

Family Stress and Coping in the Fly-in Fly-out Workforce

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Fly-in fly-out (FIFO) work schedules can present difficulties for families and yet others can thrive despite the constraints and transitions inherent in the lifestyle. This study investigated family system dimensions that perform central roles in family coping. Additionally, the relationship between work and family factors and levels of family functioning and satisfaction were explored. The sample included 63 FIFO workers and partners of FIFO workers who completed scales from selected family assessment inventories. The results provided support for Olsen's Circumplex Model of Family Systems; high family functioning was strongly associated with healthy family cohesion and flexibility, and effective communication. Implications of this research for companies that use FIFO schedules and for counsellors, companies and communities are discussed.

Fly-in fly-out (FIFO) work practices are an integral and growing part of the mining, and oil and gas industries in Australia (The Chamber of Minerals and Energy, 2005). Increasingly, companies transport workers long distances to remote work sites where they work a set number of rostered days and return home for a set number of days (typically 14/7 denotes 14 days on roster in the workplace and 7 days off roster away from the workplace). Workers are consequently away from home and family for block periods on a regular basis, working extended hours often in demanding work conditions and with little flexibility in their roster schedule.

FIFO work schedules inherently involve constraints and recurrent transitions for families (Lewis, Shrimpton, & Storey, 1988) that are different from typical non-FIFO work. There is a common perception in the community that FIFO work schedules place strain on marriages and families, and are a cause of marriage break up. This is supported by research literature reporting that the degree of success in balancing work and family affects marital satisfaction and stability (Frone, Yardley, & Markel, 1997; Kinnunen & Mauno, 1998; Pittman, 1994; Presser, 2000; Saginak & Saginak, 2005) and is made more difficult when working non-standard and inflexible hours (Heiler, Pickersgill, & Briggs, 2000; Presser, 2000; Staines & Peck, 1983;

White & Keith, 1990).

Overseas research on 'long distance commuting' in mining (Storey & Shrimpton, 1989), offshore work in the oil industry (Clark, McCann, Morrice, & Taylor, 1985; Collinson, 1998; Forsyth & Gauthier, 1991; Lewis, Shrimpton et al., 1988; Parkes, Carnell, & Farmer, 2005; Solheim, 1988), and Australian studies on fly-in fly-out employment (Beach, 1999; Gallegos, 2006; Gent, 2004; Reynolds, 2004; Sibbel, 2001) have investigated the impact of work schedules on workers and their families. The authors of an early study (Storey & Shrimpton, 1989) ascertained that generally families accepted the work cycle and were able to cope "... though not without incurring what may often be considerable personal and family costs" (p. 159) and concluded that the opportunities of long distance commuting generally made up for its constraints.

The aim of this research was to examine family qualities that enable FIFO families to function and experience satisfaction in a lifestyle that can present distinct stressors. The Circumplex Model of Couple and Family Systems was chosen for this study as the theoretical framework to investigate family stress and coping because it is a systems-based approach and, through its self-report inventories, made it possible to measure the relationship dimensions of family interactions

deemed essential to coping, these being cohesion, flexibility, and communication.

Impact of FIFO on Family Relationships

FIFO work schedules are described by the rostered number of days “on” and “off” and they vary within and between work places. Some rosters are more family friendly than others (Beach, 1999) depending on length and symmetry (symmetrical such as 14/14 or asymmetrical such as 14/7), nevertheless, the subsequent recurrent absence and presence of the worker impacts on family relationships. In the FIFO lifestyle the worker and his family move back and forth between different lives (Solheim, 1988), that being, their lives apart and lives together. While there would be considerable variation in families’ experiences of FIFO, some experiences appear to be shared.

For the worker, the difference between the culture at work and at home can be significant. Generally the work is physically demanding and in a hazardous environment (Sutherland & Cooper, 1996), routines at the workplace are structured (Parkes et al., 2005), there is little scope for self determination, and social interaction is limited (Solheim, 1988). The worker is often away for family celebrations and significant events in their children’s lives, and managing family problems and sharing in family decision-making is dependent on access to frequent and private means of communication with their partner (Collinson, 1998; Parkes et al., 2005; Reynolds, 2004). They arrive home tired often having come straight off shift and having travelled numerous hours (Collinson, 1998). Although the reunion is eagerly anticipated, it can be marred by unmet expectations (Clark & Taylor, 1988) and subsequent arguments. Reunions and partings have commonly been identified as the most difficult times emotionally for couples and families, and for communication (Gallegos, 2006; Lewis, Shrimpton et al., 1988).

In any couple relationship, there is an expectation by the individual of what their role is in the relationship and of their partner. Role expectations may be embedded in a perception of the type of relationship such as (and not limited

to), the more traditional homemaker/breadwinner (where role is based on gender), or the more contemporary and egalitarian model in which both work. The FIFO lifestyle may cause strain and subsequent change in roles that can be in discord with expectations. In the FIFO workers’ absence, the partner carries most of the responsibility of managing the home and children, maintaining relationships with extended families and friends, and often making independent decisions (Lewis, Porter et al., 1988). Furthermore, the burden of the unequal share of family responsibilities on the partner at home is exacerbated for those who also work outside the home (Taylor, Morrice, Clark, & McCann, 1985). Depending on the type of relationship and role expectations of the couple (Lewis, Porter et al., 1988), the greater independence of wives has been reported to have negative ramifications, such as conflict over authority or distrust (Clark & Taylor, 1988; Collinson, 1998; Solheim, 1988). Alternatively, it has been reported as a positive opportunity for the wives to develop coping abilities, personal confidence and perceptions of themselves as individuals (Parkes et al., 2005; Reynolds, 2004).

Division of labour can be a source of conflict during the home period if couples have not developed an agreed strategy to deal with the sharing out of housework and childcare tasks and responsibilities (Clark et al., 1985; Reynolds, 2004). In this regard, experienced couples develop strategies to manage the positioning and transition of the role of authority and decision making on parental, financial and other issues (Forsyth & Gauthier, 1991; Gallegos, 2006). Until these strategies are developed and mutually accepted, tension in the family is likely. Furthermore, the strategies and related behavioural patterns (rules, routines) may become problematic over time if they are not resilient to changes in circumstances (for example, birth of baby, partner starting or ceasing work, or children growing up and sharing in household tasks).

In summary, a number of relationship

issues emerged from the above review of the literature. These included: the transition by both worker and partner between two different lives, difficulties in couple and family communication, unmet expectations by both partners following reunions, the burden of unequal share of family responsibilities on the partner at home, role conflict as women gain greater independence and personal confidence, and ambivalence partners feel toward the lifestyle. Furthermore, variables that may influence the effect of stressors are indicated by the review and include role expectations, stage of the family life cycle, presence of dependent children, quality of communication in the relationship, the pattern and duration of the workers absences, previous experience with FIFO, and partner's work status.

International research and recent Australian research indicated that couples sampled generally accept and cope with FIFO (Lewis, Shrimpton et al., 1988; Taylor et al., 1985). Commonly cited benefits of the work and lifestyle included high salaries, extended time at home, and families can choose where to live (Pollard, 1990; Storey & Shrimpton, 1989). For some couples time apart helped them to reflect more on their relationship, place relationship difficulties in perspective, and create a better understanding and appreciation for one another (Clark & Taylor, 1988). For some wives their husband's absences brought greater independence, freedom, and sense of competence and ability (Beach, 1999; Clark et al., 1985; Clark & Taylor, 1988; Parkes et al., 2005; Pollard, 1990; Reynolds, 2004). Lastly, the lifestyle enabled improved communication in the relationship because time was set aside for daily telephone calls when the days events were shared (Reynolds, 2004).

Family Systems and Coping with Stress

As one of the foremost approaches in the study of families, Family Systems Theory was used in the present study to describe and understand FIFO families and their ability to cope. Olson's Circumplex Model of Couple and Family Systems is a clinical and theoretical model that offers a systems theory based description of the relationship dimensions, or

qualities, that enable families to respond effectively to change and stress. Healthy families, that is, families that function well, are those that manage stress and change effectively which otherwise would impede the family achieving its goals (whatever those goals may be).

According to the Circumplex Model, the family relational dimensions of cohesion, flexibility, and communication are critical for understanding and treating family systems (Olson & Gorall, 2003). Cohesion is "the emotional bonding that couple and family members have toward one another" (p. 516) and relates to how families balance separateness and togetherness. Extremely low levels of cohesion describe families and couples who are emotionally disconnected or disengaged, and extremely high levels describe families and couples who are overly connected or enmeshed.

Flexibility is "the quality and expression of leadership and organization, role relationships, and relationships rules and negotiations" (Olson & Gorall, 2004, p. 5) and relates to how families balance stability with change. Extremely low levels of flexibility describe families and couples who are inflexible or rigid, and extremely high levels describe families and couples who are overly flexible or chaotic. In this model, extremely low and high levels of cohesion and flexibility are problematic for families over the long term (Olson & Gorall, 2003, p. 518). Therefore, cohesiveness and flexibility of healthy families are balanced, that is they fall around the middle of the continuum.

Levels of cohesion and flexibility of a healthy family adjust in response to (a) predictable stressors related to its transition through the different life stages and (b) in response to unpredictable stressors and crises (Olson & Gorall, 2003; Olson & Lavee, 1989). It is by means of positive communication skills that couples and families are able to change their levels of cohesion and flexibility to deal with stress. Families with poor communication and consistently unhealthy levels of cohesion

and flexibility will tend to be prone to stress and crisis.

The Present Study

The present study sought a measure of the health of FIFO families as defined by their ability to manage stress and change, and to measure their level of family satisfaction. It drew on the Circumplex Model of Couple and Family Systems to test the hypothesis that participants who perceived their families as having good levels of satisfaction also experience healthy levels of cohesion and flexibility, and report good family communication and healthy family functioning. Because of the long periods of separation, which is in itself a barrier to communication, and the acknowledged stressors of FIFO living, it was further hypothesised that FIFO families would have stronger communication skills than the average family. In addition, this study explored the relationship between different family and work factors, with family satisfaction and family functioning. These factors included partner's work circumstances, stage of the family life cycle, roster type, and previous experience of FIFO.

Method

Procedure

Data were collected from FIFO workers and partners of FIFO workers by means of selected family inventories and a Family Information Questionnaire. Self-administered instruments were used in this study because it enabled the collection of information from a potentially large number of people from a population that is spread over a large area. Approval to conduct the research from the Monash University Standing Committee on Ethics in Research Involving Humans (SCERH) was obtained.

To obtain a convenience sample of FIFO employees from across different industries, companies, worksites, and rosters, letters were sent to numerous mining companies and contractors to the mining industry, and an oil and gas company. Following a low response rate from the first stage of recruiting participants, two privately managed accommodation facilities were

approached for assistance. The facilities were located in a northern WA town and used to accommodate FIFO workers mainly on construction jobs at nearby sites.

Measures

The inventories completed by participants included the Family Adaptability and Cohesion Evaluation Scales (FACES IV), the Family Communication Scale and the Family Satisfaction Scale.

FACES IV Scales.

The six FACES IV scales assessed the balanced and unbalanced dimensions of cohesion and flexibility. There were seven items in each of the 6 scales that have a 1-5 Likert response format ranging from "does not describe our family at all" to "very well describes our family". The raw scores of the Balanced Cohesion and Balanced Flexibility scales only (range of possible scores being 7 to 35) were converted into percentage scores; the higher the score the healthier the family.

In addition, this study used an overall measure of the health of family functioning. Olson and his colleagues developed a Total Ratio score to summarise the relative strength and problem areas into one score (Olson & Gorall, 2004). The higher the ratio score, the more balanced the family system, meaning the family has healthier processes which enable and the family to function better. Scores less than one are considered to represent unhealthy functioning and scores greater than one, healthy functioning.

The Family Communication Scale.

The Family Communication Scale (Olson & Barnes, 2004) consisted of 10 items that have a 1-5 Likert response format ranging from "does not describe our family at all" to "very well describes our family". It assessed the degree to which family members feel unconstrained and satisfied with the communication in their family. Categories dependent on a range of scores described the family's level of communication: the family has very good communication (40-50), the family generally has good communication (35-39), the

family has some good aspects in communication but also some areas could improve (25-34), the family needs to talk more with each other about how to improve communication (10-24).

The Family Satisfaction Scale.

The 10-item Family Satisfaction Scale was used to assess how happy family members are with their family system, this being how family members interact with each other. The scale has a 1-5 Likert response format ranging from "Very dissatisfied" to "Extremely satisfied". Categories dependent on a range of scores described the family's level of satisfaction: family members are very happy about their family (40-50), family members are generally happy about their family (35-39), family members are somewhat happy about their family (25-34), family members are unhappy about their family.

The Family Information Questionnaire.

A Family Information Questionnaire was developed in order to gather demographic information about the respondents, and data about work and family factors that may have an influence on the dependent measures. Respondents were asked that for each couple one questionnaire be completed and returned with the response sheet.

Participants

Responses were received from 28 couples (14 male, 14 female) and 7 individual respondents (6 male and 1 female), making a total sample of 63. Demographic characteristics of the sample are presented in Table 1. The sample consisted of 33 workers ranging in age from 26 to 60 ($M = 44$, $SD = 8$) and 27 partners of FIFO workers ranging in age from 24 to 58 ($M = 42$, $SD = 8$). Families had an average of two children, 36 % ($n = 23$) of respondents' families were categorised as early stage with young children, 38% ($n = 24$) as middle stage with teenage children, and 21% ($n = 13$) as long-term relationships with adult children. The most common roster cycles were 14 days on / 7 days off (14/7) and 14 days on / 14 days off (14/14), representing the rosters of 38 % and 33% of the sample respectively.

Results

Analysis

Data analyses were performed using SPSS, Version 14. The Kolmogorov-Smirnov statistic was used to assess the normality of distribution of responses on the dependent variables and to determine the use of parametric or non-parametric tests. The statistical methods used included frequency analysis to measure numbers, percentages, means, and medians of variables in order to describe the sample, Spearman's Rank Order Correlations to examine relations between pairs of continuous variables, the independent-samples t-test for comparing means, and the Kruskal-Wallis analysis of variance to examine the impact of several variables on the family system measures.

It was noted that because of the small group sizes there was the possibility that non-significant results may be due to insignificant power. Therefore there was an increased likelihood of making false negative errors or Type II Errors (Pallant, 2001).

At times the distinction will be made between those variables that are family dimensions or processes (cohesion, flexibility and communication), and effect variables (family satisfaction and family functioning). The family dimensions tested in the present study are considered internal family resources essential for coping, while the effect variables will be used to assess the level of family coping.

Screening the Data

Before starting data analysis, the demographic data and test scores were examined for errors, fit between their distributions and the assumptions of univariate and multivariate analyses, and outliers. The Kolmogorov-Smirnov (K-S) statistic was used to assess the normality of distribution of the dependent variables (Pallant, 2001). Violation of the assumption of normality was suggested by this statistic (based on a significance value of .05) for the Balanced Cohesion, Balanced Flexibility, and Family Communication Scores. Based on the K-S

Table 1.
Demographic Characteristics of the Sample

| Factor | <i>n</i> | % |
|----------------------------|----------|----|
| <i>Gender / role</i> | | |
| Male Worker | 32 | 51 |
| Female Worker | 1 | 1 |
| Female Partner | 30 | 48 |
| <i>Family stage</i> | | |
| Early – young children | 23 | 36 |
| Middle – teenage children | 24 | 38 |
| Long-term – adult children | 13 | 21 |
| <i>Employment</i> | | |
| Worker | | |
| Manager | 3 | 9 |
| Supervisor | 11 | 34 |
| Technician | 3 | 9 |
| Machine/plant operator | 3 | 9 |
| Trade | 8 | 25 |
| Vehicle/crane driver | 3 | 9 |
| Office based | 1 | 3 |
| Partner | | |
| At home | 8 | 27 |
| Part time employment | 11 | 37 |
| Full time employment | 10 | 33 |
| FIFO employment | 1 | 3 |
| <i>Education</i> | | |
| Worker | | |
| Some high school | 5 | 15 |
| High school certificate | 10 | 30 |
| TAFE qualification | 13 | 39 |
| University degree | 5 | 15 |
| Partner | | |
| Some high school | 6 | 20 |
| High school certificate | 11 | 37 |
| TAFE qualification | 7 | 23 |
| University degree | 4 | 13 |
| Higher degree | 1 | 3 |
| <i>Income level</i> | | |
| \$50-70,000 | 3 | 5 |
| \$70-100,000 | 14 | 22 |
| \$100-120,000 | 16 | 25 |
| >\$120,000 | 29 | 46 |

Table 1. (cont'd)
Demographic Characteristics of the Sample

| Factor | <i>n</i> | % |
|---------------------------------|----------|----|
| <i>Roster type</i> | | |
| 35/7 | 6 | 10 |
| 28/14 | 2 | 3 |
| 21/9 | 2 | 3 |
| 14/14 | 24 | 38 |
| 14/7 | 20 | 32 |
| 9/5 | 5 | 8 |
| 5/2 | 1 | 2 |
| 8/6 | 2 | 3 |
| <i>FIFO workplace</i> | | |
| Offshore | 26 | 41 |
| Land based mine | 26 | 41 |
| Construction | 11 | 11 |
| <i>Previous FIFO experience</i> | | |
| <1 year | 3 | 5 |
| 1-5 years | 27 | 43 |
| 6-10 years | 11 | 17 |
| >10 years | 21 | 33 |

Note. Missing data omitted

results, and small and often uneven sample sizes, it was decided that non-parametric tests be used when analysing the data.

Describing FIFO Families

The means and standard deviations of the respondents' scores on the different measures are listed in Table 2. On average, the workers and partners were generally happy with how members of their family related to each other and described their families as having very good communication, healthy functioning, and very good levels of cohesion and flexibility.

The distribution of scores on the Balanced Cohesion and Balanced Flexibility Scales were not normal making the median a more meaningful measure of central tendency. The median score on the Balanced Cohesion Scale ($Mdn = 67$) denoted a high level of healthy cohesion and similarly the median score on the Balanced Flexibility Scale ($Mdn = 65$) denoted a

high level of healthy flexibility. The mean of the Total Ratio Score ($M = 1.3$) indicated the respondents in the sample perceived their family as having healthy functioning. The average score on the Family Satisfaction Scale ($M = 37$) places families in his study in the category 'generally happy'. Similarly, respondents on average reported their family communication as 'very good' ($M = 40$). An independent t-test between the mean scores for the present sample and that of the test norm found the difference to be very significant $t(1314) = 3.95, p < .00$.

Association between Variables – Support for the Circumplex Model

Spearman's Rank Order correlation coefficients were calculated to explore the relationship between scores on the Balanced Cohesion, Balanced Flexibility, Family Satisfaction, Family Communication Scales,

Table 2.
Means and Standard Deviations of FIFO Respondents on Dependent Variables

| Measure | <i>N</i> | <i>M</i> | <i>Mdn</i> | <i>SD</i> |
|----------------------------------|----------|------------|------------|-----------|
| Balanced Cohesion | 63 | 61.49 | 67.00 | 23.82 |
| Balanced Flexibility | 63 | 56.60 | 65.00 | 28.82 |
| Family Satisfaction Scale | 63 | 37.19 (33) | | 5.63 (9) |
| Family Communication Scale | 63 | 39.68 (31) | | 5.73 (9) |
| Total Ratio (family functioning) | 63 | 1.26 (1.2) | | .68 (1.1) |

Note. Figures in parentheses are the reported means and standard deviations based on norm studies (Olson, Gorall, & Tiesel, 2004). NSS = Family Satisfaction Scale; NCS = Family Communication Scale.

and the Total Ratio Scale measuring family functioning (see Table 3). As predicted by the Circumplex Model, the results suggested all variables were significantly positively correlated; six coefficients were strong, and four were moderate.

The Effect of Role on Perception of Family Satisfaction

An independent *t*-test was conducted on the mean Family Satisfaction Scores for workers as a group and partners as a group, with no significant

difference found $t(61) = -1.13, p = .26$. On average, FIFO workers and partners of FIFO workers in this sample had similar perceptions of family satisfaction. Is there a significant difference within individual couples on their perceptions of family satisfaction? A paired-samples *t*-test was used to examine this but again, there were no significant differences in the scores of workers and their partners $t(27) = 1.14, p = .26$. The result indicated that there is agreement between workers and their partners

Table 3.
Spearman's Rank Order Intercorrelations of Family System Dimensions, Family Satisfaction, and Family Functioning

| | Balanced Flexibility | Balanced Cohesion | Family Satisfaction | Family Comm. | Total Ratio |
|----------------------|----------------------|-------------------|---------------------|--------------|-------------|
| Balanced Flexibility | 1 | | | | |
| Balanced Cohesion | .54 ** | 1 | | | |
| Family Satisfaction | .45 ** | .58 ** | 1 | | |
| Family Communication | .62 ** | .74 ** | .73 ** | 1 | |
| Total Ratio Score | .76 ** | .79 ** | .59 ** | .69 ** | 1 |

Note. ** Correlation is significant at the 0.01 level (2-tailed) and $N = 54$.

on their perceptions of family satisfaction.

Work and Family Factors

A series of analyses were conducted to examine the relationship between respondents' scores on the dimension scales and effect measures, and a number of work and family factors. The analyses produced no statistical evidence to confirm that partner employment, family stage, roster type, or previous experience alone influences family stress and coping. Rather than signifying that these factors had no effect it is reiterated that due to the small group sizes the results were likely due to insignificant statistical power and therefore may have reflected Type II Errors.

Discussion

Literature and previous research on the topic of FIFO repeatedly refers to the concepts of change, transition, adjustment, and adaptability (Clark & Taylor, 1988; Collinson, 1998; Gallegos, 2006; Lewis, Porter et al., 1988; Lewis, Shrimpton et al., 1988; Parkes et al., 2005; Reynolds, 2004; Solheim, 1988). While all families face situational and developmental changes that require adjustments to the way they function and how their members interrelate, there is justification for believing the FIFO lifestyle demands more of families in this respect. Change is stressful for FIFO families who must find ways to respond and survive in the lifestyle.

This study has added to our understanding of stress and coping in FIFO families. First, the data provided a description, or profile, of the health of the family systems of the sampled population. Second, the results supported the hypotheses of the Circumplex Model of Couple and Family Functioning, which then permitted predictions regarding family functioning and more specifically coping in a FIFO lifestyle.

Profile of FIFO Family Systems

The profile of the average FIFO family in the present sample was a relatively healthy one. It had moderately high levels of Balanced Cohesion, which means it successfully balances separateness and togetherness. It also had moderately high levels of Balanced Flexibility, which indicated its members can readily adjust

their roles, and the system can adjust its rules and routines in response to changes; that is, it can successfully balance stability and change. Because of the strengths and protective qualities related to healthy cohesion and flexibility, it is suggested the average FIFO family generally functions effectively. Communication is a major strength of the FIFO family and workers and their partners are satisfied with the way family members relate to each other.

Family Coping

Coping, in the present study, was defined by healthy family functioning and reports of being 'generally' or 'very' satisfied with the family. Findings indicated that for the present sample, family functioning was strongly associated with healthy flexibility, healthy cohesion, and effective family communication. Family satisfaction is strongly associated with effective communication and moderately associated with healthy cohesion and health flexibility. These intercorrelations supported the Circumplex Model of Couple and Family Functioning.

The relationship between the family dimensions and effect measures facilitates predictions about family coping. Family cohesion enables family members to exchange social and emotional support, and flexibility allows family members to assume other's roles and cover for each other. Healthy families will adjust the intensity of their cohesion and degree of flexibility in response to stressors (dysfunctional families cannot adjust their family processes and are less able to cope with stressors, usually moving from one crisis to the next). To do this, families depend on effective family communication, for example, empathic listening, clear messages, supportive statements, and effective problem solving (Segrin & Flora, 2005). Families with healthy family dynamics, as just described, will cope better with developmental and situational changes that inevitably come their way, and continue to function effectively (Olson & Gorall, 2003). Members of such families feel happy or satisfied with their family system (Olson & Wilson,

1982).

In the same way that functional and satisfied families score high on the family dimensions, families that do not cope will have problematic levels of cohesion, flexibility or less effective communication skills.

Communication

It was hypothesised that FIFO families require better than average communication in order to successfully deal with the many adjustments inherent in the recurrent presence and absence of one of its members. The present findings supported this. First, a strong correlation was found in the present sample, between communication and the other family system variables. Second, the mean score for the family communication measure in this study was 40 out of the possible maximum score of 50, being significantly higher than the norm for the test (American, non clinical population).

Parkes et al. (2005) suggested that improvement in access to timely and private telephone contact between couples during the at-work period has made a great difference for couples since the early studies of the 1980s. In particular, timely and private telephone contact helps to maintain continuity of relationships and thereby family connectedness, and makes shared decision-making possible. To extrapolate, for families already struggling with family relationship issues, the lack of access to convenient and private telecommunication is very likely to aggravate problems.

Roles

Discrepancy between workers and partners perceptions of family satisfaction was investigated in the present study as a possible marker of the impact of FIFO rosters on families. Several early studies suggested that although husbands and partners mutually consider the benefits and costs of the lifestyle and the decision to continue working in the industry, the impact is felt more by partners with the burden of increased responsibilities and bulk of adjustments falling on them (Beach, 1999; Lewis, Shrimpton et al., 1988; Pollard, 1990). Other studies suggested that the greater sense of independence

felt by women resulting from husbands working away, did not fit with traditional role expectations with traditional homemaker/breadwinner type relationships being best suited to offshore work (Clark & Taylor, 1988; Lewis, Shrimpton et al., 1988; Solheim, 1988)

Contrary to the findings above, results from the present study indicated that both workers and their partners agreed on the perception of family satisfaction. The period since the research of the 1980s has seen a change in the role and expectations of women in the family and could be a factor in explaining the results. Other contemporary research (Parkes et al., 2005; Reynolds, 2004) maintains that for women, the opportunity for increased independence was a benefit not a strain on their relationships and suited the more egalitarian relationships of the current times. Regarding the burden of responsibilities and adjustment, "Most spouses appeared to have adapted relatively favourably to the demands and challenges of having a partner working offshore" (Parkes et al., 2005, p. 432). Not limited to recent studies, (Clark & Taylor, 1988) observed that for many partners the advantages of the lifestyle outweighed the costs for them and the family.

Influence of Family and Work Factors on Family Coping

The present study explored partner employment, family life stage, roster type and previous FIFO experience and their interactions as possible influences on family functioning and satisfaction. Results were statistically non-significant and likely due to small group sizes (reflecting Type II Errors). Nevertheless, patterns in the direction of the results support further investigation.

Theoretical Predictions

Based on the findings of the present study and the theoretical hypotheses of the Circumplex Model (Olson & Gorall, 2003), it is possible to make the following predictions. Firstly, families will modify their levels of

cohesion and/or flexibility in order to deal with stress, and to successfully respond to situational change (transitions of FIFO living) and family life stage changes. Secondly, positive communication will enable families to make possible and maintain healthy (balanced) levels of cohesion and flexibility.

Implications for Counsellors, Companies and Communities

Better understanding of the impacts of a FIFO lifestyle on families can assist families considering and those already engaged in FIFO, counsellors working with families, the companies employing FIFO workforces and the communities in which they live.

Families having trouble coping with FIFO work schedules may benefit from Relationship Counselling to assist them to manage change and stress. The Circumplex Model, used in this study, is one such therapeutic approach that works with families to make changes to the way they interact with each other and the outside environment, and to move from problematic levels of cohesion and flexibility toward healthier levels, and improving communication skills of couples and families to facilitate change.

Implications for companies are firstly, the importance of access to private and timely communication for the worker at the workplace. Means of communication is not limited to telephone but includes internet-based communication (such as email and social networking platforms). Secondly, companies are encouraged to promote and provide easy access to employer funded supports such as family counselling. Thirdly, companies are well placed to make available information to workers and their families that promotes understanding of the issues and strategies to deal with them, and support services available within and outside the company. Although not demonstrated in this study, it would be prudent for companies to be mindful of the existing evidence suggesting the impact of roster types on family coping and consequently, workforce turnover (Beach, 1999; Beach et al., 2003).

Community support organisations are often

the first place families look to for assistance outside the family when having coping difficulties. Communities play an increasingly important and effective role in assisting families and mindful of the specific needs of FIFO families, of significance is the provision of parenting education and support services, child care, and relationship counselling. It is encouraging that non-government organisations working with families such as Ngala and Meerilinga in Western Australia support and participate in FIFO research, produce resources for FIFO families and provide parenting and professional workshops informed by FIFO research.

Limitations of the Study

The study had a number of limitations: the sample size and its representativeness, and lack of Australian test norms or control group. The 61 respondents to the questionnaire represented a small sample, therefore, caution must be used when generalising the findings to the larger population. The sample size affected the extent of the statistical analysis (violations of test assumptions) and conclusions that could be drawn related to moderating work and family factors.

While a review of demographic factors demonstrated a good cross section of FIFO workers and partners, there were reservations about its representativeness. The very low response rate may indicate the influence of a response bias based on the motivation of people to read and complete the questionnaire. One possibility for this came from a human resources superintendent at a large mine, "... the questionnaire looks quite complicated for some of our mining personnel. I am not sure how well received it will be. ... they may see it as too difficult for them." In view of the generally favourable scores on the dependent variables, it is possible that people who respond positively to the FIFO lifestyle were more willing to complete the questionnaire. In both cases, difficulty of the questionnaire and willingness to complete the questionnaire, the sample may have excluded relevant sections of

the population of FIFO families.

The research did not have a comparison group, either in the form of a non-FIFO control group or Australian norms for the scales. The decision not to have a control group was made because of the difficulty in controlling for extraneous variables, and accessing a reasonable sized ex-FIFO sample for comparison was too difficult for the scope of this study.

Consequently, the study could not draw conclusion based on comparison with a non-FIFO population. The choice of instrument, despite not having Australian norms, was made because it was Systems Theory based and the most relevant tool found that met the requirements of this study.

Future Directions

The number of people employed in FIFO workforces in Australia is anticipated to continue to increase with the growth of projects in the resources industry located away from major population centres. Accordingly, more families will be enjoying the benefits and managing the stressors that come with the lifestyle. Expanding on the research to date and the understanding of the impact of FIFO on families will assist in providing informed, adequate and appropriate support to families.

Limitations of this study highlight two possibilities for further attention. The workers and partners in the present sample were survivors of the FIFO lifestyle, as are their families. While their responses assist in the understanding of FIFO families it is important to proceed to compare FIFO survivors with families of workers that have left FIFO work. To this end, data obtained through exit interviews of FIFO workers would provide the valuable comparison. As noted above, the difficulty in achieving a good response rate for this study impacted on the conclusions that could be drawn in respect to the factors that may moderate coping (partner employment, family life stage, roster length and symmetry and previous FIFO experience). Further exploration of such variables with a larger sample is an area for future study in further understanding family stress and coping with the

FIFO lifestyle.

Conclusion

The present study was an addition to the catalogue of research articles investigating family systems using Olson's conceptual model of family functioning and the FACES IV instrument. It was exploratory, however, in its investigation of fly-in fly-out family systems. Its aim was to measure, describe, and make predictions about the internal systems resources that enable FIFO families to successfully cope with the unique stressors and recurrent transitions of FIFO living.

The profile of the sampled FIFO families was a relatively healthy one, that is a family with healthy cohesion (balancing separateness and togetherness) and flexibility (balancing stability and change), sustained by strong communication skills. While this positive description of the FIFO family is likely influenced by the limitations of the study, the results of the study clearly support its theoretical predictions related to family coping.

The relevance of this research for relationship counsellors is in providing support for a family systems model of stress and coping, a framework for clinical assessment and practice, and implications for how this might be applied to FIFO families. Recommendations for companies employing FIFO workforces were made and the role for communities in the support and service provision for FIFO families was highlighted.

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