Utility stress as a social determinant of health: exploring the links in a remote Aboriginal community

Eileen Willis, Meryl Pearce, Carmel McCarthy, Tom Jenkin and Fiona Ryan

Introduction
In the past two decades, there has been significant change in the regulation, provision and management of essential services such as water, electricity, gas and telephone services to the Australian population. Two significant factors in this shift have been the privatisation or limited retail contestability of once publicly owned utilities, such as electricity, water and telecommunications, and, in the case of water, a move by the Federal Government to full cost recovery in the interest of sustainability as professed under the National Water Initiative (NWI). The impact of these moves has been to increase costs for consumers, many of whom are now experiencing hardship in meeting monthly or quarterly payments. Significant research has been done on the impact of the increased cost of public utilities on low-income population groups. Most of these studies include some commentary on the impact of increased costs to Aboriginal people in urban and rural towns, with an earlier study by Tregenza and Tregenza focusing specifically on remote Aboriginal communities in South Australia. The results of these studies indicate that the impact of utility stress on low socio-economic groups is considerable. In 1998/99, 16.1% of Australians households reported utility stress, i.e. in the past year they were unable to pay either electricity, water, telephone, or gas bills by the due date because of a lack of money. Groups most at risk included the aged, single people, single-headed households, young people, the disabled and chronically ill, those living in transitory accommodation, non-English speaking migrants and Indigenous people. The Committee for Melbourne report makes a distinction between those suffering intermittent financial hardship and those who have lived in poverty over long periods of time. It is not just the long-term poor who suffer utility stress; many families who endure occasional financial hardship are also victims. Aboriginal families fit into both categories of financial hardship.

Aboriginal families living in remote and rural locations are particularly disadvantaged. The Committee for Melbourne report noted that the 2001 Census identified that 72% of Aboriginal people were in the bottom 40% of household income distribution, with an increase to 92% in remote regions, and were therefore likely to experience utility stress. Further, research

Abstract

Issue addressed: The implications of the high cost of water on the poverty and subsequent health of Aboriginal residents in a remote community in Australia.

Methods: During 2003, a focus group session was held with adults at Umoona Aboriginal community in South Australia. Participants were asked to comment on key issues of concern in the provision of the domestic water supply.

Results: The Umoona community members in Coober Pedy identified the high cost of water and electricity as key hardship factors.

Conclusions: Plans under the National Water Initiative to move to full cost recovery for water and the privatisation of public utilities may result in increased hardship for low-income groups such as Aboriginal people. Utility stress (difficulties paying water, electricity, gas or telephone accounts by the due date) increases poverty and relative deprivation, both key factors in the social determinants of health. Increased community service obligations (CSO) and rebates need to be made available to all low-income groups in order to reduce the negative impact of poverty.

Keywords: Utility stress, water, remote Aboriginal communities, relative deprivation.

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So what?

Health promotion strategies aimed at improving the health status of Aboriginal people, particularly those living in remote communities, need to take into account the complex nature of poverty in many of these communities and the subsequent negative impact this has on the ability of community members to engage in healthy living practices.
by Willis et al.\textsuperscript{6} noted that in some instances Aboriginal communities were not able to access the community service obligation (CSO) subsidy, a State Government subsidy for rural and remote customers that aims to bring the price of water and other services into line with city prices. This situation is part of an array of stresses that have an impact on individual and family health. In the case of Aboriginal people, utility stress is offered as one of the explanations for why people move back and forth between urban or rural towns to remote communities, thus contributing to chronic unemployment, poor school attendance and ongoing poverty.\textsuperscript{6}

The relationship between utility stress and health comes through the impact it has on health behaviours and poverty. For example, Lawrence\textsuperscript{4} found that people with disabilities or chronic illnesses, especially respiratory disease, who needed increased access to essential services such as electricity, water or telephone often rationed these utilities in order to meet quarterly or monthly bills, thus further jeopardising their health. Further, groups experiencing utility stress tend to spend a larger percentage of their annual income on essential services, thus limiting money available for food and other essential items. These populations tend to have poor-quality housing and less efficient use of energy technology within the household. Families renting, especially those living in public housing where government cost cutting has resulted in poor insulation, lack of verandahs or rain water tanks, are particularly vulnerable as they are forced to spend more on electricity or water than those living in more energy and water-efficient housing. Tregenza and Tregenza\textsuperscript{2} noted in their study of the Pitjamnjarrara that Aboriginal people could not achieve five of the nine essential health hardware prerequisites if water and electricity providers moved to a full cost recovery. These five health hardware prerequisites are: washing children and adults; washing clothes and bedding; buying and storing and preparing healthy food; controlling dust; and controlling temperature.

Various State governments have introduced regulatory frameworks for utility debt including concession cards, weekly payment schemes, loans, and in the case of those with chronic conditions, rebates for people on haemodialysis and oxygen support. Centrelink also provides a direct billing service for many of its recipients that many Aboriginal people access.\textsuperscript{2} The difficulty for Indigenous people is that these concessions are inadequate or may not be widely known. In the case of many communities on the fringes of rural towns, essential services are delivered to the gate, not to households, and it is left to the community to organise the payment of bills. In a few cases, residents are not able to access the CSO subsidy.\textsuperscript{6} The study outlined in this paper explores the impact of utility stress in Umoona, a remote Aboriginal community in South Australia where the CSO subsidy is not available.

### Methods

The research employed a qualitative case study approach based on a semi-structured focus group interview with members of the community. This method is seen to provide a more complex account of the richness of community attitudes than structured one-to-one interviews\textsuperscript{2} and creates a more comfortable research environment for participants. Furthermore, focus groups are an efficient means of gaining insight into the perceptions, experiences, feelings and desires of individuals and groups.\textsuperscript{7}

The study, conducted in 2003, was part of a larger study that examined community perceptions on water supply in 12 Aboriginal communities across South Australia. Focus group sessions were all semi-structured in that the participants raised and discussed the water issues of concern to them. The researchers had a predetermined list of key topics (cultural relationships to water; water regulation; user pays; quality; future availability; conservation and recycling) that, if towards the end of the focus group session had not been discussed by the participants, were raised by the facilitator. The participants were eager for an accurate account of their opinions to be voiced to organisations involved in their water supply. Because the community largely determined the content of the discussions, different water supply issues arose out of the 12 communities.

The key theme that arose out of discussions with Umoona community was that of financial hardship resulting from the costs associated with their water supply, and thus this paper focuses on Umoona alone.

The focus group session was held with five men and three women of the Umoona community on 22 September 2003. Male and female participants were interviewed together in an English. The group included, among others, Council members, long-term residents and a non-Indigenous community housing employee. The interview was taped, transcribed and returned to participants for verification and acceptance. Following this, the transcripts were analysed by the research team for emerging themes. A report focusing on the key themes was then generated and verified by the community. Participants were given the option to be named in any publications; for consistency names, are not cited in this paper. In addition to the focus group session, field observations of the water supply system were conducted and water quality data were obtained from the Coorabbing Pedy District Council.

### Research community

Umoona lies 850 kilometres to the north-west of Adelaide. The community is a 'suburb' of the opal mining township of Coorabbing. The community has a population of approximately 3,000,\textsuperscript{3} with Umoona's population ranging from 90 to 150 people.\textsuperscript{4,5} The region's climate is hot and arid. Rainfall is low (158 millimetres a year on average) and temperatures are high and variable. Tables 1 and 2 summarise the socio-economic characteristics of the Umoona community as of the Australian Bureau of Statistics 2001 Census.

### Income and employment

The median weekly household income for Aboriginal people at Umoona is $400-$499, the same as for all non-Aboriginal
people in Coober Pedy (see Table 2). However, the mean Aboriginal household size in the Umoona community is far higher than all non-Aboriginal households in Coober Pedy (3.4 compared with 2.2 persons per household). Therefore, in regard to individual weekly incomes, the disadvantages faced by Umoona residents are more apparent with individual weekly incomes of $160-$199.

The unemployment rates for the Umoona community are high, with an overall rate of 61.9%. The statistics are more alarming for the female population, with unemployment rates nearing 75%. Of the 16 Umoona residents that were employed at the time, all worked for the Community Development Employment Program, a work-for-the-dole scheme. Umoona’s unemployment rates are five times those experienced by the non-Aboriginal population of Coober Pedy (12.4%). The socio-economic profile of the Umoona community is thus characterised by low income and extreme unemployment. The significance of such disadvantage is highlighted when comparisons are made with non-Aboriginal people in Coober Pedy, who have incomes equivalent to the state-wide average and slightly above-average unemployment rates.

Health of the Umoona population

De Crespiy, Kowanko, Emden and Murray\(^\text{11}\) noted that the health status of Aboriginal people in the Coober Pedy community is characterised by the prevalence of numerous chronic illnesses (for example, cardiovascular disease, renal disease, diabetes, emphysema), psychological issues, Stolen Generation issues, and issues related to alcohol abuse and substance misuse. As such, the state of health of the people at Umoona shares many common features with that of the wider population of Aboriginal people in Australian society.

Umoona Tjutagku Health Service provides a range of services for the Aboriginal people at Umoona including community mental health care, alcohol and other drug counselling, a child health nurse, diabetes program, and domestic violence support. Working in collaboration with external agencies, the health service has been involved in establishing programs to address health issues of particular concern to the community. Examples include the Umoona Kidney Project,\(^\text{12}\) which focused on high levels of renal disease, particularly among older people in the community, and a community nutrition project\(^\text{13}\) developed to assist the Umoona community to identify and redress nutrition-related issues considered important in improving their overall health status.

Umoona water supply

Umoona’s water supply is provided by the Coober Pedy District Council and it operates independently of State Government funding or CSO subsidies. Groundwater is pumped from bores 23 kilometres north-east of Coober Pedy to storage tanks in the town. Water is then treated by reverse osmosis, stored and reticulated throughout Coober Pedy, including to the Umoona community. The district council’s responsibilities regarding water supply to Umoona stop at the community gate, and the community receives one bill each month for its water usage calculated at approximately $5/kL. Prices in Adelaide and other rural and remote towns where the CSO is in place is approximately $9/kL, although prices do vary for other remote towns. For example, water charges at Marla are around $1.25/kL up to a limited amount and $3.88 for excess water use.\(^\text{14}\) The quality of water supplied to Coober Pedy and Umoona residents is very high (93 mg/L of total dissolved solids, compared with 369 mg/L and 534 mg/L in Adelaide and rural South Australia respectively). While rainwater tanks are fitted to most Umoona households, there is little reliance on rainwater because of low and unpredictable rainfall and high temperatures.\(^\text{15}\)

Results

The focus group discussion reiterated that the Coober Pedy and Umoona water supply was of exceptional quality. Umoona residents described the water as ‘beautiful’ and like ‘rainwater’. However, the quality of the water supply comes at considerable cost: “It’s good quality water, it’s beautiful water. But we think the price is too high” (participant 4). As noted earlier, Umoona community is treated as one household with the district council providing water to the gate and billing the community as one household.

Interviewer 2: So per house it’s charged at a flat rate?

Participant 5: Well it’s charged at what the district council …

Interviewer 2: Does it depend on how much each household uses?

Table 1: Aboriginal population characteristics of Umoona community

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Males</th>
<th>Females</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total persons</td>
<td>51</td>
<td>41</td>
<td>92</td>
</tr>
<tr>
<td>Employed CDEP</td>
<td>11</td>
<td>5</td>
<td>16</td>
</tr>
<tr>
<td>Employed other</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total labour force</td>
<td>23</td>
<td>19</td>
<td>42</td>
</tr>
<tr>
<td>Unemployment rate (%)</td>
<td>52.2</td>
<td>73.7</td>
<td>61.9</td>
</tr>
</tbody>
</table>

Source: ABS 2002

Table 2: Selected socio-economic characteristics of Umoona community and non-Aboriginal people of the Coober Pedy township

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Umoona community Aboriginal</th>
<th>Coober Pedy township non-Aboriginal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Median age</td>
<td>33</td>
<td>44</td>
</tr>
<tr>
<td>Median weekly rent</td>
<td>$50-$99</td>
<td>$50-$99</td>
</tr>
<tr>
<td>Median weekly individual income</td>
<td>$160-$199</td>
<td>$300-$399</td>
</tr>
<tr>
<td>Median weekly family income</td>
<td>$600-$699</td>
<td>$500-$599</td>
</tr>
<tr>
<td>Median weekly household income</td>
<td>$400-$499</td>
<td>$400-$499</td>
</tr>
<tr>
<td>Mean household size</td>
<td>3.4</td>
<td>2.2</td>
</tr>
</tbody>
</table>

housing has got. The community could literally be granted a certain amount of kiloliters per family, and then literally only pay the excess water, and then that way perhaps a family might have a chance, to get a little bit in their pockets. It really is sad to see by the time they get their pensions on a Thursday, by the time their rent and the money comes out for the electricity, and the few basic needs ... Nine times out of ten on a Monday, you've got people coming in here for a food order, because they've got no money. (TU 255–261)

Discussion
As one informant noted, individuals and families at Umoona experiencing utility stress pick their bills through weekly deductions from their Centrelink payments or seek assistance through the various provisions offered by providers. However, these arrangements compound poor health and poor health as they often leave the individual or family with very little money to buy food for the week. Families are forced to ration the use of resources, such as air-conditioners, heating, or the watering of household gardens. They may also go without other essential household items including clothes and meals or pawn or sell essential household items to meet the water accounts.

Collecting the quarterly payments is also a considerable stressor for the Umoona Community Council. An Indigenous essential service officer (ESO) does the weekly water meter readings and reports these to the bookkeeper, who determines the amount each family must pay. This arrangement is open to conflict. Aboriginal Community Councils lack the legislative authority to enforce payment. If families refuse to pay, do not have sufficient means to meet the quarterly accounts, dispute their bill, or vacate the premises there is little the council can do but meet the costs out of its own meagre revenue. Given that water is only delivered to the community gate, it is not possible to restrict the water supply to any individual house, nor is it advisable for public health reasons. Community councils must deal with this issue with no help from outside agencies. This is despite several requests for providers such as the Coobar Pedy Council and SA Water to provide individual water accounts.

The Umoona community demonstrated a willingness to pay for water. However, the cost of water is considerable and a significant burden, particularly given the low incomes of residents. Participants expressed a strong desire for the inequities relating to water costing within Coobar Pedy and the rest of the State to be addressed. This is not an issue that can be readily dealt with by the Coobar Pedy District Council. It already offers subsidies to pensioners, with no financial assistance from the State Government in the form of a CSO available to residents in other country towns.

What is needed in this case is a review of the CSO arrangements for all Coobar Pedy residents so that the cost of water can be reduced. The high cost of water is a significant inequity in comparison to other Indigenous and non-Indigenous communities in South Australia.
Conclusion

While this case study has focused on Umoona, several other communities in our study reported utility stress.6,15 These were most often Aboriginal communities positioned on the fringes of remote towns where water is delivered to the gate. While water is piped to each house, the provider bills the community as though they were one household. While this collective response is of assistance to the community as a whole, it means that permanent householders are also responsible for the costs incurred by visitors. For community members already burdened by the high cost of water, this is an additional stressor.

The capacity also exists through the NWI to alleviate some of the problems experienced at Umoona. First, the NWI seeks a reduction in water use through the use of sustainable water technologies. At Umoona, this could include increased use of rainwater tanks, a strategy that has been taken up by several other Aboriginal groups to reduce water costs.16 Second, the NWI makes provision under clause 66 for the CSO to remain in communities where full cost recovery is unlikely, provided this is publicly reported.16 There is no reason why this could not extend to Cooper Pedy.

At the core of the social determinants is the concept of health as more than the absence of disease, to one which encompasses a broader view where the notion of an individual's capacity to be a fully functioning member of the society in which they live is emphasised as well. In light of this, the social determinants of health point to action that includes the relief of poverty along with "the broader aim of improving the circumstances in which people live and work".17 For the people at Umoona, the impact of utility stress, along with their high rates of under- and unemployment, is such that it is difficult for them to improve their overall well-being. Until there are improvements in employment and poverty can be alleviated, there is little possibility of improved health status. Addressing utility-induced poverty is thus essential in improving the well-being and life experiences of Umoona's Aboriginal residents.

Acknowledgements

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References

15. Pearce M, Willis E, Jenkin T. Aboriginal people's attitudes towards paying for water in a water-scarce region of Australia: Experience, Development and Sustainability [serial on the Internet]; 2006 [cited 2006 Feb 1];14:63-65. Available from: http://www.springerlink.com/dw415593s36f34s/dw415593s36f34s/app/home/contribution_2584181;referrer=parent;action=issue;13,14;journal;1,25;linkingpublicationnumbers;14102871

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