

Predictors of Workplace Absenteeism in Cancer Care Workers

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A. Carosi, N. Lightfoot, K. Alkema

Overview

- Background
- Objectives
- Methodology
- Results
- Conclusion

Sickness Absence Definition

- "the allocation of time across non-work activities when an individual is expected to be working"

(Goodman *et al.*, 2005)

- Sickness absence refers to "absences that are avoidable, habitual, & unexpected"

(Statistics Canada, 2005)



Background

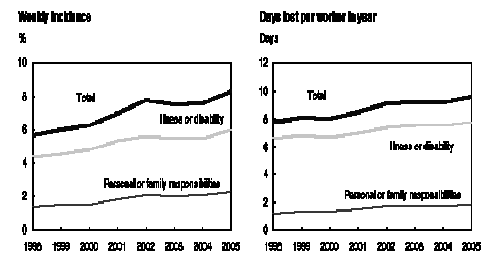


Figure 1 Work absence rates, 1997 to 2005
(Labour Force Survey, Statistics Canada, 2005)

Background



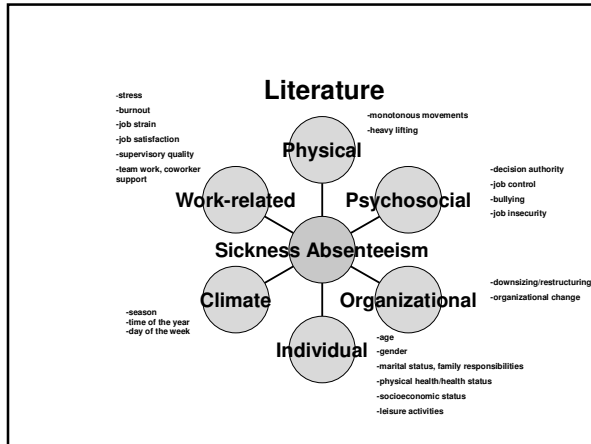
- Major concern of health care settings & organizations
- Health care workers have higher absent rates vs. workers in other industries (Statistics Canada, 2005)
- High levels of absenteeism related to burnout, work-overload, job strain & stress in health care workers (Grunfeld *et al.*, 2000)

Workplace Relevance

- High economic costs
- Reduced organizational efficiency
- Reduced employee health & well-being
- Reduced coworker performance
- Shortage of highly trained professionals
- Reduced patient care quality




Absenteeism costs hundreds to millions of dollars per year



Study Objective

- Paucity of research in health care settings
- The aim of this study is to identify predictors of high sickness absence in cancer care workers




Methodology

Study Inclusion Criteria:

- Cancer care workers employed January 1st, 1998 - December 31st 2003 at Northeastern Ontario Regional Cancer Centre, Sudbury, Ontario
- 12 months cumulative work experience
- Employees eligible for benefits

Data collection:

- Ethics approval (Tri-council REB of HRSRH)
- Passive consent
- Employee Attendance Records
- Human resource databases



Methodology

Seasonal Absence:

- Calendar months grouped into four three-month seasons
- January-March, April-June, July-September, and October-December
- Expressed using the mean sickness absence & standard error for each season

Methodology

Daily Absence:

- Calculated total days of sickness absence for each day of the week (Monday-Friday) per worker
- Expressed using the mean sickness absence & standard error for each day of the week

Methodology


Sickness Absence:

$$= \frac{\text{total number of absence events}}{\text{total number of days at risk}} \times 365 \text{ days}$$

Sickness Absence Duration:

$$= \frac{\text{total number of days absent}}{\text{total number of days at risk}} \times 365 \text{ days}$$

Mean duration:

$$= \frac{\text{number of days absent}}{\text{number of absence events}}$$


Statistical Analysis

- SPSS 12.0
- Simple frequencies, percentages, & cross-tabulations
- Logistic regression analysis
- Statistical significance $p < 0.05$

Results

- Complete data 244/285 (85.6%) cancer care workers
- Refusal (n=10)
- Did not meet study criteria (n=31)

Average absence per employee per year

- 3.93 absence events per year
- 7.62 sickness absence days per year
- 2.19 days per absence event
- 98.4% paid sickness absence

Results

Mean age: 38.6±8.1 years

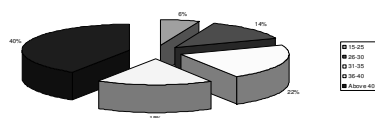


Figure 2 Age distribution of cancer care workers (n=244)

Results: Sociodemographics (n=244)

Gender

- Male: 22.5%, Female: 77.5%

Job Level

- Low: 75.4%, High: 24.6%

Employment Type

- Permanent: 78.3%, Temporary: 21.7%

Sub-program

- Clinical: 60%, Non-clinical: 32%, Administration: 8%

Employment Status

- Full-time: 85.7%, Part-time: 14.3%

Duration of Employment

- <5 yrs: 38.1%, 5 yrs+: 61.9%
- Mean duration: 8.4±5.3 years

Seasonal variation in sickness absence

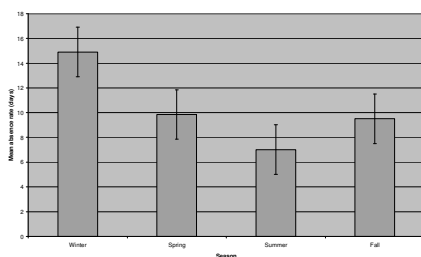


Figure 3 Sickness absence by season expressed using the mean absence events & standard error

Daily variation in sickness absence

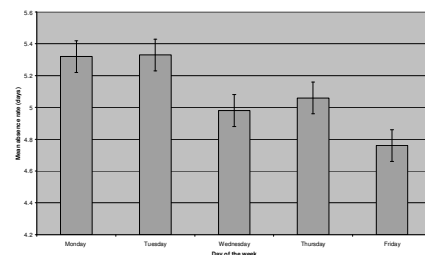


Figure 4 Daily variation in sickness absence expressed using the mean sickness absence (days) & standard error

**Results: Sickness Absence Events
Odds Ratio (OR) & 95% Confidence Intervals (95% CI)**

Variable	Group	High SA (n)	Low SA (n)	OR estimate (95% CI)
Age	<40	82	53	2.17 (1.21-3.87)
	>40	48	60	
Gender	Male	14	41	0.28 (0.13-0.60)
	Female	116	72	
Job Level	Low	114	70	2.54 (1.22-5.27)
	High	16	41	
Duration of Employment	<5 yrs	39	53	0.40 (0.22-0.72)
	>5 yrs	91	60	

Not retained in model: employment type (permanent vs. temporary, employment status (full-time vs. part-time), sub-program (clinical, non-clinical vs. administration)
High SA: sickness absence of 3 or more events per year
Low SA: sickness absence of less than 3 events per year
Low job level: multicompetency level 9-16, approximately less than \$60,000
High job level: multicompetency level over 16, approximately greater than \$60,000

**Results: Sickness Absence Duration
Odds Ratio & 95% CI**

Variable	Group	High SA (n)	Low SA (n)	OR estimate (95% CI)
Age	<40	73	63	1.70 (0.95-3.07)
	>40	47	61	
Gender	Male	12	43	0.32 (0.15-0.70)
	Female	108	81	
Employment Type	Permanent	101	90	1.93 (0.95-3.92)
	Temporary	19	34	
Job Level	Low	107	77	3.38 (1.57-7.28)
	High	13	45	
Duration of Employment	<5 yrs	33	60	0.39 (0.21-0.71)
	>5 yrs	87	64	

Not retained in model: employment status (full-time vs. part-time), sub-program (clinical, nonclinical vs. administration)
High SA: sickness absence of 5 days or more per year
Low SA: sickness absence of less than 5 days per year
Low job level: multicompetency level 9-16, approximately less than \$60,000
High job level: multicompetency level over 16, approximately greater than \$60,000

**Results: Mean Duration Sickness Absence
Odds Ratio & 95% CI**

Variable	Group	High SA (n)	Low SA (n)	OR estimate (95% CI)
Age	<40	51	85	0.67 (0.37-1.20)
	>40	53	55	
Gender	Male	14	41	0.47 (0.22-1.03)
	Female	90	99	
Employment Type	Permanent	91	100	2.11 (0.99-4.51)
	Temporary	13	40	
Job Level	Low	88	96	2.20 (1.01-4.81)
	High	16	42	
Sub-program	Clinical	72	74	9.55 (2.03-44.95)
	Non-clinical	30	49	
	Administration	2	17	
Duration of Employment	<5 yrs	28	65	0.45 (0.25-0.82)
	>5 yrs	76	75	

Not retained in model: employment status (full-time vs. part-time)
High SA: sickness absence of 1.5 days or more per absence event per year
Low SA: sickness absence of less than 1.5 days per absence event per year
Low job level: multicompetency level 9-16, approximately less than \$60,000
High job level: multicompetency level over 16, approximately greater than \$60,000

Discussion

- Study findings may not be generalizable, but valuable
- Seasonal absence may be an important indicator of workplace absenteeism especially in the winter months
- Health care managers need to be aware of high workplace absenteeism especially in employees under the age of 40 years, female workers, permanent employees, clinical workers, & short-term employees

Conclusion

- Future studies might also incorporate qualitative methods & quantitative methods in order to explore other factors related to workplace absenteeism

Acknowledgements

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