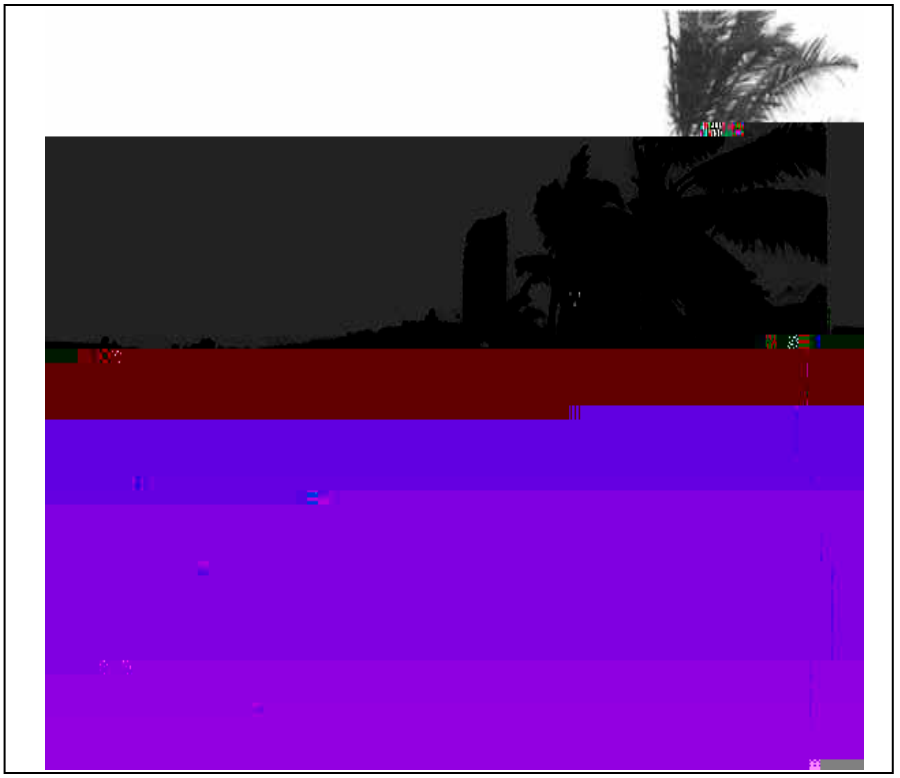
James Cook University
Faculty of Science, Engineering and
Information Technology

Socio-economic Variables as Indicators of Preparedness Level in Cyclone Events



Shannon DiGian
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showed that income level allowed for some of the more costly mitigation measures such as purchasing insurance and building homes with stronger, cyclone withstanding materials.
Lower income populations, however, are more vulnerable to disasters because they have fewer resources, less car access which means they require more assistance to evacuate and they usually live in less protected areas (King, 2000). Poorer populations also lack adequate resources to purchase natural hazard insurance which means the rebuilding and recovery process will be more difficult (Fothergill and Peek, 2004) It is also pointed out that people living in poverty are less likely to follow through with preparations necessary for mitigating the effects of hazards because they lack a sense of personal control over potential outcomes (Vaughan, 1995).

2.4 Resident Status

Studies show that elderly people are extremely aware of the hazards of their surroundings and are capable of looking after themselves due to their familiarity with their environment, yet many younger people may be new migrants to the area and do not know what preparations to make (King, 2001). The data collected pertaining to age in this study categorises residents as either

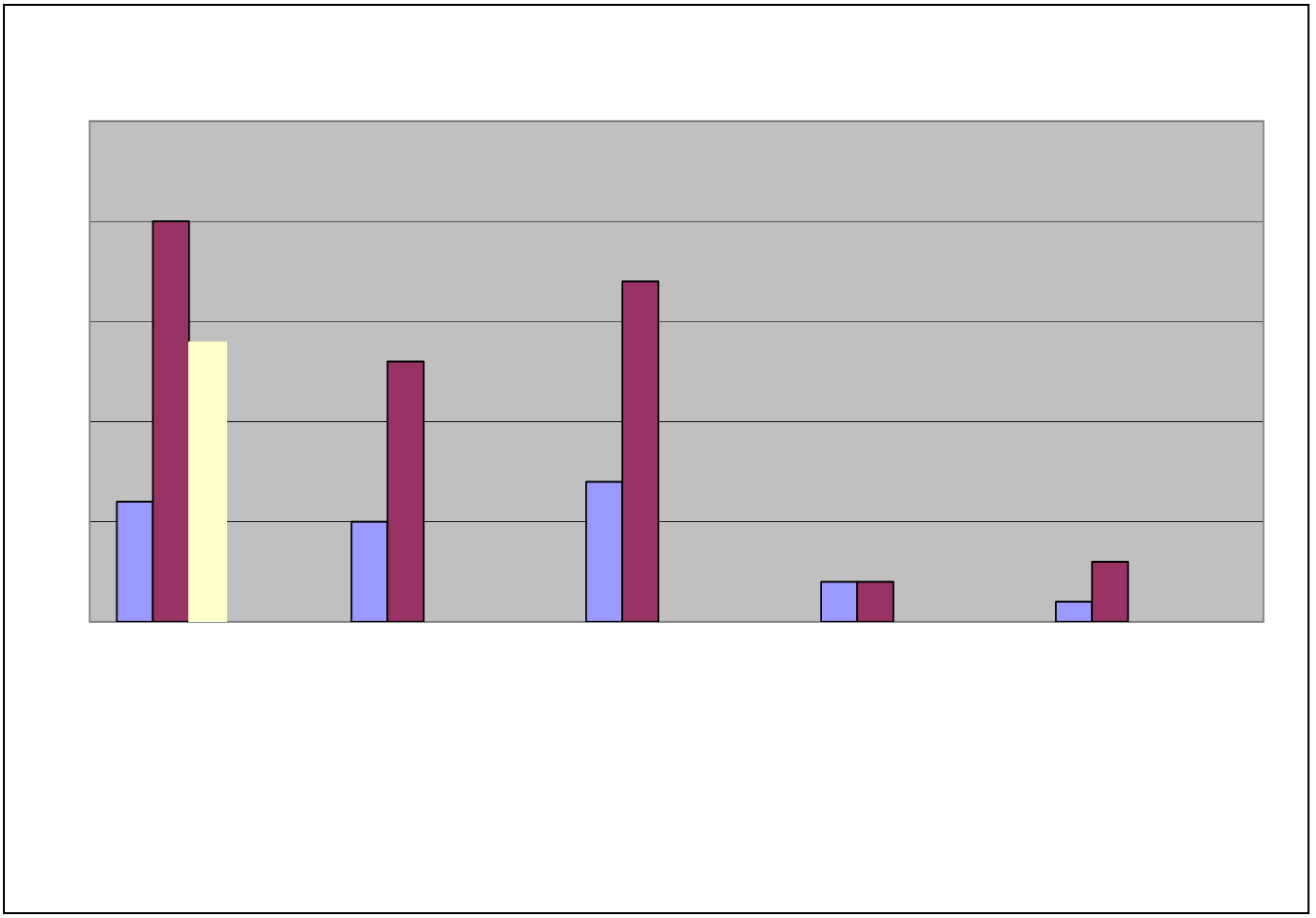
likely to deal with adverse events such as cyclones in a more productive and successful manner (Evans et al, 2004). A positive correlation, therefore, exists between resident status

4.0 Methods

Research regarding how education level, income and resident status affect ones preparedness was carried out using 2003 survey data consisting of 100 questions regarding cyclones and storm surge from Railway Estate. A total of 80 people returned the survey. Answers returned from residents were recorded in an SPSS database. SPSS was then used to construct various tables showing the correlations between three sets of data: education and preparedness, income and preparedness and resident status and preparedness. Five questions about disaster preparedness were selected from the survey and compared alongside the three variables- annual household income, education level and amount of time the survey takers have been living in the Townsville area.

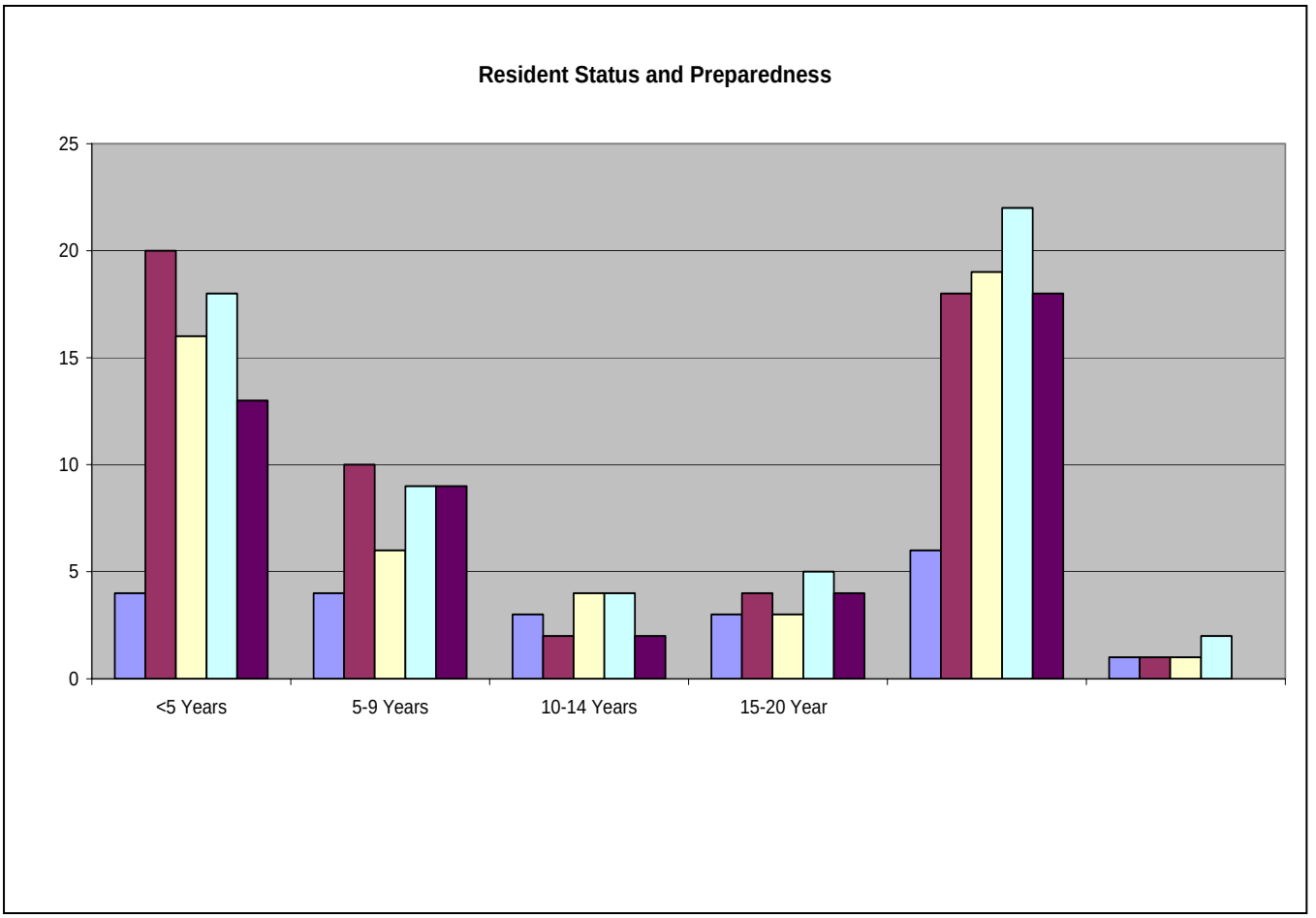
The five questions used to determine level of preparedness are listed as follows according to the question number used in the original survey:

- Question 51: Have you and other members of this household discussed an evacuation plan?



	What is the Highest Level of Education Achieved by Anyone in the Household?					
	University	TAFE	Secondary	Primary	No Answer	Total
Total Yes	78	51				

		What is the Approximate Combined Income in This Household?							
		<25,000	25,001 - 50,000	50,001 - 75,000	75,001 - 100,000	>100,001	No Answer	Don't Know	Total
	Yes	53	51	55	22	4	44	2	231
	No	26	30	28	17	1	24	3	129


Resident Status and Preparedness
25
20
15
10
5
0
<5 Years
5-9 Years
10-14 Years
15-20 Year

		How Long Have You Lived in Townsville?						
		<5 Years	5-9 Years	10-14 Years	15-20 Years	>20 Years	No Answer	Total
Preparedness	Yes	71	38	15	19	83	5	231
	No	51	21	7	5	43	2	129
	No Answer	13	1	3	1	9	13	40
Total Answers		135	60	25	25	135	20	400
Total Preparedness (%)		17.75%	9.50%	3.75%	4.75%	20.75%	1.25%	57.75%

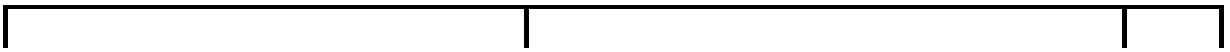
Table 3. Total Preparedness within Each Resident Status Interval

6.0 Analysis

of a storm and also understand the benefits of planning ahead to avoid personal and economic loss (Mack and Baker, 1961). They are,

Appendix A

Level of Education and Preparedness Contingency Tables



	What is the Approximate Combined Income in This Household? (Dollars per year))			
	<25,000	25,001 - 50,000	50,001 - 75,000	75,001 -

	What is the Approximate Combined Income in This Household? (Dollars per year)							
	<25,000	25,001 - 50,000	50,001 - 75,000	75,001 - 100,000	>100,001	No Answer	Don't Know	Totall

	How Long Have You Lived in Townsville?						
	<5 Years	5-9 Years	10-14 Years	15-20 Years	>20 Years	No Answer	Total
Yes							

		How Long Have You Lived in Townsville?						Total
		<5 Years	5-9 Years	10-14 Years	15-20 Years	>20 Years	No Answer	
Preparedness	Yes	71	38	15	19	83	5	231
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