INTRODUCTION

Currently there is much discussion about the retention of mine professionals within the mining industry. There is also concern about the difficulties of fly-in fly-out (FIFO) as a prolonged lifestyle. In the last issue of the AusIMM Bulletin, Terry and Sherryl Potts recounted a personal view of FIFO which raised a lot of the key issues. From a business point of view, employee turnover is costly to mine operations, with some researchers estimating the cost of replacing professionals at 150 per cent of annual salary or more (Tziner and Birati 1996).

Recently the Centre for Social Responsibility in Mining (CSRM) and the Minerals Industry Safety and Health Centre (MISHC) released a research report on employee turnover at FIFO mines in Australia - *Workforce Turnover in FIFO Mining Operations in Australia: An Exploratory Study* (Beach, Brereton and Cliff 2003). Many of the findings in this report are relevant to the discussions about FIFO and the retention of mining professionals.

In this article, we will

- introduce the study and some of the key findings
- discuss FIFO rosters, employee turnover on different FIFO rosters, and turnover of operators and mine professionals
- discuss what the study can contribute to the town versus FIFO debate, and
- consider what is needed to forward our knowledge about retention of mining professionals in the industry.

There has been very little research addressing employee retention in the Australian mining industry, and this has hamstrung the debate about what causes employee turnover and how to improve retention. While many people in the industry have views on these issues, these ideas have not been systematically tested.

Our study drew on quantitative human resource data and interview data from nine mine sites in Queensland and Western Australia. Seven FIFO mines and two town based mines were involved with the study. The interviews were undertaken with site based management personnel, particularly in the human resources area.

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Additional information was obtained from the MOSHAB Safety Behaviour Survey 2002 of the West Australian mining industry.

Key findings of our study were;

- annualised employee turnover at the FIFO sites ranged from 10 per cent to 28 per cent, the average being 21 per cent
- the highest rates of turnover were among professionals and mine operators
- there was no ‘natural level’ of employee turnover; turnover fluctuated over time in response to internal (on-site) events such as changes in working arrangements and management interventions
- the impact of FIFO rosters on employee turnover was mediated by management strategies and the nature of the workplace culture
- a turnover rate above 20 per cent was regarded as detrimental to the mine’s productivity by most interviewees; turnover rates at five of the nine participating mines were above this threshold
- mine management did not know the financial cost of employee turnover at their site and did not have access to a reliable method for estimating costs associated with employee turnover.

Many interviewees in our study thought that FIFO made it more difficult to recruit and retain employees. The issue, as they variously expressed it, was not so much that employees disliked FIFO, rather that it wore them out. This could be labelled ‘FIFO fatigue’. One interviewee summed up this idea most succinctly;

> FIFO is measured in dog years. It’s dependent on the person, but most people get really tired of it after a while (Administration manager).

There is a general consensus of opinion in the industry that FIFO patterns that are too long can be very disruptive to families and individuals, and contribute to a rapid exit from site. But what constitutes ‘too long’ in a FIFO schedule?

In an early study, Storey and Shrimpton et al (1989) examined a 28 days-on, 28 days-off FIFO pattern. They found evidence of family adaptation to this work pattern that could be maintained in the long term. Other research that looked at a 28 day-on, 7 days-off roster found the opposite, that the family adaptation required to work the FIFO pattern was not sustainable over time.

The implication here is that FIFO patterns that approximate even-time provide a greater opportunity for miners and their immediate family to actually be a family. In

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contrast, FIFO patterns where mine workers are away more days than at home make it harder for families (and mine workers) to adapt to the FIFO roster and then maintain this lifestyle in the longer term. However, the social effects of FIFO have not been sufficiently studied to know if, or when, a FIFO pattern provides the right balance of days at home to days on site.

TURNOVER OF OPERATIONAL EMPLOYEES

The rosters in our recent study were mostly 2 weeks on and 1 week off (14/7) for operational employees. The longest FIFO roster on site was a 4 weeks-on and 1 week-off pattern (worked by a contractor), but most were shorter than this.

Potts and Potts identified the 14/7 FIFO pattern as having the “potential for major detrimental impact on personal affairs, family life and relationships” (AusIMM Bulletin, Jan/Feb 2003, p67). They suggested that the employee’s absence from home, combined with the repeated entry and exit from the family, can overload the partner at home and isolate the miner on site. Some of our interviewees expressed a similar view of the 14/7. One would expect, then, that these difficulties would contribute to a higher rate of employee turnover in those areas working a 14/7.

We found that employee turnover at mines using the 14/7 pattern varied between 13 and 28 per cent, with most being at the higher end of the range. On this roster mine workers are home only every third weekend. The lowest employee turnover was at a FIFO mine operating on a 9/5 pattern. Employee turnover at this site was only 10 per cent. At this site all the employees would be home every second weekend - a big improvement on every third weekend. These findings are consistent with the idea that FIFO workers vote with their feet when the FIFO pattern is ‘too long’. However, the best performing site using a 14/7 roster (13% turnover) demonstrates that management at that mine had, in large part, off-set the difficulties associated with the 14/7. The obvious difference at this mine was not financial incentives, but the commitment of management to develop and maintain a positive organisational culture that benefited all employees.

TURNOVER OF MINE PROFESSIONALS

All the professional occupations were associated with shorter rosters, such as a 9/5, 5/2, or an alternating 5/2 - 4/3 pattern. Despite these relatively short rosters, some of the highest employee turnover occurred amongst mine professionals (the maximum was nearly 70% at one site). It is difficult to make the case that the length of the roster is pushing professionals to leave FIFO sites. In fact, some interviewees disliked the 5/2 roster because the weekend was too short to enable any real rest.

When discussing employee turnover and FIFO it is important to keep in mind that people change jobs for many reasons. High employee turnover at a FIFO mine does not necessarily indicate a rejection of FIFO. The employee may well be quitting one FIFO site to start work at another. Conversely, low employee turnover doesn’t mean that those employees who remain on a FIFO roster somehow avoid the social stresses associated with FIFO - other factors may be compensating or helping the individuals cope in some way. Factors such as remuneration, career opportunities, general employment conditions, general family satisfaction and/or social support can each play a major role in determining if a mine employee is
happy with the FIFO pattern he or she is currently working. Nonetheless, the variation in employee turnover rates in this study suggest that high employee turnover is not inevitable on FIFO mine sites. Workplace culture and roster design have a strong influence on employee retention.

TOWN OR FIFO?

Of the two town based operations in our study, one had an employee turnover rate of eight per cent; the other was 28 per cent per annum, which was higher than most of the FIFO operations. Beyond this, there is little quantitative data in our study to assess the differences between town based and FIFO operations in terms of employee retention.

Certainly the perception of our interviewees was that FIFO is a more attractive option for professional staff, precisely because the family can choose to live in an urban environment. However, as stated previously, many interviewees also held the view that FIFO makes retention of employees more difficult. Additionally, some interviewees were very positive about living in regional towns because that is where they felt the strongest community bonds.

This illustrates how the different perceptions and experiences of FIFO in the industry fit somewhat uncomfortably together. It is a bit of a ‘cop out’ to say it is a complex picture, but none the less that is what we have.

Interestingly, data from the MOSHAB survey showed that when comparing the average length of service for workers at FIFO mines with community based mines within the same mineral sector (e.g., a FIFO gold mine compared to town-based gold mine), there was no significant difference, despite the differences in roster patterns associated with FIFO and town-based operations.

FUTURE WORK

Further research is needed to assess the elements of FIFO that act as barriers to retaining professionals on site (and in the mining industry) and to support the design of effective retention strategies. It is unlikely there will be a one-size-fits all solution. Retention strategies may need to be designed on the basis of key, occupational, social or demographic factors.

The concept of ‘FIFO fatigue’ needs to be assessed for its contribution to turnover among professionals and others in the industry. This issue is distinct from factors such as career progression, organisational culture, or family life stage. Based on personal accounts, such as that provided by Potts and Potts, FIFO fatigue appears to be an emotional and physical tiredness – being fed up with constant absences from home and the stresses of mine workers repeatedly entering and exiting their family. The trend towards shorter rotational patterns (such as a 5/2) will not necessarily alleviate this problem. The industry would benefit from establishing the optimal balance of work days on site (including days-on, travel time, night shift rotation) and rest days at home that support long term involvement in FIFO work patterns.

Employee turnover data and exit interview data could be used to further identify and understand the issues contributing to employee turnover.
These data could also be used in evaluating the success of retention strategies at the mine site, company or industry level. However, the manner in which this data is currently collected and stored limits its usefulness. The full research report is available at either www.csrm.uq.edu.au or www.mishc.uq.edu.au. A summary report is also available from these websites; alternatively email Ruth Beach (r.beach@uq.edu.au) to forward a copy.

REFERENCES


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5 For example, many hundreds of hours worth of exit interview data lies idle, and for all practical purposes useless, because of the manner in which it was collected and recorded. One of the most important things the mining industry can do is to collect and store human resource data so that it can be analysed to help management planning with, for example, how to improve employee retention. The final report has data collection forms and procedures for exit interviews in the appendices.