policies but for the purposes of this study, only the services that aimed to address psychosocial risk factors were used. The WHP Psycho-social Program and Policies Scale comprised eight items. Each item indicated either the presence or absence of the program/policy. The eight items yielded an acceptable degree of internal consistency ($\alpha = 0.72$). As the programs and policies were conceptualized as a latent variable in the SEM, the items were combined into three indicators (each parcel comprising two or three items each) for use in the model. Each parcel yielded a score from 0 to 2 or 0 to 3 indicating the number of programs or policies identified by the respondents as present. Nasser and Wisenbaker (Nasser and Wisenbaker, 2003) note that item parceling is often the preferred method in SEM as item parcels are more likely to be normally distributed than single items. Parceled indicators also result in less complicated models and typically yield more precise parameter estimates, facilitating the building of more complex models due to the reduction of the number of parameters required for each latent variable. Three parcels were chosen to ensure that the model is identified (Kline, 2004), while obtaining maximum benefit from the parceling procedure.

A second organizational assessment tool was the LBE survey, also developed as part of the NHLBI-funded research (Della *et al*., 2008). The LBE was used to assess leadership support. The LBE tool has been subjected to several psychometric tests of validity and reliability and is now extensively used in worksite health promotion evaluations in the USA to gauge leadership support for worksite programs. In this study the LBE show high internal consistency ($\alpha = 0.89$). Each item was scored on a scale from 1 to 5 (strongly disagree to strongly agree). The four subscales of the LBE as defined by Della *et al.* (Della *et al*., 2008) were used as the indicators for leadership.

Employee survey

The employee health assessment included questions about demographic characteristics, overall health status, health behaviors, biometric measures, absenteeism, employee wellbeing, and work environment. *Employee wellbeing* was assessed through questions relating to job satisfaction, exhaustion/burnout and workplace conflict. The nature of the study (internet based, corporate competition) meant that there was limited space for items on the employee questionnaire. The wellbeing measure therefore comprised four items assessing (i) burnout, (ii) job satisfaction, (iii) conflict with manager and (iv) conflict with co-workers. The items were scored on a scale of 1–5, with a higher score indicating higher wellbeing across items. These items yielded an acceptable internal consistency for the between subjects model ($\alpha = 0.80$).

Perceptions of company commitment to health promotion was assessed through a single item—'My work environment enables me to maintain good health through policies and programs that support my wellbeing'. This was scored on a scale from 1 to 5 (strongly disagree to strongly agree). The item was designed for this study in order to obtain an indication of employees' opinion of their organization's health promotion initiatives, or lack thereof. Single item measures have become more common in organizational research to make surveys easier and less time consuming (Nagy, 2002). Research on multiple versus single item scales has found no disparity in the predictive validity of multiple item versus single item assessments (Bergkvist and Rossiter, 2007).

Statistical analysis

The model depicted in Figure 1 aims to explore mediational relationships and, as such, a SEM is the appropriate analysis. However, the model must also account for the fact that the data in the study were collected at two levels, from employees and from their organizations. As such, a multilevel SEM (MSEM) was fitted to the data using MPLUS v6.12. Multilevel models split the variances for all dependent variables into variance within an organization and variance between organizations (Kaplan and Elliott, 1997). A general MSEM framework allows for many different kinds of mediational relationships to be investigated. A typical model will present separate SEM models for the between and within relationships

(Preacher *et al.*, 2010). When dealing with multiple levels as Chan (Chan, 1998) notes, it is possible for the levels to be aggregated in a number of different ways. In this study we are primarily interested in additive models as our interest is in the average wellbeing of companies in relation to their health promotion activities.

RESULTS

Descriptive statistics and correlations between the variables used in the models are presented in Table 1. The strongest correlation was between the provision of wellness policies and programs and perceptions of company commitment to health. As expected, the three indicators of employee wellbeing correlated quite highly, with the strongest correlation occurring between job satisfaction and lack of conflict in the workplace. There was a moderate, significant correlation between leadership and provision of WHP policies and programs.

As mentioned previously, an MSEM was fitted to the data in order to assess the research questions. The initial model took the form described in Figure 1 for the organizational level. Leadership, provision of WHP policies and programs and employee wellbeing were all latent variables in the model, each of which had three or four manifest indicators as described in the Measures section. Perceptions of company commitment to health promotion was a manifest variable. The individual level model took the same form but only included the variables measured on the individual level, namely perceptions of company commitment to health promotion and employee wellbeing.

The fit statistics for the model suggested a good fit (RMSEA = 0.013, CFI = 0.983 and

TLI = 0.976.) In addition, the standardized root mean square residual (SRMSR) for the individual level model (SRMSR = 0.006) was very good and the organizational level model was acceptable (SRMSR = 0.071). The path between leadership support and perceptions of company commitment to health promotion was not significant (Est/SE = −1.341, $p = 0.180$). Finally as anticipated in the theorized model, the modification indices indicated that neither the path between leadership support and employee wellbeing (χ^2 change = 0.006, Std Est. = 0.001) nor the path between provision of WHP policies and programs and employee wellbeing (χ^2 change = 0.302, Std Est. = −0.055) should be added to the model.

Figure 2 provides a graphical depiction of the MSEM results. All the fit indices are acceptable and all of the paths in the model are statistically significant ($p < 0.05$), with the largest p-value being 0.006. The modification indices are in general low, with few exceptions. These exceptions all point to a slight specification error in the measurement model for employee wellbeing in that the correlation between the manifest variables for employee wellbeing and perceptions of company commitment to health promotion is not perfectly explained by the model. These effects are however small and any modification to this structure would not be coherent within the proposed model. As such the model was deemed adequate and no changes were made.

Thus, the results of the hierarchical SEM (Figure 2) indicate that companies whose employees perceive them as committed to their wellbeing tend to be companies whose employees have higher wellbeing. Companies with more WHP policies and programs have employees who are more likely to perceive them as committed and

Table 1: Descriptive statistics and correlations

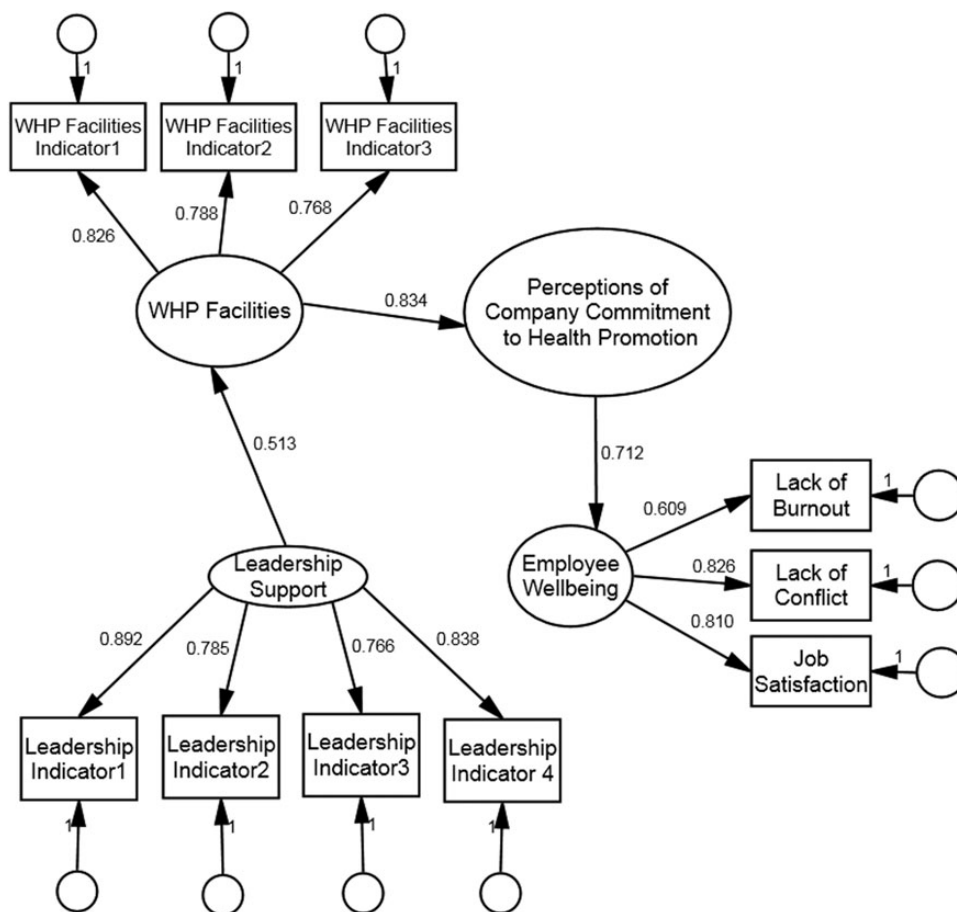|	Mean	SD	Correlations					
			1	2	3	4	5	6
1. Leadership	3.24	0.85	—					
2. WHP policies and programs	0.57	0.30	0.44***	—				
3. Perceptions of co. commitment	3.32	0.42	0.19	0.64***	—			
4. Lack of burnout	2.83	0.2	0.14	0.38**	0.60**	—		
5. Lack of conflict	3.68	0.23	0.15	0.34**	0.58**	0.42**	—	
6. Job satisfaction	3.74	0.17	0.06	0.28*	0.51**	0.47**	0.71***	—

*$p < 0.05$,
**$p < 0.01$,
***$p < 0.001$.

Fig. 2: Graphical depiction of the MSEM results. [1]Please not that WHP facilities in this figure refers to WHP policies and programs.

finally, companies with high levels of leadership involvement tend to be companies with more policies and programs. Thus, Hypotheses 1, 3, 4 and 7 were confirmed by the analysis. Hypothesis 2 could not be confirmed as the direct path between leadership and perceptions of company commitment to health promotion was not statistically significant. Finally, in order to examine the mediation hypotheses (i.e. 5 and 6) it is necessary to look at the strengths of the indirect paths. The indirect path between provision of WHP policies and programs and employee wellbeing via the mediator was statistically significant and yielded a standardized estimate of 0.593 (Est/SE = 5.027, $p < 0.001$). Similarly, the indirect path between leadership and employee wellbeing via the mediating variables of WHP policies and programs and perceptions of company commitment to health promotion (due to the model revision

there is only one path) was also statistically significant and yielded a standardized estimate of 0.305 (Est/SE = 2.298, $p < 0.022$). Thus, hypotheses 5 and 6 were also upheld by the model. Hypothesis 6 was slightly modified in that the current model indicates that leadership support was completely mediated by the provision of WHP policies and programs.

DISCUSSION

WHP aims to improve staff wellbeing. The role of leadership in WHP is regarded as a key contributor to the success of WHP initiatives. Based on SET, this study identified and evaluated a model of WHP policies and programs, leadership and employee wellbeing. The results indicate a reasonably good fit between the data and the

health promotion leadership model. As hypothesized, perceptions of company commitment to health promotion mediated the relationship between the provision of such policies and programs and employee wellbeing.

There are several implications that emerge from this research. The first relates to the use of SET as a theoretical framework for understanding the way in which company wellness initiatives impact on employee wellbeing. We have argued that company provision of WHP policies and programs acts as a social exchange resource which is likely to have beneficial outcomes for both employees and employers in the form of improved employee wellbeing. The finding that perceptions of company commitment to health promotion (a form of perceived organizational support) acts as a mediator of the relationship between provision of WHP policies and programs and employee wellbeing provides support for this way of viewing WHP. This is important because it suggests that the relationship between the provision of WHP policies and programs and employee wellbeing is not limited by whether all employees need or use these policies/programs. Not all employees may require the psychosocial services offered, but the fact that the company offers them, is associated with a higher perception of company commitment to health promotion and, in turn, with higher levels of employee wellbeing. SET thus provides a mechanism for explaining how WHP activities can have beneficial consequences for employees that go beyond the direct effects associated with the use of programs.

A second implication relates to the study's focus on leadership support. The importance of leadership to the success of wellness initiatives within organizations is widely acknowledged, but there remains relatively little research on the actual impact that leadership support has. Our findings illustrate that leaders' impact occurs at the level of the actual provision of WHP policies and programs. Employee wellbeing was associated with the provision of WHP policies and programs, which in turn were associated with leadership support, but leadership support itself did not impact wellbeing directly. This suggests that it may not be sufficient for leaders to simply voice their support for WHP. Employees may be unaware of the policies and strategies that their leaders have put in place. What employees see are the outcomes of these policies and strategies—the actual provision of wellness programs. Without this tangible evidence of leadership commitment

to WHP, leaders' impact may be reduced. Further research is still needed to fully explore the relationship between leaders' espoused support for WHP and employees' perceptions of how that support manifests itself through the actual provision of WHP programs and policies.

The third implication relates to the findings of a relationship between the provision of WHP policies and programs and perceptions of company commitment to health promotion. In the current study, these two variables were measured at different levels. At the company level, a single company representative completed a checklist of the availability of WHP policies and programs at his/her company ($n = 71$). At the employee level, all eligible employees within the company completed questionnaires ($n = 11\,472$) that asked about their experience working for the company. The establishment of a reasonably high correlation between the company representatives' views of their company offerings and their employees' perceptions of these offerings provide a validation of the company level data. It also suggests that if companies invest in wellness initiatives, these initiatives will be recognized and acknowledged by their employees.

There are also several limitations to this study. As companies self-selected for participation in this campaign, it is possible that they are most active in promoting workplace wellness in South Africa. This could have limited the variance in some of the central variables in the study, particularly WHP policies and programs and leadership support, since it is unlikely that companies with no interest in WHP would have become involved in such a campaign. The findings should be viewed in this light. Moreover, only employees with access to email and the internet could participate in this survey. Employees who do not have desk jobs or who primarily do manual work are not represented in this sample. Finally, to encourage participation across as wide a range of companies as possible, it was necessary to ensure that the questionnaire be kept short. This created constraints in the number of items that could be included to assess the variables under investigation. The advantages of obtaining data at two levels of analysis across a large number of companies outweighed this concern for the current study. However, it would be useful for future research to utilize more comprehensive measures of employee wellbeing and perceived organizational support in assessing the types of relationships that we explored.

CONCLUSION

The Healthy Company Index provided a vehicle through which to obtain company and employee data on WHP across a wide range of organizations. We used SET as a framework for analyzing this data. In line with the central tenets of SET, we found that perceptions of company commitment to health promotion played a fundamental role in employee wellbeing outcomes. The findings also illustrate how important it is for leaders to demonstrate their commitment to employee health through ensuring that their policies and procedures are acted upon on the workplace.

FUNDING

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