Appendix 6:
b) Main statistics used for section on performance

Roster * Extent dayshift/nightshift causes problems with indicators

Roster * Extent working dayshift causes problems with: fatigue

% within Roster

		Extent working dayshift causes problems with: fatigue			
		Never or rarely	Sometimes	Frequently or always	Total
Roster	Rotating D/N even-time roster (42 hr)	30.7%	41.2%	28.1%	100.0%
	Rotating (56 hr)	22.1%	36.8%	41.2%	100.0%
	Other Rotating (50+ hr)	31.1%	41.9%	27.0%	100.0%
	Day shift (40-60+ hr)	43.9%	39.0%	17.1%	100.0%
Total		30.5%	39.4%	30.0%	100.0%

Population: Effective sample size of processing workers in Tasmanian mines n = 464.
Notes: Significant difference between the rosters $X^2(6) = 19.033$ p = .004 n = 406

Roster * Extent working dayshift causes problems with: sleep

% within Roster

		Extent working dayshift causes problems with: sleep			
		Never or rarely	Sometimes	Frequently or always	Total
Roster	Rotating D/N even-time roster (42 hr)	28.3%	32.5%	39.2%	100.0%
	Rotating (56 hr)	29.3%	33.3%	37.4%	100.0%
	Other Rotating (50+ hr)	22.7%	42.7%	34.7%	100.0%
	Day shift (40-60+ hr)	42.9%	33.3%	23.8%	100.0%
Total		30.5%	34.7%	34.7%	100.0%

Population: Effective sample size of processing workers in Tasmanian mines n = 464.
Notes: No significant difference between the rosters n = 426

Roster * Extent working dayshift causes problems with: alertness whilst working

% within Roster

		Extent working dayshift causes problems with: alertness whilst working			
		Never or rarely	Sometimes	Frequently or always	Total
Roster	Rotating D/N even-time roster (42 hr)	44.0%	37.1%	19.0%	100.0%
	Rotating (56 hr)	37.0%	37.0%	26.1%	100.0%
	Other Rotating (50+ hr)	46.1%	43.4%	10.5%	100.0%
	Day shift (40-60+ hr)	59.0%	26.5%	14.5%	100.0%
Total		45.0%	36.1%	18.9%	100.0%

Population: Effective sample size of processing workers in Tasmanian mines n = 464.
Notes: Significant difference between the rosters $X^2(6) = 16.428$ p = .012 n = 413

Roster * Extent working dayshift causes problems with: concentration on shift

% within Roster

		Extent working dayshift causes problems with: concentration on shift			
		Never or rarely	Sometimes	Frequently or always	Total
Roster	Rotating D/N even-time roster (42 hr)	44.0%	31.9%	24.1%	100.0%
	Rotating (56 hr)	33.3%	41.1%	25.5%	100.0%
	Other Rotating (50+ hr)	47.4%	38.2%	14.5%	100.0%
	Day shift (40-60+ hr)	57.3%	26.8%	15.9%	100.0%
Total		43.6%	35.2%	21.2%	100.0%

Population: Effective sample size of processing workers in Tasmanian mines n = 464.
Notes: Significant difference between the rosters $X^2(6) = 15.237$ p = .018 n = 415

Roster * Extent working dayshift causes problems with: work performance

% within Roster

		Extent working dayshift causes problems with: work performance			
		Never or rarely	Sometimes	Frequently or always	Total
Roster	Rotating D/N even-time roster (42 hr)	58.3%	29.6%	12.2%	100.0%
	Rotating (56 hr)	35.5%	41.1%	23.4%	100.0%
	Other Rotating (50+ hr)	48.0%	38.7%	13.3%	100.0%
	Day shift (40-60+ hr)	67.1%	19.5%	13.4%	100.0%
Total		50.4%	33.2%	16.5%	100.0%

Population: Effective sample size of processing workers in Tasmanian mines n = 464.
Notes: Significant difference between the rosters $X^2(6) = 27.032$ p = .000 n = 413

Roster * Extent working nightshift causes problems with: sleep

% within Roster

		Extent working nightshift causes problems with: sleep			
		Never or rarely	Sometimes	Frequently or always	Total
Roster	Rotating D/N even-time roster (42 hr)	19.3%	34.5%	46.2%	100.0%
	Rotating (56 hr)	18.5%	25.3%	56.2%	100.0%
	Other Rotating (50+ hr)	16.7%	38.5%	44.9%	100.0%
Total		18.4%	31.5%	50.1%	100.0%

Population: Effective sample size of processing workers in Tasmanian mines n = 464.
Notes: Only those who work rotating roster were included in the analysis n = 365
Notes: No significant difference between the rosters n = 343

Roster * Extent working nightshift causes problems with: fatigue

% within Roster

		Extent working nightshift causes problems with: fatigue			
		Never or rarely	Sometimes	Frequently or always	Total
Roster	Rotating D/N even-time roster (42 hr)	20.7%	37.1%	42.2%	100.0%
	Rotating (56 hr)	16.5%	31.7%	51.8%	100.0%
	Other Rotating (50+ hr)	25.3%	38.0%	36.7%	100.0%
Total		20.1%	35.0%	44.9%	100.0%

Population: Sample of Processing Workers in Tasmanian Mines n = 365.
Notes: Only those who work rotating roster were included in the analysis n = 365
Notes: No significant difference between the rosters n = 334

Roster * Extent working nightshift causes problems with: concentration on shift

% within Roster

		Extent working nightshift causes problems with: concentration on shift			
		Never or rarely	Sometimes	Frequently or always	Total
Roster	Rotating D/N even-time roster (42 hr)	21.4%	37.6%	41.0%	100.0%
	Rotating (56 hr)	26.4%	30.7%	42.9%	100.0%
	Other Rotating (50+ hr)	34.6%	39.7%	25.6%	100.0%
Total		26.6%	35.2%	38.2%	100.0%

Population: Effective sample size of processing workers in Tasmanian mines n = 464.
Notes: Only those who work rotating roster were included in the analysis n = 365
Notes: Difference between the rosters approaching significance $X^2(4) = 8.802$ p = .066 n = 335

Roster * Extent working nightshift causes problems with: alertness whilst working

% within Roster

		Extent working nightshift causes problems with: alertness whilst working			
		Never or rarely	Sometimes	Frequently or always	Total
Roster	Rotating D/N even-time roster (42 hr)	22.6%	40.9%	36.5%	100.0%
	Rotating (56 hr)	28.1%	30.9%	41.0%	100.0%
	Other Rotating (50+ hr)	33.8%	42.9%	23.4%	100.0%
Total		27.5%	37.2%	35.3%	100.0%

Population: Effective sample size of processing workers in Tasmanian mines n = 464.
Notes: Only those who work rotating roster were included in the analysis n = 365
Notes: Difference between the rosters approaching significance $X^2(4) = 9.090$ p = .059 n = 331

Roster * Extent working nightshift causes problems with: work performance

% within Roster

		Extent working nightshift causes problems with: work performance			
		Never or rarely	Sometimes	Frequently or always	Total
Roster	Rotating D/N even-time roster (42 hr)	35.1%	39.5%	25.4%	100.0%
	Rotating (56 hr)	22.1%	39.3%	38.6%	100.0%
	Other Rotating (50+ hr)	33.3%	44.9%	21.8%	100.0%
Total		29.2%	40.7%	30.1%	100.0%

Population: Effective sample size of processing workers in Tasmanian mines n = 464.
Notes: Only those who work rotating roster were included in the analysis n = 365
Notes: Significant difference between the rosters $X^2(6) = 10.584$ p = .032 n = 332

Impaired and unimpaired sleep * Extent working dayshift/nightshift causes problems

Sleep Type Dayshift * Extent working dayshift causes problems with: sleep

% within Sleep Type Dayshift

		Extent working dayshift causes problems with: sleep			
		Never or rarely	Sometimes	Frequently or always	Total
Sleep Type Dayshift	Impaired Sleep - Dayshift 5 hours or less and unrefreshed	5.9%	21.2%	72.9%	100.0%
	Non Impaired Sleep - Dayshift 6 hrs+ sleep and refreshed	52.9%	35.3%	11.8%	100.0%
Total		37.3%	30.6%	32.2%	100.0%

Population: Effective sample size of processing workers in Tasmanian mines n = 464.
Notes: Only respondents with dayshift impaired or unimpaired sleep were included in analysis n = 279
Notes: Significant difference $X^2(2) = 103.328$ p = .000 n = 255

Sleep Type Dayshift * Extent working dayshift causes problems with: fatigue

% within Sleep Type Dayshift

		Extent working dayshift causes problems with: fatigue			
		Never or rarely	Sometimes	Frequently or always	Total
Sleep Type Dayshift	Impaired Sleep - Dayshift 5 hours or less and unrefreshed	13.2%	35.5%	51.3%	100.0%
	Non Impaired Sleep - Dayshift 6 hrs+ sleep and refreshed	44.2%	40.5%	15.3%	100.0%
Total		34.3%	38.9%	26.8%	100.0%

Population: Effective sample size of processing workers in Tasmanian mines n = 464.
Notes: Only respondents with dayshift impaired or unimpaired sleep were included in analysis n = 279

Notes: Significant difference between impaired and unimpaired sleep $X^2(2) = 39.915$ p = .000 n = 239

Sleep Type Dayshift * Extent working dayshift causes problems with: alertness whilst working

% within Sleep Type Dayshift

		Extent working dayshift causes problems with: alertness whilst working			
		Never or rarely	Sometimes	Frequently or always	Total
Sleep Type Dayshift	Impaired Sleep - Dayshift 5 hours or less and unrefreshed	25.9%	46.9%	27.2%	100.0%
	Non Impaired Sleep - Dayshift 6 hrs+ sleep and refreshed	62.4%	27.3%	10.3%	100.0%
Total		50.4%	33.7%	15.9%	100.0%

Population: Effective sample size of processing workers in Tasmanian mines n = 464.
Notes: Only respondents with dayshift impaired or unimpaired sleep were included in analysis n = 279
Notes: Significant difference between impaired and unimpaired sleep $X^2(2) = 30.308$ p = .000 n = 246

Sleep Type Dayshift * Extent working dayshift causes problems with: concentration on shift

% within Sleep Type Dayshift

		Extent working dayshift causes problems with: concentration on shift			
		Never or rarely	Sometimes	Frequently or always	Total
Sleep Type Dayshift	Impaired Sleep - Dayshift 5 hours or less and unrefreshed	19.8%	45.7%	34.6%	100.0%
	Non Impaired Sleep - Dayshift 6 hrs+ sleep and refreshed	59.8%	26.8%	13.4%	100.0%
Total		46.5%	33.1%	20.4%	100.0%

Population: Effective sample size of processing workers in Tasmanian mines n = 464.
Notes: Only respondents with dayshift impaired or unimpaired sleep were included in analysis n = 279
Notes: Significant difference between impaired and unimpaired sleep $X^2(2) = 36.362$ p = .000 n = 245

Sleep Type Dayshift * Extent working dayshift causes problems with: work performance

% within Sleep Type Dayshift

		Extent working dayshift causes problems with: work performance			
		Never or rarely	Sometimes	Frequently or always	Total
Sleep Type Dayshift	Impaired Sleep - Dayshift 5 hours or less and unrefreshed	27.2%	44.4%	28.4%	100.0%
	Non Impaired Sleep - Dayshift 6 hrs+ sleep and refreshed	68.3%	24.6%	7.2%	100.0%
Total		54.8%	31.0%	14.1%	100.0%

Population: Effective sample size of processing workers in Tasmanian mines n = 464.
Notes: Only respondents with dayshift impaired or unimpaired sleep were included in analysis n = 279

Notes: Significant difference between impaired and unimpaired sleep $X^2(2) = 41.142$ p = .000 n = 248

Sleep Type Nightshift * Extent working nightshift causes problems with: sleep

% within Sleep Type Nightshift

		Extent working nightshift causes problems with: sleep			
		Never or rarely	Sometimes	Frequently or always	Total
Sleep Type Nightshift	Impaired Sleep - Nightshift 5 hours or less and unrefreshed	3.4%	11.8%	84.9%	100.0%
	Non Impaired Sleep - Nightshift 6 hrs+ sleep and refreshed	44.2%	44.2%	11.6%	100.0%
Total		24.6%	28.6%	46.8%	100.0%

Population: Effective sample size of processing workers in Tasmanian mines n = 464.
Notes: Only respondents with nightshift impaired or unimpaired sleep were included in analysis n = 264
Notes: Significant difference between impaired and unimpaired sleep $X^2(2) = 135.667$ p = .000 n = 248

Sleep Type Nightshift * Extent working nightshift causes problems with: work performance

% within Sleep Type Nightshift

		Extent working nightshift causes problems with: work performance			
		Never or rarely	Sometimes	Frequently or always	Total
Sleep Type Nightshift	Impaired Sleep - Nightshift 5 hours or less and unrefreshed	18.6%	34.5%	46.9%	100.0%
	Non Impaired Sleep - Nightshift 6 hrs+ sleep and refreshed	47.6%	35.7%	16.7%	100.0%
Total		33.9%	35.1%	31.0%	100.0%

Population: Effective sample size of processing workers in Tasmanian mines n = 464.
Notes: Only respondents with nightshift impaired or unimpaired sleep were included in analysis n = 264
Notes: Significant difference between impaired and unimpaired sleep $X^2(2) = 32.433$ p = .000 n = 239

Sleep Type Nightshift * Extent working nightshift causes problems with: fatigue

% within Sleep Type Nightshift

		Extent working nightshift causes problems with: fatigue			
		Never or rarely	Sometimes	Frequently or always	Total
Sleep Type Nightshift	Impaired Sleep - Nightshift 5 hours or less and unrefreshed	11.6%	22.3%	66.1%	100.0%
	Non Impaired Sleep - Nightshift 6 hrs+ sleep and refreshed	36.2%	41.5%	22.3%	100.0%
Total		24.8%	32.6%	42.6%	100.0%

Population: Effective sample size of processing workers in Tasmanian mines n = 464.
Notes: Only respondents with nightshift impaired or unimpaired sleep were included in analysis n = 264

Notes: Significant difference between impaired and unimpaired sleep $X^2(2) = 48.502$ p = .000 n = 242

Sleep Type Nightshift * Extent working nightshift causes problems with: alertness whilst working

% within Sleep Type Nightshift

		Extent working nightshift causes problems with: alertness whilst working			
		Never or rarely	Sometimes	Frequently or always	Total
Sleep Type Nightshift	Impaired Sleep - Nightshift 5 hours or less and unrefreshed	17.1%	29.7%	53.2%	100.0%
	Non Impaired Sleep - Nightshift 6 hrs+ sleep and refreshed	44.1%	35.4%	20.5%	100.0%
Total		31.5%	32.8%	35.7%	100.0%

Population: Effective sample size of processing workers in Tasmanian mines n = 464.
Notes: Only respondents with nightshift impaired or unimpaired sleep were included in analysis n = 264
Notes: Significant difference between impaired and unimpaired sleep $X^2(2) = 31.980$ p = .000 n = 238

Sleep Type Nightshift * Extent working nightshift causes problems with: concentration on shift

% within Sleep Type Nightshift

		Extent working nightshift causes problems with: concentration on shift			
		Never or rarely	Sometimes	Frequently or always	Total
Sleep Type Nightshift	Impaired Sleep - Nightshift 5 hours or less and unrefreshed	17.4%	31.3%	51.3%	100.0%
	Non Impaired Sleep - Nightshift 6 hrs+ sleep and refreshed	40.9%	36.2%	22.8%	100.0%
Total		29.8%	33.9%	36.4%	100.0%

Population: Effective sample size of processing workers in Tasmanian mines n = 464.
Notes: Only respondents with nightshift impaired or unimpaired sleep were included in analysis n = 264
Notes: Significant difference between impaired and unimpaired sleep $X^2(2) = 25.136$ p = .000 n = 242

Tiredness and performance

Roster * Tired to extent performance impaired

Roster * Tired to the extent work performance is impaired - Day shifts

% within Roster

		Tired to the extent work performance is impaired - Day shifts			
		Never or rarely	Sometimes	Frequently or always	Total
Roster	Rotating D/N even-time roster (42 hr)	47.1%	41.3%	11.6%	100.0%
	Rotating (56 hr)	29.6%	50.7%	19.7%	100.0%
	Other Rotating (50+ hr)	54.9%	36.6%	8.5%	100.0%
	Day shift (40-60+ hr)	61.4%	30.7%	8.0%	100.0%
Total		45.4%	41.5%	13.1%	100.0%

Population: Effective sample size of processing workers in Tasmanian mines n = 464.
Notes: Significant difference between the rosters $X^2(6) = 29.442$ p = .000 n = 443

Roster * Tired to the extent work performance is impaired - Night shifts

% within Roster

		Tired to the extent work performance is impaired - Night shifts			
		Never or rarely	Sometimes	Frequently or always	Total
Roster	Rotating D/N even-time roster (42 hr)	30.0%	41.7%	28.3%	100.0%
	Rotating (56 hr)	21.6%	46.6%	31.8%	100.0%
	Other Rotating (50+ hr)	39.5%	45.7%	14.8%	100.0%
Total		28.7%	44.7%	26.6%	100.0%

Population: Effective sample size of processing workers in Tasmanian mines n = 464.
Notes: Only those who work rotating roster were included in the analysis n = 365
Notes: Significant difference between the rosters $X^2(4) = 12.180$ p = .016 n = 349

Roster * Tired to the extent work performance is impaired - Days Off

% within Roster

		Tired to the extent work performance is impaired - Days off			
		Never or rarely	Sometimes	Frequently or always	Total
Roster	Rotating D/N even-time roster (42 hr)	66.7%	27.2%	6.1%	100.0%
	Rotating (56 hr)	46.9%	37.2%	15.9%	100.0%
	Other Rotating (50+ hr)	55.0%	35.0%	10.0%	100.0%
	Day shift (40-60+ hr)	64.8%	26.8%	8.5%	100.0%
Total		57.1%	32.2%	10.7%	100.0%

Population: Effective sample size of processing workers in Tasmanian mines n = 464.
Notes: Significant difference between the rosters $X^2(6) = 14.330$ p = .026 n = 410

Impaired and unimpaired sleep * Tired to the extent performance is impaired.

Sleep type dayshift * Tired to the extent work performance is impaired - Day shifts

% within Sleep Type Dayshift

		Tired to the extent work performance is impaired - Day shifts			
		Never or rarely	Sometimes	Frequently or always	Total
Sleep Type Dayshift	Impaired Sleep - Dayshift 5 hours or less and unrefreshed	12.9%	57.6%	29.4%	100.0%
	Non Impaired Sleep - Dayshift 6 hrs+ sleep and refreshed	63.9%	32.2%	3.8%	100.0%
Total		47.8%	40.3%	11.9%	100.0%

Population: Effective sample size of processing workers in Tasmanian mines n = 464.
Notes: Only respondents with dayshift impaired or unimpaired sleep were included in analysis n = 279
Notes: Significant difference $X^2(2) = 72.720$ p = .000 n = 268

Sleep type dayshift * Tired to the extent work performance is impaired - Night shifts

% within Sleep Type Dayshift

		Tired to the extent work performance is impaired - Night shifts			
		Never or rarely	Sometimes	Frequently or always	Total
Sleep Type Dayshift	Impaired Sleep - Dayshift 5 hours or less and unrefreshed	19.5%	50.0%	30.5%	100.0%
	Non Impaired Sleep - Dayshift 6 hrs+ sleep and refreshed	40.5%	38.1%	21.4%	100.0%
Total		33.6%	42.0%	24.4%	100.0%

Population: Effective sample size of processing workers in Tasmanian mines n = 464.
Notes: Only respondents with dayshift impaired or unimpaired sleep were included in analysis n = 279
Notes: Significant difference $X^2(2) = 10.920$ p = .004 n = 250

Sleep type dayshift * Tired to the extent work performance is impaired - Days off

% within Sleep Type Dayshift

		Tired to the extent work performance is impaired - Days off			
		Never or rarely	Sometimes	Frequently or always	Total
Sleep Type Dayshift	Impaired Sleep - Dayshift 5 hours or less and unrefreshed	45.1%	43.9%	11.0%	100.0%
	Non Impaired Sleep - Dayshift 6 hrs+ sleep and refreshed	66.9%	26.6%	6.5%	100.0%
Total		59.8%	32.3%	8.0%	100.0%

Population: Effective sample size of processing workers in Tasmanian mines n = 464.
Notes: Only respondents with dayshift impaired or unimpaired sleep were included in analysis n = 279
Notes: Significant difference $X^2(2) = 10.855$ p = .004 n = 251

Sleep type nightshift * Tired to the extent work performance is impaired - Day shifts

% within Sleep Type Nightshift

		Tired to the extent work performance is impaired - Day shifts			
		Never or rarely	Sometimes	Frequently or always	Total
Sleep Type Nightshift	Impaired Sleep - Nightshift 5 hours or less and unrefreshed	37.8%	46.2%	16.0%	100.0%
	Non Impaired Sleep - Nightshift 6 hrs+ sleep and refreshed	47.6%	39.2%	13.3%	100.0%
Total		43.1%	42.4%	14.5%	100.0%

Population: Effective sample size of processing workers in Tasmanian mines n = 464.
Notes: Only respondents with nightshift impaired or unimpaired sleep were included in analysis n = 264
Notes: No significant difference n = 262

Sleep type nightshift * Tired to the extent work performance is impaired - Night shifts

% within Sleep Type Nightshift

		Tired to the extent work performance is impaired - Night shifts			
		Never or rarely	Sometimes	Frequently or always	Total
Sleep Type Nightshift	Impaired Sleep - Nightshift 5 hours or less and unrefreshed	18.8%	32.5%	48.7%	100.0%
	Non Impaired Sleep - Nightshift 6 hrs+ sleep and refreshed	43.8%	43.1%	13.1%	100.0%
Total		32.3%	38.2%	29.5%	100.0%

Population: Effective sample size of processing workers in Tasmanian mines n = 464.
Notes: Only respondents with nightshift impaired or unimpaired sleep were included in analysis n = 264
Notes: Significant difference $X^2(2) = 10.920$ p = .004 n = 250

Sleep type nightshift * Tired to the extent work performance is impaired - Days off

% within Sleep Type Nightshift

		Tired to the extent work performance is impaired - Days off			
		Never or rarely	Sometimes	Frequently or always	Total
Sleep Type Nightshift	Impaired Sleep - Nightshift 5 hours or less and unrefreshed	52.7%	32.7%	14.5%	100.0%
	Non Impaired Sleep - Nightshift 6 hrs+ sleep and refreshed	66.9%	26.5%	6.6%	100.0%
Total		60.6%	29.3%	10.2%	100.0%

Population: Effective sample size of processing workers in Tasmanian mines n = 464.
Notes: Only respondents with nightshift impaired or unimpaired sleep were included in analysis n = 264
Notes: Significant difference $X^2(2) = 10.855$ p = .004 n = 251

Struggling to keep eyes open/nodding off

Do you ever nod off without meaning to?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	147	22.9	24.1	24.1
	Yes	463	71.9	75.9	100.0
	Total	610	94.8	100.0	
Missing	System	33	5.2		
Total		643	100.0		

Population: Processing workers in Tasmanian mines n = 643.
Notes: Population estimates of nodding off without meaning to.

I nod off without meaning to during:

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Day shift only	72	11.2	15.8	15.8
	Night shift only	193	30.0	42.5	58.4
	Both shifts	189	29.4	41.6	100.0
	Total	454	70.6	100.0	
Missing	System	189	29.4		
Total		643	100.0		

Population: Processing workers in Tasmanian mines n = 643.
Notes: Population estimates of when nodding occurs.

Frequency of stuggling to keep eyes open /'nodding off'

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Every shift	76	11.8	16.2	16.2
	Regularly	170	26.4	36.3	52.5
	Infrequently	222	34.6	47.5	100.0
	Total	468	72.8	100.0	
Missing	System	175	27.2		
Total		643	100.0		

Population: Processing workers in Tasmanian mines n = 643.
Notes: Population estimates of frequency of struggling to keep eyes open/'nodding off'

Roster * Struggling to keep eyes open/nodding off

Roster * Do you ever nod off without meaning to

% within Roster

		Do you ever nod off without meaning to"		
		No	Yes	Total
Roster	Rotating D/N even-time roster (42 hr)	16.8%	83.2%	100.0%
	Rotating (56 hr)	19.6%	80.4%	100.0%
	Other Rotating (50+ hr)	31.3%	68.8%	100.0%
	Day shift (40-60+ hr)	37.6%	62.4%	100.0%
Total		24.5%	75.5%	100.0%

Population: Effective sample size of processing workers in Tasmanian mines n = 464.
Notes: Significant difference between the rosters $X^2(3) = 15.630$ p = .001 n = 432

Roster * I nod off without meaning to during:

% within Roster

		I nod off without meaning to during:			
		Day shift only	Night shift only	Both shifts	Total
Roster	Rotating D/N even-time roster (42 hr)	8.1%	51.5%	40.4%	100.0%
	Rotating (56 hr)	16.1%	34.7%	49.2%	100.0%
	Other Rotating (50+ hr)	12.5%	46.4%	41.1%	100.0%
	Day shift (40-60+ hr)	34.7%	40.8%	24.5%	100.0%
Total		15.8%	42.9%	41.3%	100.0%

Population: Effective sample size of processing workers in Tasmanian mines n = 464.
Notes: Significant difference between the rosters $X^2(6) = 24.051$ p = .001 n = 332

Roster * Frequency of struggling to keep eyes open/'nodding off'

% within Roster

		Frequency of struggling to keep eyes open				
		Every shift	Once every block of 2-3 shifts	Once every roster cycle	Only rarely	Total
Roster	Rotating D/N even-time roster (42 hr)	13.9%	38.6%	14.9%	32.7%	100.0%
	Rotating (56 hr)	16.2%	45.3%	17.9%	20.5%	100.0%
	Other Rotating (50+ hr)	5.3%	28.1%	33.3%	33.3%	100.0%
	Day shift (40-60+ hr)	33.3%	20.4%	9.3%	37.0%	100.0%
Total		16.4%	36.2%	18.2%	29.2%	100.0%

Population: Effective sample size of processing workers in Tasmanian mines n = 464.
Notes: Significant difference between the rosters $X^2(9) = 36.826$ p = .000 n = 329

Napping During Work Time

Does respondent nap during work time

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No, no need	221	34.4	35.4	35.4
	No, but would like to	240	37.4	38.5	74.0
	Yes	162	25.2	26.0	100.0
	Total	623	97.0	100.0	
Missing	System	20	3.0		
Total		643	100.0		

Population: Processing workers in Tasmanian mines n = 643.
Notes: Population estimates of napping during work time

Frequency of napping

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Every shift	31	4.8	14.7	14.7
	Regularly	66	10.2	31.4	46.0
	Infrequently	113	17.5	54.0	100.0
	Total	209	32.5	100.0	
Missing	System	434	67.5		
Total		643	100.0		

Population: Processing Workers in Tasmanian Mines n = 643.
Notes: Population estimates of frequency of napping.

Reason that best describes why respondent naps

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Don't plan to nap, can't seem to stay awake whole shift	101	15.7	51.2	51.2
	Plan to nap to get through shift	31	4.8	15.6	66.8
	Need to nap otherwise fall asleep	20	3.1	10.1	76.9
	Nap to break boredom and make shift pass faster	15	2.3	7.7	84.5
	Want to nap but no opportunity to	30	4.7	15.5	100.0
	Total	197	30.7	100.0	
Missing	System	446	69.3		
Total		643	100.0		

Population: Processing workers in Tasmanian mines n = 643.

Notes: Population estimates of why employees nap

Roster * Napping during work time.

Roster*Does respondent nap during work time

% within Roster

		Does respondent nap during work time			
		No, no need	No, but would like to	Yes	Total
Roster	Rotating D/N even-time roster (42 hr)	31.5%	33.9%	34.7%	100.0%
	Rotating (56 hr)	26.7%	43.3%	30.0%	100.0%
	Other Rotating (50+ hr)	43.2%	39.5%	17.3%	100.0%
	Day shift (40-60+ hr)	47.7%	34.1%	18.2%	100.0%
Total		35.2%	38.1%	26.6%	100.0%

Population: Effective sample size of processing workers in Tasmanian mines n = 464.
Notes: Significant difference between the rosters $X^2(6) = 19.733$ p = .003 n = 443.

Main job/task * Does respondent nap during work time

% within What job/task do you spend most of the time doing

		Does respondent nap during work time			
		No, no need	No, but would like to	Yes	Total
What job/task do you spend most of the time doing	Truck - Underground	25.3%	34.3%	40.4%	100.0%
	Bogger	31.0%	41.4%	27.6%	100.0%
	Jumbo Operating	34.9%	44.2%	20.9%	100.0%
	Underground - Other	31.7%	38.1%	30.2%	100.0%
	Mill/Gold Mine - Processing Plant/Operations	33.8%	47.5%	18.8%	100.0%
	Workshop - Maintenance	48.0%	33.7%	18.4%	100.0%
Total		34.5%	39.0%	26.5%	100.0%

Population: Effective sample size of processing workers in Tasmanian mines n = 464.
Notes: Respondents who stated "other' or did not respond were not included in the analysis. n = 450.
Notes: Significant difference between the occupations $X^2(10) = 23.416$ p = .009 n = 441.

Roster at the mines * Frequency of napping

% within What job/task do you spend most of the time doing

		Frequency of napping		
		Regularly	Infrequently	Total
What job/task do you spend most of the time doing	Truck - Underground	62.2%	37.8%	100.0%
	Bogger	31.3%	68.8%	100.0%
	Jumbo Operating	53.8%	46.2%	100.0%
	Underground - Other	46.7%	53.3%	100.0%
	Mill/Gold Mine - Processing Plant/Operations	30.0%	70.0%	100.0%
	Workshop - Maintenance	40.0%	60.0%	100.0%
Total		47.0%	53.0%	100.0%

Population: Effective sample size of processing workers in Tasmanian mines n = 464.
Notes: Respondents who stated "other' or did not respond were not included in the analysis. n = 450.
Notes: No significant difference n = 116

Commuting:
Struggle to stay awake travelling between home and mine/permanent home and roster home

Do you struggle to stay awake driving to or from work

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes, on way home from work	185	28.8	33.1	33.1
	Yes, on way to work	10	1.5	1.7	34.8
	Yes, both to and from work	14	2.2	2.5	37.3
	No	333	51.8	59.5	96.9
	Don't drive	18	2.7	3.1	100.0
	Total	560	87.0	100.0	
Missing	System	83	13.0		
Total		643	100.0		

Population: Processing workers in Tasmanian mines n = 643.
Notes: Population estimates of struggling to stay awake whilst driving to and/or home from work.

Rosters at the mines * Do you ever struggle to stay awake while you are driving to or from work?

% within rosters at the mines

		Do you ever struggle to stay awake while you are driving to or from work?		
		Yes, either on the way, way home, or both	No	Total
rosters at the mines	Eventime roster. Mine 1	75.7%	24.3%	100.0%
	Eventime roster. Mine 2	20.0%	80.0%	100.0%
	56 hr rotating roster. Mine 3	25.0%	75.0%	100.0%
	56 hr rotating roster. Mine 4	25.9%	74.1%	100.0%
	56 hr rotating roster. Mine 5	46.6%	53.4%	100.0%
Total		36.8%	63.2%	100.0%

Population: Effective sample size of processing workers in Tasmanian mines n = 464.
Notes: Even time rosters n = 123, 56-hour rotating rosters n = 151, all n = 274
Notes: Significant difference between all rosters $X^2(4) = 38.671$ p = .000 n = 242 and both the even time rosters $X^2(1) = 29.277$ p = .000 n = 97 and rotating rosters $X^2(2) = 7.040$ p = .030 n = 145

Rosters at the mines * Do you ever struggle to stay awake while you are driving from your permanent home to where you live on roster?

% within rosters at the mines

		Do you ever struggle to stay awake while you are driving from your permanent home to where you live on roster?		
		Yes, either on the way, way home, or both	No	Total
rosters at the mines	Eventime roster. Mine 1	50.0%	50.0%	100.0%
	Eventime roster. Mine 2	38.5%	61.5%	100.0%
	56 hr rotating roster. Mine 3	31.3%	68.8%	100.0%
	56 hr rotating roster. Mine 4	7.7%	92.3%	100.0%
	56 hr rotating roster. Mine 5	54.8%	45.2%	100.0%
Total		39.6%	60.4%	100.0%

Population: Effective sample size of processing workers in Tasmanian mines n = 464.
Notes: Even time rosters n = 123, 56-hour rotating rosters n = 151, all n = 274
Notes: Significant difference between all rosters $X^2(4) = 12.092$ p = .017 n = 192 the and rotating rosters $X^2(2) = 11.020$ p = .004 n = 103