

Predicting absenteeism and turnover intentions in the health professions

Majella J Albion, Gerard J Fogarty, Michael A Machin and Jeff Patrick

Abstract

Objectives: The study examined the mediating influence of individual psychological reactions to work on the relationship between organisational climate and job withdrawal behaviours (viz, intention to leave and absenteeism).

Methods: 1097 hospital employees were surveyed using the Queensland Public Agency Staff Survey (QPASS) to obtain measures of organisational climate, psychological reactions to work, job satisfaction, and self-reported levels of intention to leave. Group-level absenteeism data were provided from the Health Service District files.

Results: Two psychological states, quality of work life and job satisfaction, were found to fully mediate the relationship between the organisational climate variable, role clarity, and intention to leave, while individual distress was found to partially mediate the same relationship. However, the hypothesised mediation effect of psychological states on the relationship between organisational climate and absenteeism did not emerge.

Conclusion: Skills shortages and increasing demands for health services make retention of staff in the health service industry vitally important. As a means of addressing this issue, this study presents an emergent mediating model defining relationships among individual psychological factors, aspects of organisational climate and intention to leave. Identification of the processes associated with staff withdrawal behaviours or intentions will assist in devising interventions to improve retention.

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ABSENTEEISM AND TURNOVER are two problems that cost industry millions, perhaps billions of dollars per annum.¹ The costs take the form of recruitment activity for permanent or replacement casual staff, lost work days, and the addi-

What is known about the topic?

Staff absenteeism and unwanted turnover are issues for the health care workforce, particularly in relation to reported shortages in various health professional groups. There are theoretical and empirical grounds for hypothesising links between both positive and negative psychological states and behaviours such as absenteeism. There are also grounds for positing a link between attitudes, such as job satisfaction, and turnover intentions.

What does this paper add?

This paper presents a model proposing that individual morale, quality of work life, job satisfaction, and individual distress are psychological states that all make a contribution to organisational performance variables such as intention to leave and absenteeism. We found that the influence of one organisational factor, role clarity, on turnover intentions was fully mediated by quality of work life and job satisfaction. The influence of another organisational factor, workplace distress, on absenteeism was not mediated by either positive or negative psychological states.

What are the implications for practitioners?

This study supports the use of generic approaches for reducing the duration of absence and improving retention that include improving employees' level of participation in decision making, the level of support and feedback that supervisors provided to employees, and the quality and frequency of communication.

Majella J Albion, PhD, MAPS, Lecturer
Gerard J Fogarty, PhD, FAPS, Professor
Michael A Machin, PhD, Associate Professor
Jeff Patrick, PhD, Senior Lecturer
 Department of Psychology, University of Southern Queensland, Toowoomba, QLD.

Correspondence: Associate Professor Michael A Machin, Department of Psychology, University of Southern Queensland, Toowoomba, QLD 4350.

machin@usq.edu.au

tional work burden placed on others. The extent of the problem has led to renewed interest among researchers in theoretical models that specify the individual and organisational factors that contribute to these behaviours and to trace the interconnections among these factors. The models reveal a complex pattern wherein psychological factors such as mood, stress, and fatigue trigger physiological reactions that lead to various types of withdrawal behaviour, of which absenteeism and turnover are two of the most extreme forms. Most of these models capture the middle and later stages of the process; that is, they model the consequences of psychological states. Few studies have tested integrated models that seek to capture the background organisational features, the mediating psychological states, and the behavioural outcomes. Such models are needed to gain an overall perspective on absenteeism and to suggest where efforts might be directed to reduce this costly outcome.

This study adopted an organisational climate framework to develop and test a model that captured the main contributors to absenteeism and turnover intentions. Specifically, the study examined the role of psychological states as mediators of the influence of organisational factors on absenteeism and turnover intentions. We began the literature review by examining the immediate precursors to these withdrawal behaviours. We then examined the links between organisational and psychological variables before proposing an integrated model that was tested using data collected from employees working in public hospitals.

Psychological antecedents of absenteeism and turnover

There is no shortage of research linking psychological variables with absenteeism and turnover. For example, specific variables associated with the individual such as global Type A behaviour² and psychological distress³ have been implicated in increasing withdrawal behaviours, as have aspects of the workplace such as stress and work overload,⁴ low organisational trust,⁵ and work monotony.⁶ From a theoretical perspective, when

workers are exposed repeatedly to negative or demanding work conditions, allostatic load theory⁷ predicts that such prolonged exposure leads to a psychophysiological imbalance that eventually results in chronic health complaints. The mechanism by which this happens is primarily neurophysiological. Specifically, the demands of work lead to heightened levels of neuroendocrinological activity which is helpful in the short term but deleterious in the long term, leading to states of sustained activation if periods of recovery are not sufficient. Thus, from a theoretical perspective, in organisations where high levels of work demands are evident, we can expect to see evidence of health problems with consequent high levels of absenteeism and, eventually, turnover.

Empirical data are accumulating to support this theoretical link between work demands and absenteeism. Cooper and Cartwright⁸ reported a 60% reduction in absenteeism following the implementation of a stress reduction program. In a study of truck drivers, de Croon, Sluiter and Frings-Dresin⁹ reported that 12% of self-reported absenteeism periods of more than 14 days were due to mental health complaints. Similar findings have been reported for the United Kingdom.¹⁰ In The Netherlands, using absenteeism data collected from personnel records, Bakker and colleagues¹¹ were able to demonstrate through structural equation modelling that burnout predicted 4% of the variance in absence duration. Indicators of psychological wellbeing have also been linked with absenteeism. Mason and Griffin¹ looked at the effect of morale on absenteeism and found that it accounted for between 3%–11% of the variance in absenteeism after controlling for the effects of age, gender, and group size.

There is a similarly strong case for linking job turnover behaviour with psychological precursors. Nurses' perceptions of their ability to do the work required of them were found to be related to their intention to leave the profession.¹² Cropanzano, James and Konovsky¹³ reported that job satisfaction mediated the relation between dispositional affectivity, especially positive affectivity, and turnover intentions. Hulin¹⁴ found a strong inverse relationship between job satisfaction and

intention to leave. A recent meta-analysis of the literature relating positive and negative affectivity to job-related attitudes found that $p = -0.17$ based on a k of 18 with $N = 5327$ between positive affectivity and turnover intentions and that $p = 0.28$ based on a k of 35 with $N = 8671$ between negative affectivity and turnover intentions.¹⁵ Chang et al¹⁶ noted that work demands are related to turnover in nurses.

Summarising this research, there are theoretical and empirical grounds for hypothesising links between both positive and negative psychological states and behaviours such as absenteeism. There are also grounds for positing a link between attitudes, such as job satisfaction, and turnover intentions. The evidence linking absenteeism and turnover is less clear with some researchers seeing these behaviours as forming part of a continuum of withdrawal behaviors,¹⁴ while others see them as unrelated outcomes.¹⁷ A third viewpoint¹¹ is that the relationship depends on the measure of absenteeism. Thus, frequency of absences is indicative of withdrawal and is predicted by variables such as commitment, while duration of absences is indicative of poor health and predicted by variables such as burnout.

One of the aims of the study was to explore relations among positive and negative psychological states and both absenteeism and turnover intentions. It was expected that both positive and negative psychological states would be associated with absenteeism and turnover intentions in the health professions; and that absenteeism (in particular, absence duration) and turnover intentions would be unrelated in the health professions. A further aim of the study was to explore the impact of organisational influences on both absenteeism and turnover intentions and to test whether these organisational influences are partially or fully mediated by the positive and negative psychological states of employees in the health professions.

Psychological states as mediators of organisational influences

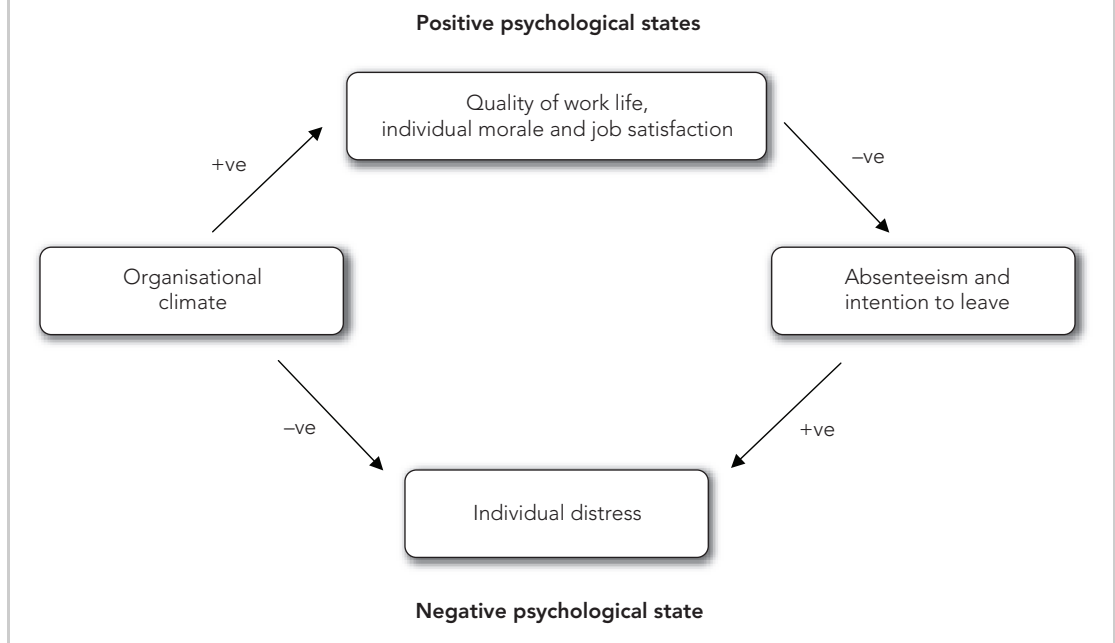
For many years, research focused on a withdrawal model of absenteeism which suggested that with-

drawal behaviours were largely related to individuals' attitudes, specifically job dissatisfaction and low work commitment. Johns¹⁸ criticised the withdrawal model for focusing exclusively on worker attitudes and not including dispositional and external factors such as absence cultures, organisational policies, economic conditions, available employment alternatives, and other social factors. The need to look beyond attitudinal factors is also indicated by research showing a link between organisational factors and withdrawal behaviours. For example, Stetzer, Morgeson and Anderson¹⁹ found a correlation of -0.27 between organisational climate and absenteeism, and more recently, Stordeur and D'Hoore²⁰ have reported that turnover is related to structural features of the work environment. In a study that was a direct forerunner of the current one, Machin, Fogarty and Albion²¹ found that in a sample of rural-based nurses, high work support was related to lower levels of absenteeism, while high work demands were associated with high levels of absenteeism. These results replicated findings by Johns²² that both the task and social implications of staff working together and supporting one another were related to absenteeism.

Studies such as these raise questions about the mechanisms by which organisational factors influence withdrawal behaviours. One possibility is that organisational factors have a direct effect on withdrawal behaviours. However, such an account does not explain why absenteeism varies widely within organisations and within sections of organisations. A more likely possibility is that psychological variables (B) mediate the impact of organisational factors (A) on withdrawal behaviours (C). In order to demonstrate this mediation effect, we must first ensure that there is a relationship between A and B, and between B and C. We have already reviewed literature demonstrating a link between B and C, we now turn to the literature linking A and B.

Positive aspects of the organisation such as support, role clarity, and cooperation have been shown to relate to positive psychological outcomes such as morale²³ and high self-efficacy.²⁴ Conversely, de Croon et al⁹ drew attention to

I Proposed model of the relationships between organisational climate, psychological mediators, and absenteeism and intention to leave.



stressful working conditions, especially environments characterised by high psychological demands, low control, and low social support as likely causes of psychological distress. In a study conducted in a health setting similar to the one in the present study, Sluiter and colleagues²⁵ reported that physical demands, mental and emotional demands, and lack of decision latitude all made a significant contribution to the prediction of need for recovery in a sample of 922 nurses from The Netherlands. In a one-year follow-up survey, need for recovery was itself a significant contributor to subjective health complaints among hospital nurses, as measured by chronic fatigue, sleep quality, and emotional exhaustion. Baseline work demands in their prospective study of hospital nurses predicted a significant 4% of the variance in duration of sickness absence one year later. Thus, there is a link between work demands and need for recovery and a subsequent link between need for recovery and absenteeism. Bakker et al¹¹ also proposed a model that included both organisational and individual variables as

predictors of absenteeism. Their model showed burnout mediating the effects of job demands on absence duration. A second pathway in their model showed organisational commitment mediating the effect of job resources on absence duration. About 4% of the variance in both forms of absenteeism was explained by this model.

Theoretical framework

The study adopted the dynamic equilibrium theory of stress proposed by Hart, Wearing and Headley.²⁶ The essence of this theory is that we all possess a level of psychological wellbeing that can be predicted on the basis of enduring characteristics, such as personality, organisational climate, and people's stable or typical style of coping. The model shown in Box 1 proposes that individual morale, quality of work life, job satisfaction, and individual distress are psychological states that all make a contribution to organisational performance variables such as intention to leave and absenteeism. These variables are cast as mediators in this model and henceforth

in this paper they will be referred to as psychological mediators. In this model, organisational climate is regarded as an exogenous construct that is able to explain variance in all of the other variables. It reflects employees' perceptions of the work environment, and includes things such as role clarity, role congruence, supervisory practices, decision-making processes, relationships among employees, appraisal and recognition, and leadership. This model was adopted by Mason and Griffin¹ in their study of absenteeism. On the basis of the model and their findings, we expect that positive and negative psychological states will mediate at least some aspects of the relationship between organisational climate and duration of absenteeism in the health professions. We also expect that positive and negative psychological states will mediate at least some aspects of the relationship between organisational climate and intention to leave in the health professions.

Methods

Participants

Participants in this study were employees in a Queensland regional Health Service District (HSD). Facilities in the HSD included one large hospital, three smaller hospitals, three nursing homes, a community health service, other allied health services, and the district corporate office. The data were collected as part of an organisational climate survey conducted with all employees of the HSD. A very good response rate of 65% was achieved, with 1097 of the 1683 employees submitting completed survey forms.

The sample consisted of 866 females (78.9%) and 217 males (19.8%). Fourteen respondents did not indicate their sex. The largest age group (36.1%) was the 41–50 years cohort. The average time people had been in their current position and at their current location was 3–5 years. About 20% of staff had been in their current positions for 10 years or longer.

Materials

The opening section of the questionnaire contained questions relating to demographic data

such as age, gender, occupational classification, location of work, and tenure. The Queensland Public Agency Staff Survey²⁷ (QPASS) was used to obtain measures of employees' reactions to their work environment. The original QPASS measured six aspects of a person's experiences at work — positive work events, negative work events, organisational climate, problem-focused coping, emotion-focused coping, and psychological outcomes. Only two of these aspects were measured on this occasion — organisational climate and psychological outcomes. There are 10 scales measuring organisational climate variables: workplace morale; supportive leadership; participative decision-making; role clarity; professional interaction; appraisal and recognition; professional growth; goal congruence; workplace distress; and excessive work demands. The first eight of these scales measure positive aspects of the work environment, while the last two are negative indicators. Respondents indicate their agreement with each item on a 5-point scale.

The three subscales measuring psychological outcomes are quality of work life, individual morale, and individual distress. The items on these three measures are marked on a 7-point scale. Two additional outcome measures were obtained. In the final section of the questionnaire, participants were also asked to indicate their level of job satisfaction, and their intention to leave their current position.

A summary of absenteeism data for the 2 months following the survey period was made available from the Human Resources Division of the HSD. For privacy reasons, individual-level data were not available. Instead, total hours absence were provided for each occupational group (administration, medical, professional, operations/technical, and nursing) at each of fifteen different work locations, potentially yielding 75 separate data points. However, because of the uneven distribution of workers over these locations, some groups were not represented at some locations, leaving only 56 data points for absenteeism. Absences relating to maternity, annual, and long service leave were not included. It was regarded as essential that the measure of absen-

2 Descriptive data for the QPASS subscales and additional measures (N = 1097)

Variable	M*	SD	α
Quality of work life	51.69	24.76	0.92
Individual morale	55.59	22.08	0.93
Individual distress	32.66	22.76	0.90
Workplace morale	52.61	21.55	0.86
Supportive leadership	58.59	24.22	0.88
Participative decision making	51.68	22.41	0.83
Role clarity	63.88	18.47	0.80
Professional interaction	62.81	18.35	0.87
Appraisal and recognition	50.20	22.98	0.91
Professional growth	51.71	21.75	0.83
Goal congruence	57.96	18.74	0.81
Workplace distress	58.10	22.51	0.89
Excessive work demands	61.15	23.64	0.83
Job satisfaction	67.34	23.06	0.81
Intention to leave	18.54	21.10	0.77

* Scores expressed as percentages.

teism be taken following the organisational climate survey as we were proposing that organisational climate would be a contributor to psychological states and both absenteeism and intention to leave. It is quite possible that the relationships between these variables are reciprocal and the model would need to reflect this if all variables were measured at the same time.

Procedure

The anonymous survey was administered in a paper-based format to all staff. Work time was made available for its completion, and data were collected at various work sites over a 2-week period. Confidentiality was respected during all aspects of data collection, with management having access to group results only.

Results

The data were screened and prepared for analysis using SPSS 15.0 for Windows (SPSS Inc, Chicago,

Ill, USA). All scores were converted to percentages to enable appropriate comparisons to be made. Mean percentage scores and reliability data for each of the scales are presented in Box 2. The alpha coefficients indicate that the scales were reliable. Given that there were no individual-level absenteeism data available, the analyses were conducted with questionnaire data which had been aggregated into group-level averages for each of the 56 occupational groups across the facilities. The correlations of the QPASS scales with job satisfaction, and the two withdrawal measures, intention to leave and absenteeism, are presented in Box 3.

One of the predictions we made was that measures of both positive and negative psychological states would be associated with intention to leave and absenteeism. At the group level, quality of work life ($r = -0.68$; $P < 0.01$), individual morale ($r = -0.52$; $P < 0.01$), individual distress ($r = 0.60$; $P < 0.01$), and job satisfaction ($r = -0.71$; $P < 0.01$) all had significant relationships with intention to leave, while only individual morale had a significant relationship with absenteeism ($r = -0.30$; $P < 0.05$). Another prediction was that the measures of absenteeism and intention to leave would not be related. This was supported with the group-level measures of intention to leave and duration of absenteeism not significantly correlated ($r = 0.08$; $P > 0.05$). As a consequence, we decided to treat these dependent variables separately in two exploratory models. In each case the possible mediating effects of psychological factors (quality of work life, individual morale, individual distress, and job satisfaction) on the possible relationship between the 10 aspects of organisational climate listed in Box 2, and the dependent variable were assessed using the protocol suggested by Frazier, Barron and Tix²⁸ In this case, mediation can only be said to exist when four conditions are satisfied: when a particular aspect of organisational climate predicts the dependent variable; when that same aspect predicts the potential mediator; when the proposed mediator has a significant unique effect on the dependent variable; and when the effect of organisational climate on the dependent variable shrinks upon the addition of the proposed media-

3 Correlational data for aggregated QPASS subscales and additional measures (N = 56)

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Quality of work life	1.00														
Individual morale	0.70	1.00													
Individual distress	-0.61	-0.83	1.00												
Workplace morale	0.73	0.64	-0.46	1.00											
Supportive leadership	0.64	0.76	-0.62	0.73	1.00										
Participative decision making	0.55	0.55	-0.38	0.69	0.76	1.00									
Role clarity	0.71	0.74	-0.75	0.59	0.68	0.52	1.00								
Professional interaction	0.65	0.73	-0.63	0.79	0.78	0.76	0.76	1.00							
Appraisal and recognition	0.65	0.52	-0.34	0.79	0.64	0.66	0.48	0.62	1.00						
Professional growth	0.61	0.50	-0.24	0.67	0.59	0.70	0.44	0.60	0.80	1.00					
Goal congruence	0.71	0.69	-0.63	0.81	0.67	0.72	0.72	0.82	0.67	0.56	1.00				
Workplace distress ¹	-0.56	-0.72	0.70	-0.70	-0.79	-0.57	-0.59	-0.68	-0.50	-0.46	-0.69	1.00			
Excessive work demands ¹	-0.34	-0.50	0.45	-0.38	-0.66	-0.42	-0.32	-0.39	-0.37	-0.35	-0.34	0.76	1.00		
Job satisfaction	0.83	0.60	-0.60	0.59	0.51	0.49	0.73	0.59	0.61	0.56	0.72	-0.42	<i>-0.15</i>	1.00	
Intention to leave	-0.68	-0.52	0.60	-0.43	-0.45	-0.37	-0.62	-0.45	-0.35	-0.37	-0.51	0.47	0.27	-0.71	1.00
Absenteeism	<i>-0.15</i>	-0.30	<i>0.26</i>	<i>-0.23</i>	-0.31	<i>-0.15</i>	<i>-0.09</i>	<i>-0.25</i>	<i>-0.15</i>	<i>-0.14</i>	<i>-0.24</i>	0.39	0.28	<i>-0.02</i>	<i>0.08</i>

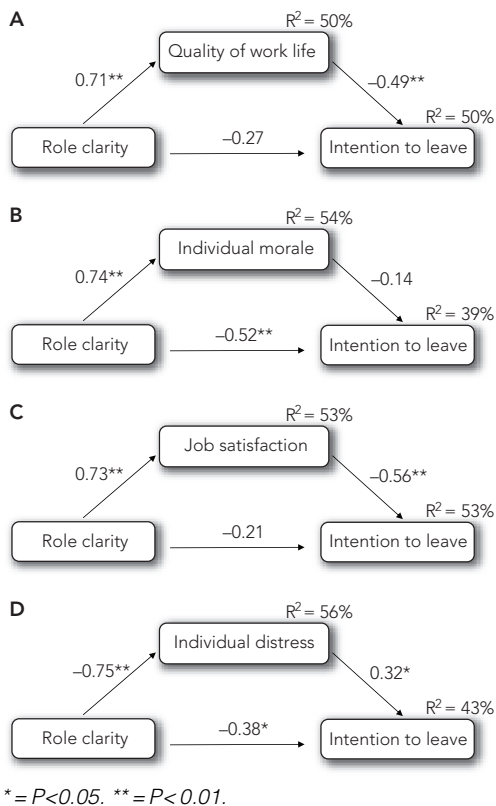
Italic type: not significant. **Bold type:** $P < 0.05$. All other scores, $P < 0.01$.¹ These measures of organisational climate are scored such that higher scores are unfavourable.

tor. In relation to the first condition — the possible relationship between various aspects of organisational climate and the dependent variable — a stepwise procedure was used to screen the data for independent variables significantly related to the dependent variable in each case.

In the first instance, only role clarity contributed significantly to the prediction of intention to leave ($R^2 = 0.38$; $F(1,54) = 33.23$; $P < 0.001$). In fact, the model regressing intention to leave on role clarity accounted for almost as much variance

as the model regressing it on all ten organisational climate variables ($R^2 = 0.43$; $F(10,45) = 3.46$; $P < 0.01$). The other nine aspects of organisational climate were therefore omitted from further analysis within this first model. In relation to the second condition of mediation, the relationships between role clarity and each of the four positive and negative psychological states were assessed separately. Role clarity significantly predicted quality of work life ($R^2 = 0.50$; $F(1,54) = 54.49$; $P < 0.001$), individual morale ($R^2 = 0.54$; $F(1,54) =$

4 Results of regressing intention to leave on role clarity and potential mediating variables



63.66; $P < 0.001$), individual distress ($R^2 = 0.56$; $F(1,54) = 68.91$; $P < 0.001$), and job satisfaction ($R^2 = 0.53$; $F(1,54) = 61.55$; $P < 0.001$). In relation to the third condition, only job satisfaction ($\beta = -0.56$; $t = -4.02$; $P < 0.01$), individual distress ($\beta = 0.32$; $t = 2.04$; $P < 0.05$), and quality of work life ($\beta = -0.49$; $t = -3.59$; $P < 0.01$) uniquely predicted intention to leave. Individual morale ($\beta = -0.14$; $t = -0.88$; ns) was therefore rejected as a mediator.

In order to assess the last condition of mediation, intention to leave was regressed onto role clarity with each of the potential mediators controlled in turn. The effect of role clarity reduced in each case once the respective mediator was introduced, and in some cases, the controlled effect

was not significant. These relationships were confirmed with a series of significant Sobel tests (job satisfaction: $S = 3.58$, $P < 0.05$; individual distress: $S = 1.98$, $P = 0.05$; and quality of work life: $S = 3.23$, $P < 0.05$). This outcome indicates that job satisfaction and quality of work life both fully mediate the effect of role clarity on intention to leave. Individual distress only partially mediates the effect of role clarity on intention to leave. The relationships which emerged from this analysis are shown in Box 4 (parts a to d).

In the second model, only workplace distress contributed significantly to the prediction of duration of absenteeism ($R^2 = 0.15$; $F(1,54) = 9.62$; $P < 0.01$), compared with the result when absenteeism was regressed on all of the variables ($R^2 = 0.24$; $F(10,45) = 1.42$; $P > 0.05$). Therefore, the other nine aspects of organisational climate were omitted from further analysis. Again, the relationships between workplace distress and each of the four positive and negative psychological states were assessed separately. Workplace distress significantly predicted quality of work life ($R^2 = 0.31$; $F(1,54) = 24.13$; $P < 0.001$), individual morale ($R^2 = 0.52$; $F(1,54) = 57.60$; $P < 0.001$), individual distress ($R^2 = 0.49$; $F(1,54) = 52.43$; $P < 0.001$), and job satisfaction ($R^2 = 0.18$; $F(1,54) = 11.74$; $P < 0.01$). Of these four possible mediators, none exhibited a significant unique relationship with absenteeism. Quality of work life ($\beta = 0.10$; $t = 0.65$; ns), individual morale ($\beta = 0.04$; $t = -0.19$; ns), individual distress ($\beta = 0.02$; $t = -0.13$; ns), and job satisfaction ($\beta = 0.17$; $t = 1.23$; ns) do not therefore appear to mediate the effect of workplace distress on absenteeism.

Discussion

The dependent variables in this study were an objective measure of absenteeism as well as the employees' intentions to leave. A linear relationship was shown to exist between work distress and absenteeism, with higher levels of work distress being related to greater duration of absences in health professions. However, contrary to our prediction, the effect of workplace distress was not mediated by individual psychological states.

Although work distress significantly predicted both positive and negative psychological states, none of these predicted unique variance in absenteeism. Therefore, the evidence indicates that contrary to the proposed model shown in Box 1, at the group level, only one aspect of organisational climate is directly linked to absenteeism. In our model, this relationship is shown as unidirectional, but we acknowledge that where absenteeism reflects a longer term pattern of withdrawal behaviour in work units, that the impact on the work unit may be for employees to report higher levels of workplace distress resulting from staff shortages.

In this study, role clarity was the only organisational climate variable to emerge as a unique contributor to the formation of intentions to leave. That is, those who had a clear sense of their roles and responsibilities and the policies and lines of authority within their organisation were less likely to think about leaving the organisation. This is in line with findings of Bauer et al²⁹ that role clarity is an important aspect of socialisation and is related to organisational commitment and intention to stay. In relation to the prediction about whether individual psychological states mediate the influence of organisational climate on intention to leave, the impact of role clarity was fully mediated by job satisfaction and quality of work life, and partially mediated by individual distress. That is, the influence of role clarity on reducing the formulations of intentions to leave can be largely explained through the associated positive impact of the individual's sense of satisfaction with their actual work and their conditions of employment.

Therefore, there are mixed results regarding the possible mediating effects of psychological factors on at least some of the well established relationships between aspects of organisational climate and both intention to leave and absenteeism. While absenteeism does not appear to be mediated by individual factors, we have presented an emergent mediational model in relation to intention to leave which will now stand to independent replication. Of course, the main issue with respect to absences from work and employee withdrawal behaviours is whether there are viable

strategies that organisations can implement that will improve these outcomes. Bauer et al²⁹ demonstrated the importance of socialisation strategies in facilitating newcomer adjustment, which they operationalised as role clarity, self-efficacy, and social acceptance. They found that better adjustment related to positive outcomes including intention to stay. The results of the current study would suggest that improving role clarity by developing clear policies, transparent policies and lines of authority, and well-defined roles is a significant strategy that is likely to enhance the socialisation, commitment, and intention to stay of all staff, newcomers and veterans alike.

On another related issue, while the lack of correlation between absenteeism and intention to leave was expected, the null result does warrant some further elucidation. The data suggested the relationship between these two variables may be curvilinear. At low levels of intention to leave, absenteeism appeared to increase as intention increased. However, at higher levels of intention, that is, as plans move from possibilities to probabilities, absenteeism declines sharply. It seems that as it becomes more likely that the person will leave, the need to find temporary respite in absenteeism is reduced. Because turnover was dependent upon external variables such as the availability of suitable alternatives, Sheridan¹⁷ noted that in situations where there were few viable options for people experiencing low job satisfaction, turnover would decrease, but there would not be a concomitant decrease in other withdrawal behaviours, such as lateness or absenteeism. In fact, the opposite was likely to be the case. The negative impact of employees who stay only because they have no viable alternative should not be disregarded.

A more recent view of absenteeism distinguishes between the frequency of absences and the duration of those absences.¹¹ According to Bakker et al, frequency of absences is a measure of withdrawal behaviour, a view that received empirical support when this measure was found to be associated with organisational commitment. Absence duration, on the other hand, was not regarded as forming part of the withdrawal con-

tinuum but as being driven by health concerns, a view supported by the observation of a correlation between absence duration and a measure of burnout.¹¹ Both forms of absenteeism were related ($r = 0.45$; $P < 0.01$), but there was no indication of how either form of absenteeism might relate to turnover. In the study we did not collect separate frequency and duration measures, so the two were confounded. Given the lack of compelling reasons for linking this aggregate measure of absenteeism with turnover, we expected that there would not be a relationship between the two outcomes.

One of the limitations of the study is that we were not able to access individual-level absence data, nor would we have been able to match it with anonymously collected organisational climate data. However, Hulin¹⁴ noted that when individual absence data were included in analyses, correlations were often artefactually low because absence is a low frequency occurrence and the data do not conform to assumptions of normality. So, while aggregation of the data presents some limitations, it also helps reduce the problem of non-normal distribution. There are also issues that researchers must address when analysing multi-level models which combine both individual-level and group-level or organisational-level responses. Meade and Eby³⁰ describe the challenges as involving analysis of the extent of within-group agreement, specifying the type of composition model, and examining the construct validity of variables across multiple levels. We recognise that by choosing to aggregate the individual-level data to the group level to allow the absenteeism data to be included, these issues remain unresolved. Another limitation is that these results represent the responses of employees in one Queensland Health Service District, and therefore may not generalise to other work environments.

While we would not be the first authors to draw the distinction between intention to leave and actual resignation (turnover), the former is a viable indicator of the latter. More plainly, while this study did not look at the relationship between intention to leave and actual turnover,

the relationships that were found do provide some support for Hulin's¹⁴ proposition that "the underlying relationship between job attitudes and latent propensity to quit is probably strong and negative" (p. 465). Intention to leave is also clearly a product of a highly interrelated set of mediators that reflect aspects of the individual's psychological state.

In sum, while we are pleased to report the emergent model, we are cautious at this stage about how well these models will apply outside the health care setting. Indeed Sluiter et al²⁵ found that there were differences across occupations regarding the specific work demands that impact on the individual even within the health care sector. We are also cognisant of the fact that this sort of applied research rests somewhere between practical and informed advice to staff and management, and the academic desire to work toward theory that does more than merely describe what is happening, in aspiring to explain why. In both regards this study falls short of these ultimate goals, but succeeds in furthering our understanding of the complex relationship between organisational climate, individual psychological states, and organisational outcomes.

Competing interests

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