

Divorce and separation in the Australian mining sector: Is it what we expect?

Lindsay Greer and Karin Stokes PhD

Central Queensland University

Contact: l.greer@cqu.edu.au or k.f.stokes@cqu.edu.au

Divorce and separation in the Australian mining sector: Is it what we expect?

ABSTRACT

The recent rapid growth in resource intensive regions of Australia has been associated with a flurry of government activity at the local and state level with the intention of responding to the significant challenges that the rapid growth has introduced. The government activity has resulted in a number of positive developments in many cases as a result of community consultation and engagement. A common characterisation at community forums and other public sphere debates about resource developments has been a characterisation of mining workers as a homogenous group of mainly males who are 'barely civilised' residing in poorly constructed work camps and creating general community anomie. Miners are subsequently equated with various social ills. This paper questions one of the assumptions expressed within public forums. It takes a closer look at divorce and separation in the mining sector in response to the often heard statement that employment in the mining sector increases the likelihood of relationship stress resulting in higher than average divorce and separation rates.

Words: 165

Key words: mining, divorce, separation, FIFO, DIDO, workforce

Divorce and separation in the Australian mining sector: Is it what we expect?

Lindsay Greer and Karin Stokes PhD
Central Queensland University
Contact: l.greer@cqu.edu.au or k.f.stokes@cqu.edu.au

Introduction:

Resource developments in Australia, particularly in the mining sector, are increasingly being established in regional and remote localities with associated workforce recruitment and retention challenges. Regional Australia has witnessed a decade-long expansion in resource extraction, mainly coal and iron ore, which has resulted in an extended period of ‘boom’-like conditions on the eastern and western seaboard of Australia. The basic mechanism underlying the boom-town model is a rapid growth of population that occurs as people move into an area either to reside or fly in/fly out (FIFO) to work and take advantage of the employment and business opportunities in the resource sector of the region. This, in turn, has focused attention on the social pressures within resource intensive communities.

One often cited challenge in the recruitment and retention of mining workforce is a perception that employment schedules result in an increase in familial relationship problems with an associated higher than expected divorce and separation rates among mining workers. This paper examines this issue via analysis of customised ABS census data (1996, 2001, and 2006) from Queensland, focusing on the divorce and separation rates for each Local Government Area categorised by industry sectors (ANZSIC 93).

Background:

In Australia, a policy spectrum involving government legislation at the Federal, State and local level offer a basic recognition of the need to make provision for the functioning of families through unpaid parental leave, carer's leave allowances, and personal leave. These conditions are not universal and differ from state to state, between employment categories as well as employment sector (Earle 2002).

Mining sector employment agreements may involve block shift arrangements that support fly-in/fly-out (FIFO) and drive in/drive out (DIDO) schedules, and these have attracted considerable attention (O'Neill 2004; Beach 1999; Beach, Brereton and Cliff 2003) due to the purported link between block shift employment arrangements and possible negative impacts on families. It is hypothesized that the FIFO schedules act as an intensifier on relationships within families leading to increased stress on existing marital arrangements, which may lead to divorce or separation. But as these trends are not supported by more than anecdotal and case study evidence, they open a space for further investigation.

An examination of Australian Bureau of Statistics (ABS) census data ascertained the incidence of familial disjunction due to divorce and separation. Divorce and separation rates signify the rate of breakdown of formalised relationships (de Vaus, 2004:210), and this has been used to interrogate a wide variety of variables. For Healey (2009) the ABS 2006 census data highlighted that Australia's divorce rate has fallen from its peak in 2001, which had flowed from the introduction of the Family Law Act in 1975. By 2007, ABS data showed a decline in the crude divorce rate (divorces per thousand people) from 2.5 to 2.3 percent with 47,963 divorces granted in 2007 compared to 51,375 in 2006 while there was a corresponding rise in the average length of marriage rates from 10.1 years in 1988 to 12.5 years in 2007 (ABS, 2007).

Literature abounds on the social characteristics of marriage breakdowns including family histories (Amato 1996; Webster, Orbach and House 1995), attitudes, beliefs (Clarke-Stewart and Bretana 2006) and socio-economic factors (Mandemakers, Monden and Kalmijn 2010; de Vaus 2007). More recently gender variables in the initiation of separation and divorce have been illuminated (Hewitt 2008).

Attitudinal change towards single mothers, cohabitation and childlessness in early marriages as couples complete educational and vocational aims has led to an increased age at first marriage for both men and women (Hugo 2001). Commensurate with this for women, the age for having their first child and their age at divorce is also climbing. The time between marriage and separation is increasing, so that fewer divorces involve the consideration of young children since the parents are more likely to have waited until their children's late adolescence before separating (Healey 2009). Further, there is a decline in remarriage generally and a tendency for those remarriages also to fail particularly if the couple are still relatively young (de Vaus and Wolcott 1997).

As an institution, marriage is declining and the structure of the Australian family has irrevocably changed (Linacre 2007). Families are becoming more diverse as they are formed, dissolved and reformed over increased (and increasing) individual lifetimes (Linacre 2007). Couples are also increasingly likely to cohabit prior to marriage (Healey 2009) but cohabiting couples tend to separate more readily than married couples, although this trend is greater the younger the cohort (Hewitt 2008). The net result of these trends creates a greater proportion of singletons amongst adult Australians (Healey 2009).

The mining industry, with its isolated geographies (Murray and Peetz 2007; Pattenden 1998), long shifts (Pocock et al 2001; O'Neill 2004), FIFO schedules (da Costa, Silva and Hui 2006), DIDO workforce (di Milla and Bowden 2007), other sessional work occupancies (da Costa 2008), and gender-imbalanced populations (Pattenden 1998), are considered by many to be highly prone to elevated levels of social and personal stress factors. Certainly there is literature which suggests geographical translocations of mining employees and an apparent commensurate increase in violence and substance abuse leads, anecdotally, to a higher proportion of heterosexual relationship dissolution (Sharma and Rees, 2007). Shift work and commuting patterns in mining are considered to place excessive strain on family and especially marital relationships (Brewer 1994; Gibson 1994; Grosswald 2003).

Mining sector research has focused on the potential alienating nature of shift work resulting in considerable effort to determine optimal roster systems (Allen 2008, 2009; de Cieri et al 2002; Heiler, Pickersgill and Briggs 2001). Employee retention has been the historical focus of roster changes, but as Baldwin (1977) noted, Australia's more unionised labour has traditionally seen higher wages to compensate for such occupational deficits. Frequent overtime and extended work shifts however have also been shown to create adverse effects on health (Caruso et al 2004; Costa 1996), although for the majority of Australian miners there is no correlation between shift types or lengths and injuries. This suggests that the industry has created a work environment that is relatively safety conscious (Cliff and Horberry 2008; Cram and Aziz 2001), and indeed, to have safety and social benefits for miners (Cram and Aziz 2001; di Milla and Bowden 2007). Nonetheless, mineworkers seem to be only moderately satisfied with their quality of life (da Costa 2008).

Just what constitutes 'stress' amongst workers in the mining sector is not clear, with the perception of a lack of control over the work environment being the most common indicator (Brewer 1994). Unhealthy coping strategies such as smoking, drinking, substance abuse and weight gain lead to poor long-term health outcomes and increased risk of accident and injury (Hossain et al 2003; Frank 2000; Iverson and Maguire 2000). The prevalence of fatigue also promotes stress and injury leading to the development of the 'Fitness for Duty' concept, which seeks to exclude workers who are already at risk due to physical incapacity or ill-health, and to focus attention onto the prevention of work-related injury (Bofinger et al 2001). Not all research has supported these findings as common factors for miners' stress (Caruso et al 2004) nonetheless, a pattern of deteriorating performance and increased numbers of near-misses can be shown. Frequent exposure to such experiences leads inevitably to psychological strain, but the effects of this on marital relationships has not been extensively reviewed (Costa 1996).

Gendered aspects of mining:

One feature of the mining sector is the increasing employment of women in traditionally male activities although women still remain at a significant social disadvantage compared with male miners (Sharma 2010). Pattenden (1998) reviewed the pressures of exclusion that go with being a (female) minority within a largely homogenous (male) community, concluding that frustration of stalled careers and limited opportunities led women away from the mining industry. Despite the recognition by mining industry worldwide that there are social benefits to having women at the workplace, such as improved behavioural standards and a more productive workforce (Pattenden 1998), mining is still regarded as a 'male' occupation (Pini and Mayes 2009). There is some evidence of company policy changes to increase the number of women within the mining workforce however these are yet to have a significant

impact (Sharma 2010). It is often a lack of access to childcare, limited opportunities for part-time work, long hours and inflexible work practices which hinder the attraction to mine work for women (Pini and Mayes 2009; Yakovleva 2007).

Women in mining communities are represented more substantially in gender-congruent employment, and if they are also employed in the mining sector, may report higher levels of stress (Heiler, Pickersgill and Briggs 2001). D'Arcy and Siddique (1985) further argue a greater risk of mental illness, lack of social integration and poor quality of life accruing to the wives of miners in isolated communities, is a trend which continues today (Mayes and Pini 2008). This characteristic of mining life, described, somewhat harshly, as 'feudal relations' (Gibson-Graham 1996), appears to not only define the lives of some mining women, but also seems to remain highly resistant to change. Allen (2009) points out that whilst some families may thrive on the work-focused routines of mining, others do not, and this may become a factor in the decision by some workers to relocate for more standard employment schedules (5 days on/2 days off) and/or to less isolated localities. In particular, it has been argued that it is women, as part of the workforce or as domestic support (or, commonly, a mixture of both) whose wellbeing is at greatest risk (Murray and Peetz 2007; Pini and Mayes 2009; O'Neill 2004). Strategies that women use to offset disadvantages in mining communities are creative and resilient, if limited by social, economic and ideological structures that are more difficult to resist at community level, particularly when involving mateship groups (Collis 1999). As with women increasingly taking the initiative in instigating change in the state and formation of relationships, Allen (2008) suggests the same for work choice factors such as FIFO arrangements.

There is ample evidence that mining labour is heavily weighted towards male workers and managers, whilst women tend to undertake administrative tasks and manage homes (Nancarrow, Lockie and Sharma 2008; Dansereau 2006; Preston et al 2000). This culture has led to concern about intimate partner violence, a prime indicator of deteriorating interpersonal relationships. Pre-existing marital conflict has been demonstrated to increase as shift work and long hours take their toll on sleep patterns and emotional stability (Costa 1996), but although it has been suggested that mining is particularly prone to these effects, this has not been demonstrated in situ (Nancarrow, Lockie and Sharma 2008). More mundanely, it would appear that a lack of adequate housing for families is a more common and crucial complication faced by most miners (Dansereau 2006; Scheltens and Morris 2006) and likely to exacerbate relationship stress.

Stress factors for miners:

Quality-of-life indicators such as household income, accommodation, social relations, education, life expectancy and access to services appear to be enhanced by mining activities generally, although some specific demographic sectors in Australia (such as Aboriginals, the long-term unemployed etc) have not received similar benefits (Hajkowicz, Heyenga, and Moffat 2010; Gibbs 2003). Benefits accruing to mining communities and the small settlements closest to them depend upon the quality of the interrelationships established (Kilpatrick et al 2010). As Murray and Peetz (2007) point out, mining booms are cyclical and eventually, the region and the workers generally, will suffer the downturn. Women and children are identified as the primary targets for community integration as they are also the primary service users (Allen 2009). When this support is not readily forthcoming, work-life imbalance occurs, precipitating a number of negative consequences. But as da Costa (2008) and Mann et al (2010) discovered, investment in a resource intensive community's facilities

does not always translate to the perception of a better quality of life. Consequently, the concerns of local communities and the development and strengthening of relationships would seem to be critical stress factors for mining communities..

It is argued, however, that FIFO creates additional stress and psychological ill-health for workers and their families alike. This includes an intensification of work relationships due to the mines' remoteness and exceptionally close contact between work teams that threaten family stability and blurs the distinction between the professional and the personal (da Costa, Silva and Hui 2006; Taylor and Simmonds 2009). This suits some but is arguably not seen as conducive to stable family relations, particularly those with young children.

What is clear is that there is a complex interaction of work and worker characteristics, commute time, and perception of levels of control of workplace activities that can create long term problems for some miners (Caruso et.al. 2004; Cliff and Horberry 2008; Costa 1996). Additionally, not all mining industries are equal in their treatment of workers, nor can results from one region be readily extrapolated to another (Heiler, Pickersgill and Briggs 2001). Mining workforce is also characterised as a homogenous group overlooking the diversity of roles, positions and conditions of employment (MISC, 2007).

There are a variety of strategies available to help recruit and retain workers and to minimise adverse effects of mining activities on miners (Dansereau 2006; Hajkowitz, Heyenga and Moffat 2010). How beneficial these strategies would be in relation to divorce and separation for mining families is not clear. Certainly there are factors which help promote worker welfare, and primarily these involve consultation, communication and conflict resolution (Iverson and Maguire 2000). Engagement at community and enterprise levels as a major part

of the social environmental monitoring is necessary for the retention of skilled, productive and satisfied workers (Pearce 2010). These attributes are strongly associated with healthy family cohesion, flexibility and effective communication (Taylor and Simmonds 2009).

Divorce and Separation Data:

The key question of this paper is to see if there is evidence of a higher rate of divorce and separation in the mining sector than in other industry sectors. ABS data supplied the number of employed persons who indicated that they were either divorced or separated at the time of the 1996, 2001, and 2006 census collections. The record units were sorted by the industry of employment and by the place of usual residence within local government boundaries in Queensland. Employment populations by industry sectors was similarly sourced from ABS 2006 Census community profiles to examine the ten year trend from 1996 to 2006.

Overall divorce and separation trends for employed persons within Australia show a small but steady increase from 9.83 percent to 11.26 percent of the total workforce over the decade from 1996 to 2006. A similar trend is observed in the mining sector workforce, where the proportion of divorced/separated persons is fractionally higher (10 percent compared to 9.83 percent) than the percentage for the total workforce in 1996. As a percentage the increase is less for the mining sector (1.15 percent) than for the total workforce (1.43 percent) over the ten year period. While there would appear to be a general trend of an increasing number of divorced/separated persons both within the mining sector and more generally within the Australian workforce any deviation within the mining sector from the national trend is extremely small. This is also evident when compared to the crude divorce/separation rates recorded over longer time frames.

Overall the proportion of divorced/separated employed persons in the mining sector compared to the other industry sectors in raw numbers is small. Within Queensland the number of mining sector employees who were divorced or separated at the time of the census collections was 2,207 (1996), 2,024 (2001), and 3,351 (2006). This equates to 9.86, 10.49, 10.86 percent of those employed in the mining sector in Queensland. The percentage of Queensland employees within the mining sector who are divorced or separated as a proportion of all Queensland employees is 10.91 percent (ABS, 2006), which is less than the Queensland average across all industry sectors at 12.09 percent (ABS, 2006) and less than the overall Australian average at 11.26 percent..

The ABS customised data (1996, 2002, 2006) was grouped by local government areas into mining intensive areas, metropolitan, and regional centres. What became clear is that in those areas considered to be resource intensive, the proportion of mining sector workers who are divorced or separated is either decreasing or increasing only very slightly. This would suggest that the mining sectors workers located in the resource intensive localities, that is those who live locally to the mining operations are either more likely to be in a stable relationship or are single and do not describe themselves as divorced or separated.

The highest percentage increase in divorce and separation of mining sector workers is in those regional centres that have been absorbing a high influx of mining sector employees and display an upward trend with an increasing proportion of divorce/separated individuals. There is no direct evidence that this increase is related to a corresponding increase in the number of mining sector workers residing in the regional centres and commuting to the resource intensive regions. In Mackay, where there has been a substantial increase in the number of mining workers from 648 (1996) to 3129 (2006) the corresponding increase in the

percentage of divorced/separated mining workers is only 1.10 percent. Likewise in Brisbane where a high proportion of the 3048 mining workers would be FIFO the increase in divorce/separation for mining workers is only 0.47 percent. On the other hand, the percentage of mining sector workers divorced/separated in the regional centres of Thuringowa (16.95%), Townsville (15.06%), Gold Coast (16.04%), Gladstone (15.60%) and Rockhampton (14.43%) is well above the average rate for Queensland (10.86) and suggests that the issue of FIFO on divorce and separation rate should be investigated further.

Conclusion:

The objective has been a preliminary examination to ascertain whether there is evidence of an increase in the number of mining workers who are separated or divorced primarily due to the block shift working arrangements. It is acknowledged that there is a level of imprecision in the measures used and that they operate more as proxy indicators for family stability. Also, mining sector employees are not differentiated by their individual working arrangements. Our assertion is that given an increase in fly-in fly-out working arrangements, and based on the assumed negative impact of such arrangements on family cohesion, we should have seen a corresponding increase in the proportion of workers divorced or separated in the mining sector. This increase would also be greater in local government areas characterised as the residential base for FIFO workers.

While there is no conclusive evidence that FIFO working arrangements are correlated with the divorce and separation rates of workers in the mining sector there is support for the assertion that mining employees have relatively stable familial relationships and have low divorce/separation rates. Given that most mine workers in the Queensland context do live relatively close to their place of employment the FIFO/DIDO cohort does not represent all

mine workers and this would affect the data. Further investigation of FIFO/DIDO mine workers and a longitudinal study of the life cycle of mine workers would thus be invaluable in determining the type and source of social stressors that contribute to relationship failures.

References

Allan, J., 2008 'Mining's Relocation Culture: Implications for family, community and industry', Discussion Paper 1, Centre for Inland Health, Charles Sturt University, Accessed at http://www.lyndoncommunity.org.au/AccountData/34/content/docs/external2008_7.pdf

Allan, J., 2009 'Recruitment and retention in the mining industry: A family and community issue', Conference presentation, Accessed at <http://www.bowenbasin.cqu.edu.au>

Australian Bureau of Statistics (ABS) 2007, 'Selected divorce indicators, Australia, Selected years, 1988–2007', Cat No.3307.0.55.001 Divorces, Australia, 2007

Amato, Paul R. 1996 'Explaining the Intergenerational Transmission of Divorce' *Journal of Marriage and the Family*, Vol. 58, August, pp. 628-640.

Baldwin, Doug 1977 'A Study in Social Control: The Life of the Silver Miner in Northern Ontario', in *Labour*, pp. 79-106.

Beach, R. 1999. "The Impact of Intense Work Schedules on Family Structure: A Case Study of 4:1 Fly-In/Fly-Out Schedule in the Australian Mining Industry", in Collis, M., Munro, L.

and Russell, S. (eds.) 1999. *Sociology for the New Millennium – Challenges and Prospects*, The Australian Sociological Association, Melbourne.

Beach, R., Brereton, D. and Cliff, D. 2003. *Workforce Turnover in FIFO Mining Operations in Australia: An Explanatory Study*. University of Queensland, Brisbane.

Bofinger, Carmel, Mahon, Elizabeth, Cliff, David & Heiler, Kathryn 2001 'Fitness for duty: The findings of the ACARP scoping study', Minerals Industry Safety and Health Centre, University of Queensland.

Brewer, Ann M. 1994 'Employee distress and the introduction of flexible working arrangements in the NSW coal-mining industry', *IJES*, Vol. 2[1], April, pp. 110-131

Caruso, Claire C., Hitchcock, Edward M., Dick, Robert B., Russo, John M. & Schmit, Jennifer M. 2004 'Overtime and Extended Work Shifts: Recent Findings on Illnesses, Injuries, and Health Behaviors', National Institute for Occupational Safety and Health, U. S. Department of Health and Human Services, Centers for Disease Control and Prevention, April.

Clarke-Stewart, Alison & Bretano, Cornelia 2006 *Divorce: Causes and Consequences*, New Haven: Yale University Press.

Cliff, David & Horberry, Tim 2008 'Hours of work risk factors for coal mining', *Int. J. Mining and Mineral Engineering*, Vol. 1[1], pp. 77-94

Collis, Marion 1999 'Marital conflict and men's leisure: how women negotiate male power in a small mining community', *Journal of Sociology*, Vol. 35[1], March, pp. 60-76

Costa, Giovanni 1996 'The impact of shift and night work on health', *Applied Ergonomics*, Vol. 27[1], pp. 9-16

Cram, K.B. & Aziz, N.I. 2001 'Safety and Welfare of Mine Employees in Australian Black Coal Mines', *International Mining Congress and Exhibition of Turkey (IMCET)*, pp. 221-228

D'Arcy, C. & Siddique, C.M. 1985 'Marital status and psychological well-being: a cross-national comparative analysis' *International Journal of Comparative Sociology*, Vol. 26(3-4), pp. 149-166.

da Costa, Silvana Dunham 2008 'Mineworkers' quality of life in remote communities: a multiple case study in the Brazilian Amazon', PhD Thesis, The University of British Columbia (Vancouver) April.

da Costa, Silvana D., Silva, Ana Carolina & Hui, Vivien 2006 'What are the Opportunities and Challenges for Women in Fly-in-fly-out (FIFO) Mining in Canada? *An Exploratory Study*', Norman B. Keevil Institute of Mining Engineering, University of British Columbia.

Dansereau, Suzanne 2006 'Globalization and Mining Labour: Wages, Skills and Mobility, Minerals & Energy', *Raw Materials Report*, Vol. 21[2], pp. 8-22.

De Cieri, Helen, Holmes, Barbara, Abbott, Jacqui & Pettit, Trisha 2002 'Work-life balance strategies: progress and problems in Australian organizations', *Working Paper 58-02*, Monash University Faculty of Business & Economics, November.

de Vaus, D. & Wolcott, I. 1997 'Australian Family Profiles: social and demographic patterns' paper delivered at AIFS conference, Melbourne.

de Vaus, D., 2004, *Diversity and change in Australian Families: Statistical profiles*, Australian Institute of Family Studies, 2004.

<http://www.aifs.gov.au/institute/pubs/diversity/main.html>

de Vaus, D. 2007 'The Consequences of Divorce for Financial Living Standards in Later Life', Australian Institute of Family Studies at www.aifs.org

Earle, J. 2002 'Family-friendly workplaces: a tale of two sectors', *Family Matters*, Australian Institute of Family Studies, No. 51, Autumn, pp. 12-17.

Frank, Arthur L. 2000 'Injuries Related to Shiftwork', *American Journal of Preventive Medicine*, Vol. 18(4S) pp. 33-36

Gibbs, Leah M. 2003 'Decolonising, Multiplicities and Mining in the Eastern Goldfields, Western Australia', *Australian Geographical Studies*, Vol. 41(1), March, pp.17-28

Gibson, K. 1994 'Researching the 'divorce roster' with women in the coal communities of Central Queensland', in Franklin, M.A. et al (eds), *Country women at the crossroads:*

perspectives on the lives of rural Australian women in the 1990s, Armidale: University of New England Press.

Gibson-Graham, J. K. 1992 'Hewers of Cake and Drawers of Tea: Women, Industrial Restructuring and Class Processes on the Coalfields of Central Queensland', *Rethinking Marxism*, Vol.5 (4), pp. 29-56.

Grosswald, B. 2003 'Shift work and negative work-to-family spillover' *Journal of Sociology and Social Welfare*, Vol. 30(4), pp. 31–56.

Hajkowicz, Stefan A., Heyenga, Sonja, and Moffat, Kieren 2010 'The relationship between mining and socio-economic well being in Australia's regions' *Resources Policy* at http://www.sciencedirect.com/science?_ob=MImg&_imagekey=B6VBM-511KB8N-1-C&_cdi=5930&_user=409397&_pii=S0301420710000486&_origin=search&_coverDate=09%2F16%2F2010&_sk=999999999&view=c&wchp=dGLbVIW-zSkWb&md5=62f04aa86722d7be01bb89dc516ba4de&ie=/sdarticle.pdf

Healey, Justin (ed.) 2009 'Separation and divorce', *Issues in Society*, Vol. 282, at <http://www.spinneypress.com.au/282%20Separation%20and%20Divorce.html>

Heiler, Kathryn, Pickersgill, Richard & Briggs, Chris 2001 'Working time arrangements in the Australian mining industry: Trends and implications with particular reference to occupational health and safety', Sectoral Activities Programme Working Paper 162, 41pp. at <http://www.ilo.org/public/english/dialogue/sector/papers/austrmin/index.htm>

Hewitt, Belinda 2008 'Marriage breakdown in Australia: social correlates, gender and initiator status' Social Policy Research Paper No. 35, University of Queensland, Research Publications Unit, Commonwealth of Australia.

Hossain, J.L., Reinish, L.W., Kayumov, L., Bhuiya, P. & Shapiro, C.M. 2003 'Underlying sleep pathology may cause chronic high fatigue in shift-workers', *Journal of Sleep Research*, Vol. 12, pp. 223-230

Hugo, G. 2001 'Centenary Article—A Century of Population Change in Australia', *Year Book Australia 2001*, Canberra, ACT: Australian Bureau of Statistics.

Iverson, Roderick D. & Maguire, Catherine 2000, 'The relationship between job and life satisfaction: Evidence from a remote mining community', *Human Relations*, Vol. 53[6], pp. 807-839

Kilpatrick, Sue, Vitartas, Peter, Homisan, Martin & Johns, Susan 2010 'The mobile skilled workforce: Optimising benefits for rural communities', Rural Industries Research and Development Corporation at www.rirdc.gov.au.

Linacre, Susan 2007 'Lifetime marriage and divorce trends', *Australian Social Trends*, Australian Bureau of Statistics.

Mandemakers, J.J., Monden, C.W.S. & Kalmijn, M. 2010 'Are the effects of divorce on psychological distress modified by family background?' *Advances in Life Course Research*, Vol. 15 (1), pp. 27-40.

Mann, J., Akbar, D., Greer, L., 2010, Accessibility of Family Services in a central Queensland mining town – A case study of Middlemount, Qld., SEGRA Conference: Regions delivering a big Australia, October 2010.

Mayes, R. & Pini, B. 2008 'Women and Mining in Contemporary Australia: An Exploratory Study' paper presented at TASA conference, University of Melbourne, at <http://www.tasa.org.au/conferences/conferencepapers08/Rural/Mayes,%20Robyn,%20Session%2033%20PDF.pdf>

Mining Industry Skills Centre, 2007, Securing the Critical Capability: Towards an Holistic Skills Strategy for the Mining Industry, accessed 28th July, <http://www.miskillscentre.com.au/media/73933/strategyskills.pdf>

Murray, Georgina & Peetz, David 2007 'Coal rushes: progress report on women miners, miners' women and their communities', Griffith University, Brisbane, Queensland.

Nancarrow, Heather, Lockie, Stewart & Sharma, Sanjay 2008 'Intimate partner abuse of women in the Bowen Basin and Mackay region of Central Queensland: A report submitted to the Criminology Research Council', Australian Institute of Criminology, Australia.

O'Neill, Steve 2004 'Work and family policies as industrial and employment entitlements', Research Paper No. 2 2004–05, Information and Research Services, Parliamentary Library, Canberra. www.aph.gov.au/library/pubs/rp/2004-05/05rp02.pdf

Pattenden, Catherine 1998 'Women in mining: A report to the "Women in Mining" Taskforce', The Australasian Institute of Mining and Metallurgy, November.

Pearce, Andrew 2010 'Cannington Life Extension Project Appendix W: Social Impact Assessment, BHP Billiton Minerals Pty Ltd, June.

Pini, Barbara & Mayes, Robyn 2009 '*Mining Women in the 21st Century*', presentation for the John Curtin Institute of Public Policy, Curtin University of Technology, Western Australia.

Pocock, B., van Wanrooy, B., Strazzari, S & Bridge, K. 2001 *Fifty Families: What Unreasonable Hours Are Doing to Australians, Their Families and Their Communities*. Melbourne: Australian Council of Trade Unions.

Preston, Valerie, Rose, Damaris, Norcliffe, Glen & Holmes, John 2000 'Shift work, childcare and domestic care: divisions of labour in Canadian Paper mill communities', *Gender, Place & Culture*, Vol. 7[1], pp. 5-29.

Scheltens, Melinda & Morris, Yolande 2006 'Homelessness in High Income Mining Towns and the Opportunity for Big Business To Play a Part', Centrelink, 13 pp.

Sharma, Sanjay 2010 'The impact of mining on women: lessons from the coal mining Bowen Basin of Queensland, Australia' *Impact Assessment and Project Appraisal*, Vol. 28(3), September, pp. 201-215.

Sharma, Sanjay and Rees, Susan 2007 'Consideration of the determinants of women's mental health in remote Australian mining towns', *Aust. J. Rural Health* Vol. 15, pp. 1–7

Taylor, Jill Clover & Simmonds, Janette Graetz 2009 'Family Stress and Coping in the Fly-in Fly-out Workforce', *The Australian Community Psychologist*, Vol. 21(2), December, pp. 23-36.

Webster, Pamela S., Orbach, Terri L. & House, James S. 1995 'Effects of Childhood Family Background on Adult Marital Quality and Perceived Stability' *American Journal of Sociology*, Vol. 101 (2), September, pp. 404-432.

Yakovleva, Natalia 2007 'Perspectives on female participation in artisanal and small-scale mining: A case study of Birim North District of Ghana', *Resources Policy* No.32 pp. 29–41.

Acknowledgement:

This research was undertaken as part of the Minerals Futures Research Cluster, a collaborative program between the Australian CSIRO (Commonwealth Scientific Industrial Research Organisation); The University of Queensland; The University of Technology, Sydney; Curtin University of Technology; Central Queensland University; and The Australian National University. The authors gratefully acknowledge the contribution of each partner and the CSIRO Flagship Collaboration Fund. The Minerals Futures Cluster is a part of the Minerals Down Under National Research Flagship.

Assistance from the Australian Bureau of Statistics is greatly appreciated. [Australian Bureau of Statistics, Census of Population and Housing, 1996, 2001, 2006].