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## Original Research

### Coping and resilience in farming families affected by drought

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#### ABSTRACT

**Objectives:** The present study was a qualitative investigation of the impact of drought on rural families of southern New South Wales, Australia, with particular emphasis on the concept of resilience in times of stress. The aim was to provide insight, from a psychological perspective, into the experiences of rural farmers in a time of adversity, and to identify the coping resources utilized by these farming families.

**Method:** Participants were 11 members of five families from Blighty, a small farming town in the Riverina district, experiencing drought and decreased water allocation to their local area. Family members were interviewed on two separate occasions at their farms.

**Results:** Analysis of interview transcripts revealed that a wide range of coping strategies were being utilized by these families from problem-focussed coping, optimism and positive appraisal to less adaptive strategies such as cognitive dissonance, denial and avoidance of negative social influences. A significant finding was the discovery of a range of collective coping strategies used by the families in this study and the reliance on social capital as an adaptive resource. There were signs, however, that social cohesion of this community had become compromised due to competition for resources.

**Conclusion:** The adaptive coping mechanisms traditionally employed by these farming families are starting to weaken and urgent work to enhance the individual coping strategies of farmers is needed. Furthermore, Government needs to recognise the importance of social capital as a coping resource that will enable farming families to adapt and survive drought conditions into the future. Providing financial assistance to support current community initiatives and collective coping strategies may prove more beneficial to farmers than allocating inadequate amounts of funding to individual farming families.

**Key words:** coping, drought, farming families, mental health, resilience.

#### ARTICLE

##### Introduction

Drought is defined by the Australian Bureau of Meteorology as acute water shortage, and is classified on two levels: serious and severe. Serious drought refers to total rainfall of no more than 5% and 10% of the same period in the previous year, while severe rainfall refers to rainfall below 5% of the same period

in the previous year. Water catchments in eastern Australia have been seriously affected by the lack of rain and presence of above average temperatures in recent years. Significant rainfall will be required to overcome the effect of the acute lack of rain in eastern Australia and return the lives of both rural and metropolitan areas to normal<sup>1</sup>.

Farming families are under increasing pressure due to the impact of the drought on farm sustainability. It is important to understand that for many farmers, a farm exists as an income, a lifestyle, and a home; however, often the only training farmers have relates to efficiently and effectively running a farm<sup>2</sup>. There is also a low level of further education in rural farming communities, a trend that creates barriers for children and adolescents in rural areas seeking work outside the farm<sup>2</sup>. Because farms are often passed down through generations and are the legacy left for future generations, the prospect of losing a farm creates a great deal of stress for all members of farming families<sup>1</sup>.

### ***Family stress, coping and resilience***

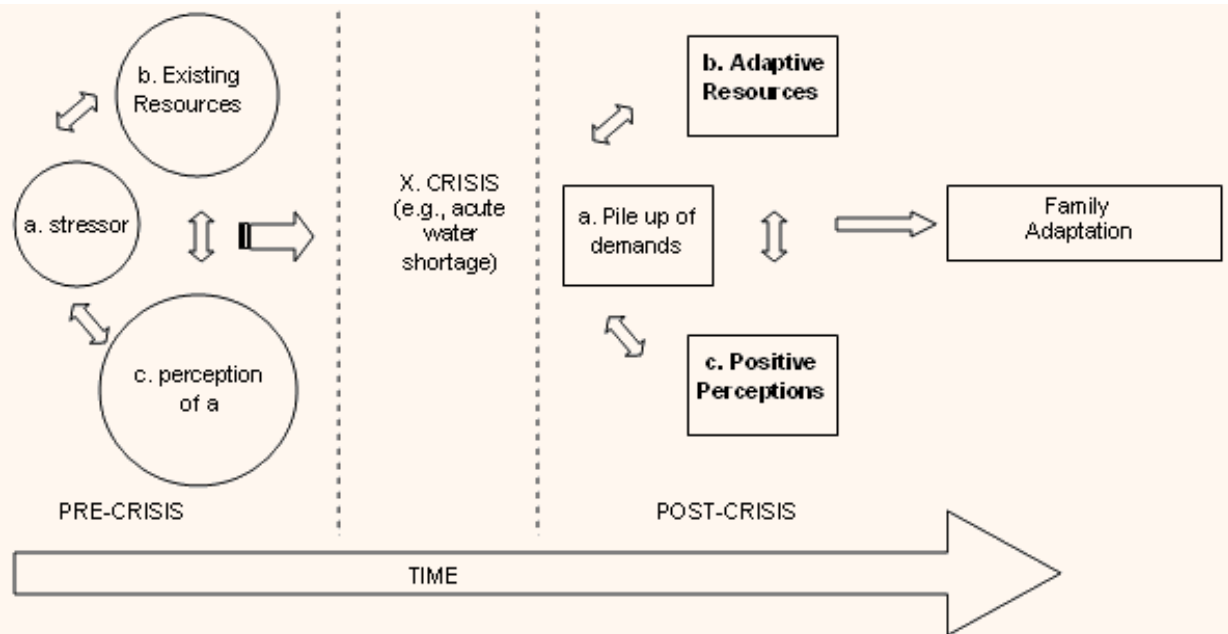
The difference between coping and catastrophe begins with a person's perception of the stressful event as well as a person's perceived capacity to cope with the event. Successful coping is then linked to adaptation, whereby a person successfully adopts alternative thoughts and behaviour which provide them with the competence to overcome the stressor<sup>3,4</sup>. Catastrophe is created when a person feels unable to cope with a stressor and acts in a way that is detrimental to their situation, that is, maladaptive.

Personal characteristics such as modesty, humility, honesty and psychological strength are linked with a person's ability to adjust to adversity and also prosper long term<sup>5</sup>. Adopting constructive coping strategies in a place where work and home life cannot be separated is vital in ensuring a good balance between work and home life. This was discussed by Leipert and Reutter<sup>3</sup>, who suggested that in isolated settings, attributes such as positivism, self-reliance, developing resources in the local area, education, information and seeking social support greatly contribute to more adaptive coping among residents. External resources such as friends and extended family increase the resources already available to rural families. Several researchers have suggested that rural populations are more reliant on community values, collective coping mechanisms and social cohesion when dealing with stress, compared with metropolitan populations who rely more heavily on individualistic values and coping mechanisms<sup>6</sup>.

### ***The double ABCX model of family crisis***

The 'double ABCX model of family crisis'<sup>7-9</sup> suggests that the experience of family stress is impacted by many factors. When a build up of stressors puts pressure on the resources available to a family, the resources available are then tested. The family's ability to cope with the stressor relates to the type and quantity of stress as well as the resources available. Coping is then influenced by the appraisal of the stressing event and the demands placed on the family<sup>10</sup>. Adequate resources and optimistic appraisal then lead to adaptation of behaviour and increased coping mechanisms. Alternatively, if resources are inadequate and the appraisal of the stressor is pessimistic, this leaves the family unable to cope with demands created by the stressor<sup>11</sup>. The level of stress compared with resources available can also predict adaptation in families faced with adverse conditions<sup>12</sup>.

The double ABCX model is a useful means of conceptualising the interaction between stressors, resources, and event appraisal and the way these relate to family stress and coping in time of crisis (Fig1). The double ABCX model describes the outcome of a crisis based on the preceding factors, including family stressors (Fig1 - a). It is rare for a family to be affected by one stressor alone; therefore, the build up of stressors, and the type of stressors (eg financial stress), contribute to the impact of a crisis on a family<sup>13</sup>. Family resources (Fig1 - b) also contribute to the outcome of a crisis. Resources may include social support, financial support, emotional and physical wellbeing of family members, previous experiences, interpersonal resources, cognitive abilities and the resources of the family as a group. Each family member contributes resources that may assist in the final outcome of stressors<sup>12</sup>. Family perception of the stressor is also significant. This refers to the meaning given to a particular stressor or event by the family (Fig1 - c).



**Figure 1: Depiction of the interplay between demands, resources, and perceptions highlighting the central role of adaptive resources and positive perceptions to the possible outcome, adapted from McCubbin and Patterson (1983)<sup>13</sup>.**

### ***Rationale for present study***

The psychological pressure that drought creates for farming families is an area that has received very little research attention. Psychosocial intervention has been required to assist rural farming families in dealing with the adverse conditions created by the current drought, yet there is a paucity of research to inform these efforts. The present study aims to contribute to the area by examining the impact of the current drought on farming families in rural New South Wales. Of particular interest are coping mechanisms and resilience factors within and between family members and their rural community in this time of adversity.

### **Method**

#### ***Participants***

Participants were 11 members of five farming families from Blighty, a small farming town in the Riverina district, rural New South Wales, ranging in age from 15 to 60 years, whose water access had been affected by drought. Participants were purposively selected using a snowballing technique, based on the high impact of the drought and lack of water allocation on their particular rural area.

#### ***Procedure***

Prior to contacting participants, ethics approval was obtained from the University of Ballarat's Human Research Ethics Committee. Participants were invited, via phone contact, to participate. Families were interviewed on two separate occasions at the family home for approximately 1 hour regarding their experiences of the drought. Interview questions related to how the drought had impacted on them as a family and their community as well as the coping mechanisms employed in response to the stress they were experiencing.

Interviews were recorded on a digital recording device and later transcribed by the first author. Interviews were de-identified during the transcription process and then analysed by the first author using interpretive phenomenological analysis – in accordance with the procedures outlined by Jonathon Smith<sup>14</sup>. The first step in this procedure involves choosing the first case, usually the most detailed, and reading it several times. Initial impressions regarding the first case are noted in the transcript margin. This process continues 'within' cases. These first insights are re-examined in peer debriefing sessions and given preliminary thematic labels by the principal researcher. Themes are listed and organized into clusters to reflect connections between categories. Once clustering of themes has occurred, superordinate labels are assigned to each cluster. The analysis then proceeds from the initial thematic structure to an analysis 'across' cases. As new themes emerge, the superordinate thematic structure is refined. In this study, coding decisions were also cross-examined by the second author and the thematic structure was reviewed by members of the Rural Adolescent Mental Health Group at the University of Ballarat to enhance the rigor of the analysis.

### **Results**

As a result of the thematic analysis undertaken, three master themes were identified corresponding to three broad domains of coping: (i) problem-focused coping; (ii) psychological coping strategies (individual); and (iii) collective coping strategies. The results are reported corresponding to each thematic label. Each theme is accompanied by a thematic description as well as selected quotes that capture the essence of the theme.

### **Master theme 1: problem-focused coping**

**Theme: planning ahead for future generations:** The passing down of farms through generations was thought by participants to have been negatively impacted by the drought. The sustainability of farms in terms of a lifestyle choice was questioned, and the expectations of parents were low. Parents coped with this challenge by encouraging their offspring to leave the farm to gain new skills.

*The only thing I think may have changed is say 10-20 years ago if there were sons and they wanted to stay on the farm, they would have done their schooling and then stayed on the farm. Where as now, the parents are pushing them to go to uni. To experience something different or learn another trade 'cause they can see maybe farming isn't a long term thing for them so it gives them something else to learn.*

**Theme: expansion and diversification:** In order to maintain a stable, adequate income, participants were purchasing more land. This contributed to income through creating the option to grow more crops or purchase more cattle, and also increased the number of water rights owned by families. The ability to be diverse in farm practices was a real asset to participants. Those able to diversify were able to turn to the most profitable product of the moment, therefore creating more income and enabling families to purchase larger farms and sustain their lifestyle.

*People aren't coming to the district because people who have been here a long, long time and six sons or something are buying extra farms so there are less people.*

*We've got wheat, seed canola, mainly cereal, hay, lucerne, fat lambs, just a bit of everything all bar cattle, dairy cattle and beef cattle we don't do. And we've probably found that over the last 5 years because we are diverse and we can piggy back on things that are going well at the time like fat lambs, its probably carried us through a little bit better than other people that rely on the one thing. Once the water's knocked on the head they're not set up to do anything else, whereas we've been set up to do bits of different things and fat lambs are going well then we can up our production of those and its just jumping on the back of anything that's doing well, so its helped us through financially.*

### **Master theme 2: psychological coping strategies (individual)**

Participants utilised a number of psychological coping strategies to get through day-to-day living. The ability to stay positive was a key theme for all participants who considered themselves to be coping well in general, despite their financial and external stressors.

**Theme: perspective:** Positive appraisals contributed to feeling able to cope in the current situation. Perspective also contributed to participants' sense of responsibility to farms being passed down through generations.

*We said that last time how it put the drought in perspective. Everything was so bad and then you think we might not be here tomorrow, you think, we've got our health, that's all that matters. You think of the drought and losing everything, you think its only money, although having said that a lot of farmers I know, it's about their sense of identity, if you can't be successful at farming then you are basically failed as a person. I know a lot of people traditionally would feel that way because it's who they are.*

**Theme: optimism:** Theme: optimism: Optimism was a major theme for many participants. This coping mechanism was utilised to deal with financial stress as well as the impact of the drought on general daily life.

*Yeah, I mean you could worry yourself sick about how you're going to be bankrupt in 12 months - how bad can it really be?*

*You still got to have a level of optimism, I guess we wouldn't be here if we didn't and that's all it is, and it gets back to that about being positive and about saying we'll ride it through and I guess its just, you just got to be positive.*

**Theme: perceived vigour:** Age was a significant factor contributing to participants' sense of coping. Age also contributed to decisions made about staying on the farm and continuing through the drought or starting afresh and leaving farming.

*It's too late for me, if I was 46 I could change but not now, I'm too old to change. I can't use a computer, I could if I wanted to probably but ... I've got more things to achieve here 'cause this is a family farm and I bought it off the family.*

**Theme: comparative methods:** Participants suggested that comparing their situation with those worse off had a positive effect on their ability to cope. This method was used by participants when faced with financial pressures, or when they were feeling overcome by their current situation.

*And especially if you have that view in life that there are always people worse off than yourself and I think to have a bit of that optimistic outlook I think.*

*When you talk about stress, I stress a little bit less when you think of other people like dairy farmers who have to buy in heaps of fodder and that because usually they are cutting sides and its just not there and that's pretty enormous and there are a lot of them around here. There is always someone worse than you.*

**Theme: cognitive dissonance and denial:** Not acknowledging their current situation, and staying positive when there was evidence to the contrary, was a key theme that emerged from participants' accounts. Participants explicitly acknowledged that staying positive was 'a must' and that negativity was not acceptable to a lot of farmers.

*I don't think anyone likes to acknowledge that they might have a problem perhaps.*

*So [name] said you can't sit in the corner. I said, oh, that's a bit harsh...well its true...and it absolutely is.*

*Positive, stay positive.*

### **Master theme 3: collective coping strategies**

Participants' strong sense of family and community as well as participation in community events contributed to their capacity to deal with the drought; however, an emerging division within the community between the 'positive thinkers' and the 'negative thinkers' was also noted.

**Theme: support from partners and children:** Support from partners and children assured participants that they were not experiencing things alone; a strong marital relationship was considered to be an important contributor to the current health of all family members in the face of adversity.

*Yeah a little bit of pocket money. And the kids were a little younger and when they're younger they're not so huge to feed but I don't think it's affected our relationship and it probably makes us a bit stronger and we bond together and think we'll get through it; we'll see the end of it and reap the rewards again.*

*It's easier to face something if you're not facing it alone I suppose. We still make our jokes about moving to Queensland bankrupt; at least we'll all be together, living on the dole.*

*Oh yeah, I can have the shittiest day and when I come home there is nothing better than when your kids wrap you up. I've always said that ever since they were little, you can come home and have the worst day and soon as you open the door it doesn't matter, it's all gone. 'Till the next morning or late at night you might be thinking about it but for the immediate time, it's good.*

**Theme: community as a resource:** Community events and the shared environment of farmers provided participants with a sense of belonging to a larger group, decreasing their sense of isolation and increasing their ability to cope. Acknowledging that others were experiencing the same hardships and financial pressures allowed farmers to feel less stressed and more supported.

*I suppose there is a lot of support things around like the footy club and if you make an*

*effort to go and be a part of those sort of clubs that all helps 'cause even you know [he] was saying at football training it was amazing, the amount of blokes that would come down, stand around and have a beer together.*

*If I was to wake up tomorrow and I didn't want to get out of bed and I went into that psychological thing there would be six guys here by 10 am and then [name] would only have to ring two or three for there to be six or 10, and by that night there would be 20.*

**Theme: history in the area:** Participants suggested that having grown up in the area increased the support networks available to them and increased their sense of community. This contributed to their ability to cope. Knowledge that previous droughts and hardships had been experienced by earlier generations was a protective factor for long-term residents.

*People who have grown up here probably have more contacts, so they have family around them and might be a broader base of friends to someone who has moved here 2 years ago.*

**Theme: social debriefing:** A major place for debriefing was the local pub (hotel), and going there allowed locals to relax, unwind and discuss their experiences in a non-judgmental environment with individuals experiencing the same circumstances. Local sports clubs also provided an outlet and time away from the farm, allowing participants to discuss their situations and difficulties.

*No rain yes, but everyone is in the same situation in different ways but it's come through that having people around you that you can lean on has been a good thing.*

**Theme: community acts of caring:** Indirect support from unlikely individuals has also provided participants with an outlet for their stress. The support demonstrated by professional contacts contributed to a greater sense of coping for participants.

*And I guess you go to town and you see your bank manager and that and a few people have said to me the bank managers say 'You're not drinking are you?' and we say 'No, no' (just a slab every night). The bank managers actually ask their clients and make sure they haven't turned to alcohol and things like that for sanity.*

**Theme: avoidance of negative social influences:** Participants explicitly stated that avoiding negativity was one way they avoided feeling stressed. Surrounding themselves with positive friends and excluding farmers who were perceived to be 'negative' was a strategy for some farmers.

*Yeah not really, I know that if you do speak to someone we tend not to mix so much with negative people. And if you are talking to someone who is negative you think 'I don't want to go there'. It doesn't do you any good at all.*

**Theme: erosion of community spirit:** With the increasing impact of the drought on financial stability, participants identified a shift from sharing farming experience and solutions freely with one another to a more conservative approach that protected the coping mechanisms and resources of individuals, rather than the community.

*We said earlier people haven't pulled together as such but we'll clarify that. The first drought if people knew there was hay somewhere at a bulk amount they'd really try to help you out but this year its not 'dog eat dog' but if someone hears of hay they'd be a bit quiet about it and get in and get it first and then if there's any left, you ring a mate.*

## Discussion

The present study highlights the issues faced by families in rural areas affected by drought and the strategies and resources that have enabled them to cope. Several examples of problem-focused coping and planning were noted. Individual coping mechanisms used included optimism and perceived vigor, with younger participants suggesting they felt more able to cope due to their higher levels of energy as well as a perceived ability to change careers without loss of 'identity'. Participants also coped by comparing their situations favourably with farmers in more desperate conditions. Collective sources of support were key for participants, allowing them to feel supported and understood in their current situation. In many cases this was linked to having been in the area for a long time.

Consistent with theoretical models of family adaptation<sup>13</sup> and previous research on the importance of positive appraisal as a coping mechanism<sup>3,4</sup>, participants dealt with the impact of the drought by exploring what was positive in their situations. A comparison between losing a farm and losing their family helped participants to remain positive about the support they were receiving from family, and positive about the prospect that they may lose the farm. Participants suggested that although they were suffering from financial hardship, family and health were their most important assets. However, it was also evident from the interviews that the use of cognitive dissonance and denial to deal with the drought had become a strategy. In terms of coping and resilience, cognitive dissonance is thought to produce negative affect, which may interfere with more adaptive coping behavior<sup>15</sup>. Furthermore, denial is likely to have a negative long-term impact on the family by creating resistance to change.

Social capital was drawn upon by participants in this study in times of stress, for social debriefing and support. Family support was also used, with participants identifying that having relatives in the area was an added resource. Bank managers and townspeople connected to rural families were also identified as people offering indirect support, enquiring regularly into the wellbeing of participants and their families. Family, however, was the main source of support for many participants. Families suggested that the drought impacted negatively on community relationships by promoting individual needs over those of the community. Participants identified negative influences in the community and surrounding district and suggested these were to be avoided at all costs, due to their impact on the ability of the family to cope. This, in turn, has the potential to erode the social cohesion that has traditionally been a valued feature of this community. Due to the lack of food for stock in the area, participants identified changing their practices from sharing any available feed to ensuring they were able to obtain as much feed as was possible for the health of their own stock. This was done at the cost of other farmers who were also struggling to feed their cattle. This phenomenon was also linked to sharing information. Participants discussed the regular practice of sharing farming experiences and solutions. It was suggested that this had moved to an almost 'dog-eat-dog' approach, where farmers would only share information if they felt it did not advantage other farmers.

Therefore, on both the level of individual coping and collective coping strategies, participants in this study have described a weakening of the strategy. Two important strategies – optimistic appraisal and reliance on social capital – which initially assisted families to adapt to continual demands have given way to denial and dissonance, social avoidance and competition. In terms of the significance of this study, this finding is the most concerning. As drought conditions fail to improve for farming families, urgent work is needed to assist families who are struggling to cope.

### ***Methodological considerations***

The sample size for the present study is small; however, it is an acceptable size for qualitative research and typical for studies using interpretative phenomenological analysis<sup>14</sup>. Related to this, participants were all from the same rural area of New South Wales, Australia. Due to the diversity of rural populations, the outcomes found in this study are not generalisable to other rural communities. Therefore, further research is required to explore the issues of rural farming families in other areas of Australia.

Another limitation of the present study is the extent of engagement. This study utilised a limited form of repeated interviewing. However, in order to develop greater insight into the experiences of the participants, a period of prolonged engagement, perhaps over several months, would be required<sup>16</sup>. Because participants tended to present their situation in a positive light, prolonged engagement may have revealed more examples of maladaptive coping, or difficulties with mental health, than the participants in the present study were willing to reveal over two interviews.

### ***Implications for public policy***

In order to increase the resilience of farming families affected by the drought, their adaptive resources and their psychological coping strategies need to be strengthened. This should happen at individual and community level.

Governments should consider how to also invest in the social capital of rural communities and recognise this as a potential resource that will enable farming families to adapt and survive drought conditions<sup>6</sup>. Providing financial assistance to support current community initiatives and collective coping strategies may prove more beneficial to farmers than allocating inadequate amounts of funding to individual farming families. Several useful frameworks, for example asset-based community development<sup>6</sup>, exist to allow a systematic approach to strengthening and harnessing the social capital of farming communities. Similarly, at an individual level, evidence-based, cognitive-behavioural approaches to improving coping resources exist<sup>17</sup>, and a deliberate policy decision to fund practitioners who have the skills to provide these services to farming communities is warranted.

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