

Maintaining volunteer firefighter numbers: Adding value to the retention coin

McLennan, Birch, Cowlshaw & Hayes investigate how volunteer-based fire agencies could boost retention of their volunteers

Abstract

Annual resignation rates for Australian volunteer-based fire agencies range from about 6.7% to 8.3% of total volunteer firefighter memberships. We report two studies investigating aspects of volunteer retention. (1) Analysis of 396 exit survey returns from former volunteers found that reasons contributing to resigning were: Work/Family needs, 51%; Moved from the area, 38%; Age/Health issues, 28%; Dissatisfaction with the volunteer role, 25%. A major contributor to Dissatisfaction was poor brigade leadership. (2) A survey of 514 second-year volunteers found that higher levels of volunteer satisfaction, and thus intention to remain, were associated strongly with being a member of a well-led, inclusive, and harmonious brigade. Overall, the findings indicated the need for agencies to: (a) distinguish unavoidable reasons for resigning (Moved; Age/Health issues) from potentially avoidable reasons (Work/family needs; Dissatisfaction); (b) endeavour to balance the demands on volunteers and the needs of their volunteers' work and family life; and (c) enhance the quality of brigade leadership and management.

Introduction

With its dry climate, flammable vegetation characteristics, and land use and settlement patterns, much of Australia—including urban/rural fringes of major cities—is vulnerable to bushfires. Sparse human settlement outside capital cities and major regional centres means that Australian communities rely heavily for fire protection on approximately 220,000 volunteer firefighters (McLennan, 2008) in eight state and territory volunteer-based fire services.

During the period 1995-2003, total volunteer firefighter numbers across Australia declined appreciably, because of complex economic and demographic changes in Australian society (McLennan & Birch, 2005). While most agencies report that previous declines in total numbers appear to have been halted, and in some cases reversed, there is little room for complacency. Concerns have been expressed about possible negative impacts of climate change on future volunteer numbers in south eastern Australia (Office of the Emergency Services Commissioner, 2008): an increase in the frequency of severe weather events plus generally drier summer conditions will likely result in more frequent large fires, and thus greater demands on volunteers' time. Furthermore, it seems likely that economic uncertainties and concerns (such as rising fuel costs) may deter many from volunteering with fire agencies in the future (McLennan, 2008).

There are indications that most agencies have reviewed and improved their approaches to recruiting new volunteers (e.g., McLennan, Birch, King & O'Loughlin, 2007). However, in order to maintain adequate numbers of volunteers to meet community protection needs agencies must not only recruit, but also **retain**, their volunteers. In 2007 resignation rates for Australia's volunteer-based fire agencies ranged from 6.7% to 8.3%, with a weighted mean resignation rate for all agencies of 7.7% (Note 1). In 2003, the corresponding figures were: 6.3% to 10.4%, with a weighted mean of 8.1% (Note 2). Based on information supplied by agencies, McLennan (2004a) estimated that in 2003, the direct annual cost to Australian volunteer-based fire agencies stemming from volunteer resignations was approximately \$13 million. This figure does not take into account possible productivity and performance costs to fire agencies and the communities they protect stemming from: (a) absenteeism prior to departure (Griffeth, Hom, & Gaertner, 2000); and (b) possible reduced brigade effectiveness pending availability of a trained replacement volunteer (Mobley, 1982).

Photograph courtesy of Queensland Fire & Rescue Service, Rural Operations.



Queensland Rural Fire Service volunteers getting ready for the next fire season.

The general organisational and human resources literature has devoted considerable attention to problems associated with employee turnover, and especially turnover stemming from voluntary (as distinct from involuntary) resignations (Evans, Christopher, and Stoffel, 2000; Hom & Griffeth, 1995; Mobley, 1982). Voluntary resignations are considered by most researchers to be a negative indicator of organisational effectiveness (Cascio, 1991; Griffeth & Hom, 2001; Staw, 1980). Numerous research studies have been reported concerning causes of employee turnover. For example, Abassi and Hollman (2000) concluded that there were five major contributors to staff resignations:

1. Faulty hiring practices.
2. Inappropriate styles of management.
3. Lack of recognition.
4. Poor wage policies and non-competitive salaries and benefits.
5. Toxic workplace environments.

Other aspects of the workplace identified as determinants of staff turnover levels include: degree of satisfaction with supervisors; satisfaction with co-workers; role ambiguity; role conflict; organisational culture; and job demands-resources imbalance (Evans et al., 2000; Griffeth et al. 2000; Price, 2001; Schaufeli & Bakker, 2004; Udechukwu & Mujtabu, 2007). Employee (dis)satisfaction and (lack of) organisational commitment have both been found to be linked strongly to resignations (Currivan, 1999; Hom & Kiniki, 2001; Price, 2001; Udechukwu & Mujtabu, 2006).

It is likely that many research findings and conclusions from this general literature on employee turnover can be applied usefully to the volunteer-based fire services. However, the fact that: (a) volunteers are not remunerated, and (b) most incur significant financial costs as a consequence of their volunteering (McLennan, 2008), probably imposes limits on how reliably some findings and conclusions can be generalised from a paid employment context to a volunteer-based fire agency.

Apparently, very little research has been undertaken concerning resignations by volunteer firefighters. Only one study has been reported previously into reasons why Australian volunteer firefighters resign. Woodward and Kallman (2001) mailed exit survey questionnaires to former CFA Victoria volunteers and analysed 166 returns (24% return rate). Their data suggested that about one third of resignations resulted from volunteers leaving the area. Woodward and Kallman concluded that three major reasons for resigning, apart from leaving the area, were (a) time demands (26%)—including work, family and personal commitments; (b) negative brigade and organisational issues (18%)—such as demands of meetings and call-outs; lack of recognition by the organisation; interpersonal conflict; lack of leadership opportunities; and nepotism; and (c) training demands (12%)—including time, and limited access to training opportunities and resources.

Seeking to boost volunteer retention resembles examining a coin; there are two sides: one is concerned with identifying, and minimising, factors likely to lead to resignation; the other side is concerned with identifying, and maximising, factors which make volunteers want to remain. In this paper we report two studies; each investigated a different side of the volunteer firefighter retention coin. The first was based on an analysis of exit surveys returned by former volunteers who had resigned. The aim was to identify the major reasons why the volunteers had resigned, distinguishing between 'avoidable' and 'unavoidable' reasons (Hom & Griffith, 1995). The second study investigated determinants of volunteers' reported intentions to remain with the agency (cf., Tett & Meyer, 1993). The purpose of the research was to identify possible means by which volunteer-based fire agencies might boost retention of their volunteers.

Study 1: Reasons for resigning

Method

At the request of the South Australian Country Fire Service (CFS) and the South Australian Fire and Emergency Services Commission (SAFECOM), the Bushfire Cooperative Research Centre (CRC) Volunteerism Project team analysed 394 exit survey returns from 2,438 exit surveys (return rate 19%) mailed by CFS to former volunteers who resigned during the period December 2005 – December 2007. Those who responded comprised 306 men (78%) and 88 women (22%); their median ages were 46 and 37 years, respectively. Median length of volunteer service was 10 years for men and 5.5 years for women. These gender percentages and median ages and lengths of service of respondents approximated those of the overall CFS volunteer membership. The exit survey questionnaire was designed by CFS staff and a consultant. The questionnaire requested demographic information from the former volunteers, and asked to them to rate up to 5 of 12 listed possible reasons for resigning, on a 5-point scale: 1 = most important, 5 = least important. Former volunteers were also asked to describe any negative aspects of their experiences as volunteers.

Results and discussion

Because of the large number of missing values resulting from the questionnaire response format, hierarchical cluster analysis using (a) squared Euclidian distances; and (b) Ward's linkage method was employed to identify associations among reasons given for resigning. Four clusters were identified (Figure 1):

I. Dissatisfactions with CFS volunteering:
25% nominated these as contributing reasons for resigning.

II. Age/Health Concerns: 28% of respondents nominated these as contributing reasons for resigning.

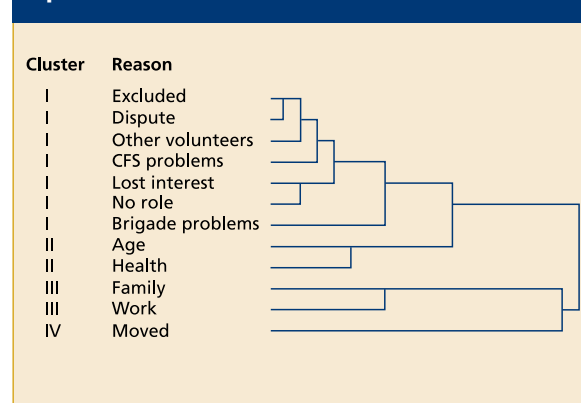
III. Work/Family Commitments: 51% of respondents endorsed these as contributing reasons for resigning.

IV. Moved away from the district: 38% of respondents endorsed this as a contributing reason for resigning.

There is probably little that any agency can do meaningfully to counter the largely unavoidable factors involved in clusters II (Age/Health) and IV (Moved). Cluster III (Work/Family) will prove difficult to address, requiring attention to a range of volunteer issues, including: workload (both responding to incidents, and training); income and costs of volunteering concerns; and socioeconomic pressures on families. Agencies' capacities to intervene in these areas are likely to be somewhat limited in the absence of Commonwealth or state government policy initiatives. However, the makeup of Cluster I (Dissatisfaction with CFS volunteering) suggests that many resignations are potentially avoidable by improving brigade climate through better management and leadership. The specific contributing reasons for resigning making up this cluster were:

- Felt excluded from brigade activities.
- Dispute with another member.
- Problems with other volunteers
- Unhappy with the direction of CFS as an organisation.
- Lost interest in the CFS.
- Didn't feel there was a role for me in the brigade.
- Unhappy with brigade (or higher level) management.

Figure 1: Hierarchical cluster dendrogram; using squared Euclidian distances and Ward's method.



Respondents were also asked “What did you enjoy least about volunteering with CFS?” There were 286 written text responses describing sources of dissatisfaction. Some former volunteers described more than one source of dissatisfaction. The responses were inspected and assigned to one of seven major categories. These are tabulated below.

1. Dissatisfaction with brigade life (34%):
 - Poor brigade climate: conflicts, factionalism, exclusion, bullying (n = 64).
 - Poor brigade leadership: autocratic, favouritism, incompetence (n = 23).
 - Negative impacts of other volunteers: lazy, unsafe, troublemakers (n = 9)
2. Time demands of volunteering (22%):
 - Time required: (n = 32).
 - Time wasted: operations, training (n = 30).
3. The nature of the work of a CFS volunteer (14%):
 - Risks and stressors: mostly anxieties associated with attending vehicle accidents (n = 32).
 - Physical conditions: heat, smoke, fatigue, dirt, climbing ladders (n = 10).
4. Bureaucracy, red tape, rules, forms (12%):
5. CFS structures, staff, and processes (9%):
 - Locals not consulted, ignored, over-ruled (n = 15).
 - Negative behaviours/attitudes of paid staff to volunteers (n = 8).
 - Inadequate resources/equipment (n = 4).
 - Lack of communication with brigades (n = 2).
6. Training (6%):
 - Excessive demands (n = 13)
 - Inadequate/poor quality (n = 3).
7. Local community: lack of interest, support, recognition (3%):

The negative aspects of volunteering listed above suggest that poor brigade climate, brigade leadership failures, and organisational shortcomings outweigh negative aspects of the actual work of a CFS volunteer (including stresses and time conflicts) as primary sources of dissatisfaction with volunteering leading to resignation.

Study 2: Volunteers’ Intentions to Remain

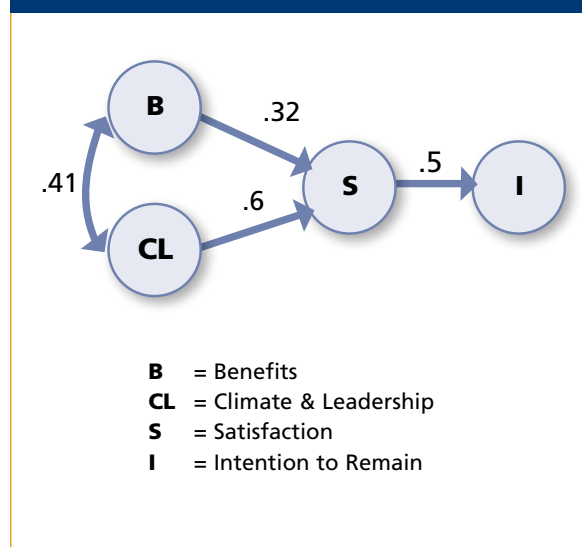
Method

As part of CFA’s New Member Tracking Project (McLennan, Birch, & King, 2006) 514 survey returns from CFA volunteers, who had been members for 12 months, were analysed. Respondents were 345 men (67%) and 176 women (33%). Their median age was 38 years. The survey questionnaire asked the volunteers about their experiences in their brigade, time conflicts, perceived risks, limitations on activities, constraints and frustrations, benefits derived from their volunteering, overall satisfaction with being a CFA volunteer, and strength of intention to remain a CFA volunteer. Associations among these various aspects of volunteers’ experiences were examined, focussing on predictors of level of intention to remain a CFA volunteer.

Results and discussion

Perceived risks, time conflicts, limitations on activities, and constraints and frustrations, were not related to either level of satisfaction with volunteering, nor with intention to remain. Brigade climate and leadership, and benefits of being a CFA volunteer, were found to be related strongly to satisfaction with volunteering, and level of satisfaction with volunteering was, in turn, linked strongly with intention to remain a CFA volunteer (Figure 2 and Table 1). The indirect effects latent variable path model depicted in Figure 2 was found to be a good fit to the data on the basis of structural equation modelling (SEM) analyses using the AMOS program (Note 3).

Figure 2: Path model: coefficients (range -1 to +1) show the relative strengths of association (for all, p <.001).



What is of considerable interest is that for these current volunteers in their second year of service, notionally 'negative' aspects of volunteering (risks, time conflicts, limitations, constraints and frustrations) were, apparently, unrelated to reported levels of satisfaction with being a CFA volunteer. However, brigade climate and leadership was a major determinant of satisfaction

with volunteering (along with benefits derived from volunteering). This latter finding is consistent with both common sense observations, and implications of much of the research on employee turnover: being a member of a well-led, inclusive, and harmonious volunteer brigade is associated strongly with higher levels of both satisfaction and reported intention to remain a volunteer.

Table 1. Items making up the scales depicted in Figure 2.

Intention to remain

(internal consistency scale reliability, = .86)
(response options: Very unlikely; Somewhat unlikely; Don't know; Somewhat likely; Very likely).

How likely is it that you will still be a CFA volunteer in 12 months?

How likely is it that you will still be a CFA volunteer in 3 years?

If you moved to another area served by CFA, would you apply for a transfer to the local brigade?

Satisfaction with being a CFA volunteer (= .85)

(response options: Strongly disagree; Somewhat disagree; Don't know; Somewhat agree; Strongly agree).

I feel that I have been fully accepted into the brigade

I feel as though I have a significant role to play in my brigade

CFA constantly offers new experiences and presents new challenges

I feel that my social life is more enjoyable since joining CFA

I would recommend other suitable people to join the CFA

Benefits gained from joining CFA (= .87)

(response options: Strongly disagree; Somewhat disagree; Don't know; Somewhat agree; Strongly agree).

As a CFA volunteer I can contribute to protecting the members of my community

Being a CFA volunteer adds to my career options

Being a CFA volunteer allows me to learn new things and apply new skills

Being a CFA volunteer makes me feel I am a valued member of the community

Being a CFA volunteer allows me to help others instead of dwelling on my own concerns

My friends place a high value on me being a CFA volunteer

Being a CFA volunteer broadens my networks in the community

Being a CFA volunteer helps meet my sense of obligation to my community

Brigade climate and leadership (= .88)

(response options: Not at all true; Not very true; Don't know; Somewhat true; Very true).

My brigade keeps me well informed about what's going on

The brigade leaders are always fair-minded

Brigade officers are good leaders

I have never experienced bullying in CFA

CFA training sessions are always well delivered

CFA accredited drivers always drive CFA vehicles safely and responsibly

After doing an assessment, the certificate of accreditation comes quickly

Brigade officers are skilled and knowledgeable

My brigade gets along well with all other agencies like the Department of Sustainability and Environment and the State Emergency Service

My brigade gets along well with all other brigades

I always feel safe when working with other CFA members

I'm given responsibilities appropriate to my level of skill & experience

I have had opportunities to meet other brigades through CFA activities

I have never experienced harassment or discrimination in CFA

My brigade and CFA deal with troublesome members promptly

General discussion

It is acknowledged that the research described comes from only two of Australia's eight volunteer-based agencies, and that the data were provided by a minority of those surveyed. Thus, the findings should be regarded as suggestive rather than definitive, they are the findings we have at present.

Adding value to the retention 'coin' involves first, choosing and implementing initiatives which promise a return on investment of resources; and second, looking at both sides of the coin—why volunteers leave, and why they stay.

In considering initiatives, agencies must distinguish between reasons for resigning which are, to a greater or lesser extent, unavoidable, and those which are potentially avoidable. Given that any decision by a volunteer to resign almost certainly has multiple inputs, it is impossible to be prescriptive about an 'unavoidable' resignation rate. Perhaps a conservative estimate might be that between 30% and 50% of annual volunteer resignations from an agency are unavoidable. In an ageing Australian population, a significant percentage of resignations each year due to age, infirmity, and ill-health is to be expected. Agencies may want to examine ways in which the knowledge and experience of valued long-serving volunteers can be retained in brigades for as long as practicable. One option might involve (a) raising the profile, by greater recognition (both within agencies and within communities), of volunteers in support roles; and, (b) formalising roles for mentors to pass on their knowledge and experience to younger volunteers, notwithstanding being unable to undertake operational activities.

Similarly, in times of both economic uncertainties and changing employment opportunities and constraints, a significant percentage of volunteers will resign because they believe that they have no choice but to move elsewhere for financial and family reasons. Agencies could, perhaps, review how they process resignations, with a view to making it easier to link former volunteers to brigades in their new places of abode, where these brigades exist. However, many such moves are likely to be to locations in capital cities or large regional centres where there are no volunteer brigades. One idea worth considering might be to establish 'headquarters brigades' or similar. This concept, which is by no means new, could involve setting up 'virtual brigades', comprising members who want to remain affiliated with their fire agency despite being unable to be a member of a local brigade. There would be opportunities to meet, to retain or learn new skills, and take part in exercises; and these volunteers could provide so-called surge-capacity to reinforce firefighting efforts during times of high demand—for example, by providing personnel to fill

roles in incident management teams and staging area teams. Of course, the economics of such an initiative would need careful evaluation.

Of the (notionally) avoidable reasons why volunteers resign, the most pervasive seems to be imbalance between the demands of volunteering on one hand, and needs associated with volunteers' work and families on the other. This is not an easy problem to address. There are obviously several facets of the problem. But the returns are potentially very great. Perhaps agencies could best proceed along two parallel paths. The first would involve assisting brigade management or leadership groups in: (a) being as economical as possible in making calls on volunteers' time for incidents, training, and meetings; (b) informing employers of their volunteers what volunteering entails, and the benefits accruing to the community from the protection provided by the brigade and its volunteer members (Birch & McLennan, 2006)—note that NSW Rural Fire Service (RFS) has developed information kits for employers of RFS volunteers; and (c) providing induction programs and information kits to families of new volunteers focussing on what being a fire service volunteer entails, and the provisions the agency has in place to mitigate risks for volunteers and to support volunteers and their families (Cowlshaw, McLennan, & Evans, 2008). The second path would involve making representations to governments (in collaboration with peak bodies such as the Australasian Fire and Emergency Services Authorities Council, Emergency Management Australia's Australian Emergency Management Volunteer Forum, and Volunteering Australia) to develop policy initiatives which ease those financial imposts on volunteers, their families and employers, associated directly with emergency services volunteering.

The key role of the volunteer brigade as analogous to a work environment for volunteers emerged clearly from both the studies. A poor brigade climate serves as a potent source of dissatisfaction contributing to the resignation process. A good brigade climate is a source of positive experiences and promotes commitment to remaining a fire service volunteer in spite of the discomforts, frustrations, and stresses which are the inevitable lot of volunteers on occasions. It is puzzling that agencies generally appear to have paid relatively little attention to the problem of how to assist more brigades to be better organisational environments in which to be a volunteer. Training in leadership and people management skills, such as basic supervision principles, conflict resolution, negotiation, and goal setting, does not appear to be a very high priority in most agencies—neither for career staff who supervise volunteers, nor for volunteers who manage and lead other volunteers.

Agencies could begin by determining what organisational structures and processes are required to support good leadership by both career staff and volunteers (Motowidlo, 2003), then implementing effective staff development programs to improve the skills of their career staff in managing and supervising volunteers (there would seem to be little point in endeavouring to train volunteers to be better brigade leaders if career staff members have not first been trained in how to consistently model effective leadership behaviours). Then, effective training programs would need to be developed to equip volunteers who aspire to brigade leadership role, and to up-skill volunteers who already occupy leadership positions.

By way of concluding comment, it appears that many of the insights derived from research on turnover of employees, touched upon in the introduction to this paper, can inform agencies in boosting retention of their volunteers by both minimising avoidable contributors to resignations, and maximising experiences at the brigade level likely to foster commitment to remaining a fire service volunteer.

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Note 1: Figures provided by CFA, NSW RFS, QFRS, SA CFS, FESA WA.

Note 2: These figures are based on those in McLennan (2004b), but only figures for the larger (not ACT or Tasmania) agencies have been reported here.

Note 3: Figure 2 path model fit indices: 2(2: N =485) = 0.886, p. = .642; adjusted goodness of fit index (AGFI) = .995; comparative fit index (CFI) = 1.000; root mean square error of approximation (RMSEA) = .000; standardised root mean square residual (SRMR) = .01 (see Weston and Gore, 2006).

Note 4: This paper refers predominantly to volunteers in the fire sector but the information could easily include other emergency management sector volunteer agencies.

References

- Abassi, S. M., & Hollman, K. W. (2000). Turnover: the real bottom line. *Public Personnel Management, 29*, 333-342.
- Birch, A., & McLennan, J. (2006). *Survey of employers about employing personnel who are Rural Fire Service volunteers*. Bushfire Cooperative Research Centre Volunteerism Project, NSW Rural Fire Service Report No. 2006:2. School of Psychological Science, La Trobe University, Bundoora.
- Cascio, W. F. (1991). *Costing human resources: The financial impact of behavior in organizations* (3rd ed.). Boston, MA: Kent Publishing.
- Cowlishaw, S., McLennan, J., & Evans, L. (2008). Volunteer firefighting and family life: An organisational perspective on conflict between volunteer and family roles. Submitted to *Australian Journal on Volunteering*.
- Currivan, D. B. (1999). The causal order of job satisfaction and organizational commitment in models of employee turnover. *Human Resource Management Review, 9*, 495-524.
- Evans, R., Christopher, T., & Stoffel, T. (2000). Managing employee absenteeism and turnover for competitive advantage. In A. Travaglione & V. Marshall (Eds.), *Human resource strategies: An applied approach* (pp. 272-309). Sydney: McGraw Hill Australia.
- Hom, P. W., & Griffeth, R. W. (1995). *Employee turnover*. Cincinnati, OH: South-Western College Publishing.
- Hom, P. W., & Kiniki, A. J. (2001). Toward a greater understanding of how dissatisfaction drives employee turnover. *Academy of Management Journal, 44*, 975-987.
- Griffeth, R. W. & Hom, P. W. (2001). *Retaining valued employees*. Thousand Oaks, CA: Sage.
- Griffeth, R. W., Hom, P. W., & Gaertner, S. (2000). A meta-analysis of antecedents and correlates of employee turnover: Update, moderator tests, and research implications for the next millennium. *Journal of Management, 26*, 463-488.
- McLennan, J. (2008). *Issues facing Australian volunteer-based emergency services organisations: 2008 – 2010: A report prepared for Emergency Management Australia (EMA)*. Complex Decision Research Group, School of Psychological Science, La Trobe University, Bundoora.

- McLennan, J. (2004a). *Recruiting new rural fire service volunteers: Direct expenditure estimates*. Bushfire Cooperative Research Centre Volunteerism Project Occasional Report No. 2004:3. School of Psychological Science, La Trobe University, Bundoora.
- McLennan, J. (2004b). *Profiles of Australia's volunteer firefighters (revised)*. Bushfire Cooperative Research Centre Volunteerism Project Report No. 3:2004. School of Psychological Science, La Trobe University, Bundoora.
- McLennan, J., & Birch, A. (2005). A potential crisis in wildfire emergency response capability? Australia's volunteer firefighters. *Environmental Hazards*, 6(2), 101-108.
- McLennan, J., Birch, A., & King, C. (2006.) Holding on to what you have got: the CFA longitudinal study of new volunteers. *Papers from the inaugural volunteering research symposium 7-8 March 2006*, Melbourne, pp. 82-89, Supplement to *Australian Journal on Volunteering*, vol. 11 no. 2.
- McLennan, J., Birch, A., King, C., & O'Loughlin, F. (2007). Recruiting younger fire service volunteers. *Fire Note* No. 10, January. Melbourne: Bushfire Cooperative Research Centre.
- Mobley, W. H. (1982). *Employee turnover: Causes, consequences, and control*. Reading, MA: Addison-Wesley.
- Motowidlo, S. J. (2003). Job performance. In W. C. Borman, D. R. Ilgen & R. Klimoski (Eds.), *Handbook of psychology: Volume 12 Industrial and organizational psychology* (pp. 39-53). Hoboken, NJ: John Wiley & Sons.
- Office of the Emergency Services Commissioner (2008). *Emergency services strategy project discussion paper: Climate change and volunteerism*. Melbourne: Department of Justice.
- Price (2001). Reflections on the determinants of voluntary turnover. *International Journal of Manpower*, 22, 600-624.
- Schaufeli, W. B., & Bakker, A. B. (2004). Job demands, job resources, and their relationship with burnout and engagement: A multi sample study. *Journal of Organizational Behavior*, 25, 293-315.
- Staw, B. M. (1980). The consequences of turnover. *Journal of Occupational Psychology*, 1, 253-273.
- Tett, R. P., & Meyer, J. P. (1993). Job satisfaction, organisational commitment, turnover intention, and turnover. *Personnel Psychology*, 46, 259-293.
- Udechukwu, I. I., & Mujtaba, B. G. (2006). Job satisfaction and organizational commitment. In B. G. Mujtaba & F. J. Cavico (Eds.), *Age discrimination in employment: Cross cultural comparison and management strategies* (pp. 174-188). FL: Booksurge Llc.
- Udechukwu, I. I., & Mujtaba, B. G. (2007). Employee turnover and social affiliation. In B. G. Mujtaba (Ed.), *Mentoring diverse professionals* (2nd ed., pp. 179-190). FL: Llumina Press
- Weston, R. & Gore, P. A. (2006). A brief guide to structural equation modelling. *The Counseling Psychologist*, 34, 719-751.
- Woodward, A., & Kallman, J. (2001). Why volunteers leave: Volunteer exit survey and emergency services. *Australian Journal on Volunteering*, 6(2), 91-98.

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