

The effect of working in an infection isolation room on hospital nurses' job satisfaction

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Introduction

- ✓ All patients colonized or infected with Carbapenemase-producing *Klebsiella pneumoniae* (KPC):
 - to be placed under contact precautions
 - in a dedicated isolation room with a dedicated nursing staff
- ✓ Working in isolation has various consequences on nurses:
 - subsequent loneliness at work
 - inferior work performance
 - feelings of social vulnerability, professional isolation
 - tendency to leave and higher burnout
- ✓ Impact of prolong working on isolation room nurses has not been established

Aim: To examine the relationships between personal work experience, feelings of loneliness, perceived knowledge of KPC, professional functioning level and job satisfaction among nurses working on the dedicated staff of isolation rooms in a large medical centre in central Israel.

Methods

Sample: 87 registered nurses who had worked in the KPC isolation room during the previous two and a half years. 77% - women; 62% had an academic BA/BsN in nursing. Ages ranged from 24-60, with a mean age of 40 (SD=10.20); mean seniority at work was 15 years (SD=12.61). 51% of the nurses were born in Israel, 56% in the former USSR. 69.5% of the nurses reported receiving infection control training during the previous two years.

Tools: The self-administered questionnaire comprised 4 sections: (a) job satisfaction ($\alpha = 0.88$); (b) perceived knowledge about KPC infection ($\alpha = 0.85$); (c) personal experience of working in a dedicated isolation room ($\alpha = 0.90$); (d) feelings of loneliness at work ($\alpha = 0.68$); (e) the respondents' perception of their professional functioning in the isolation room ($\alpha = 0.67$) and (f) the respondent's demographic data.

Procedure:

- A pilot study - 10 nurses from internal medicine departments
- The final questionnaire was then distributed to 107 working
- Those who gave their informed consent were given the questionnaire
- The response rate was 93%.

Table 1: Items in the *Personal experience of working in a KPC isolation room* questionnaire. The lower the mean score of all items, the more positive was nurses' attitude toward working in a KPC isolation room.

Working in a KPC isolation room is characterized by...	Mean	SD
A feeling of professional independence	3.96	1.05
A sense of alienation	2.78	1.34
Is seen as a punitive measure	2.01	1.13
A sense of calm and serenity	3.23	1.27
Being uninformed on what is happening in the ward	2.96	1.32
A feeling of loneliness	3.17	1.51
A sense that time does not pass	2.83	1.39
A burden of responsibility	3.01	1.31
Fear of enclosed spaces	1.93	1.35
A sense of exploitation	1.77	1.15
A feeling of being in prison	2.25	1.45
A sense of social isolation	2.65	1.49
Being labelled as "contaminated"	2.63	1.54
Boredom	2.67	1.44
Anger	1.98	1.21

*p < 0.05; 1-5 scale, 1-strongly disagree, 5-strongly agree

Results

The mean scores for the main study variables for the whole sample are given in Table 2.

Table 2:

Research variables	Mean	SD	Scale range
1. Job satisfaction	4.23	.55	1-5
2. Personal experience of working in KPC isolation room	2.51	.77	1-5
3. Feeling of loneliness	2.59	2.32	1-4
4. Perceived knowledge about KPC infection	4.28	.58	1-5
5. Perceived professional functioning	3.87	.62	1-5

Male nurses ranked their professional functioning higher than female nurses (M=4.13 versus 3.79; $t=2.35$, $p<.05$) and former USSR-born nurses reported a better experience of working in an isolation room than their Israeli-born colleagues (2.28 v 2.60, $t=2.17$, $p<.05$). There were no significant differences between nurses on other socio-demographic variables. The results of the correlation analysis between the main study variables are given in Table 3.

Table 3: Relationships between variables (n=87)

Research variables	1	2	3	4
1. Feeling of loneliness	-----			
2. Personal experience of working in KPC isolation room	.38**	-----		
3. Perceived knowledge about KPC infection	-.05	-.15	-----	
4. Perceived professional functioning	-.29**	-.32**	.30**	-----
5. Job satisfaction	-.16	-.40**	.42**	.45**

*p < .05; **p < 0.01

- Regression analysis: only the quality of the personal experience of working in a KPC isolation room ($t=3.32$, $B=-.24$, $\beta=-.37$, $p<.01$) and perceived level of professional functioning variables predicted the dependent variable ($t=4.28$, $B=.37$, $\beta=.48$, $p<.001$), explaining 33% ($R^2=.327$) of the variance in nurses' job satisfaction.

Conclusions and Implications for nursing management

Managers who assign nurses for work in isolation rooms need to take into account that:

- Prolonged working in isolation from colleagues can negatively impinge on both performance and job satisfaction.
- It is essential to consider refraining from lengthy nurse assignment to the isolation room, providing them with the option of performing general duties on the ward
- Training strategies should address informing nurses of possible effects of work in isolation, and providing ways of coping with loneliness while working in an isolation room.



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