The influence of personal characteristics on student nurse health attitudes

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KEY WORDS

Student nurses, personal characteristics, health attitudes, feelings, beliefs, intentions to act.

ABSTRACT

Objectives
To measure student nurses' attitudes toward health and identify the influence of demographic characteristics and psychological wellbeing on these attitudes.

Design
A cross-sectional survey between April and June 2006.

Setting
An Australian University in South-East Queensland.

Subjects
369 students enrolled in the Bachelor of Nursing, Pre-Registration Program.

Main outcome measures
Attitudes to health, measured by the Health Attitude Scale-form B and psychological wellbeing, measured by the General Health Questionnaire-28.

Results
Student nurses were generally positive in their 'feelings', 'beliefs' and 'intentions' towards health behaviour. There was a significant difference in 'feelings' towards health by year of BN program ($F(2,336) = 3.128$, $p<0.05$), with respondents becoming more positive as they progressed through their study. Those not in employment had more positive 'feelings' towards health than those in employment ($F(1,366) = 5.642$, $p<0.05$) and the better reported psychological health, the more positive the 'feelings' ($F(2,366) = 3.862$, $p<0.05$). Older age groups reported more positive health 'beliefs' ($F(3,350) = 4.414$, $p<0.01$) and 'intentions to act' ($F(3,350) = 2.986$, $p<0.05$). Males were more positive than females in their health 'beliefs' ($F(1,337) = 4.246$, $p<0.05$).

Conclusions
Individual characteristics influenced student nurses' attitudes towards health and measurement which incorporates 'feelings', 'beliefs' and 'intentions to act' as components of health attitudes provide a clearer picture of where these influences lie. Further research is advocated to replicate these findings in a broader sample and determine their implications in the design of primary prevention strategies.

INTRODUCTION

Medical advances in modern society have reduced the impact of infectious disease in industrialised nations and instead chronic disease, lifestyle and human behaviour have taken the mantel as the main contributing factors in cause of death (Torabi et al 2004). A greater effort to reduce and prevent the occurrence of disease, disorders and injuries is keenly recognised and attempts are being predominantly targeted through primary preventions including health promotion, education and protection. These prevention strategies are increasingly focused on changing attitudes as research has shown attitudes are central in determining health related behaviours and lifestyle choices (Torabi et al 2004). However, the exact nature of the attitude behaviour relationship is complex and has been the focus of research interest for a number of decades. Rosenberg and Hovland (1960) were first to posit the Three Component Theory of Attitudes, which holds that attitudes are multidimensional and comprised of: 'beliefs' (cognition); 'feelings' (affect); and 'intentions to act' (behavioural intention). A number of different theories have since been postulated including The Theory of Reasoned Action (TRA) (Ajzen and Fishbein 1980) and The Theory of Planned Behaviour (TPB) (Ajzen 1988). Both theories argue that a person's 'intention to act' is the biggest influence on subsequent behaviour and is central in the attitude behaviour relationship. Much research exists, including a number of large meta-analyses (Armitage and Connor 2001; Hausenblas et al 1997; Godin and Kok 1996; Ajzen 1991; Van den Putte 1991), which supports TRA and TPB as good means of understanding the intention behaviour relationship. However, the importance of 'feelings' should not be underestimated, as psychological evidence has shown these are typically the first reaction to a situation and subsequently guide the cognitive processing, intention to act and behaviour (Loewenstein et al 2001; Slovic et al 2004).

Nurses' Attitudes to Health

Nurses are the largest professional group within healthcare and are often viewed as public role models and health advocates (Smith and Legget 2007). This view rests on the assumption that nurses will have positive attitudes towards health, be better at self care and effective at promoting healthy lifestyle choices to others. This however, is not necessarily so with studies revealing that some nurses regularly engage in unhealthy practices that can compromise their ability and desire to promote healthy lifestyles (Smith and Legget 2007; Purcell et al 2006). There are a limited number of studies that have sought to explore nurses' attitudes towards health and those that have tend to focus on attitudes towards specific health related behaviours and not on the measurement of health attitudes generally (Aalto et al 2005; McCann et al 2005; Clark et al 2004; Callaghan 1999; Nagle et al 1999). In light of this and the privileged position of nurses to act as health advocates, a greater understanding of nurses' attitudes towards health is essential for successful implementation of primary prevention strategies. Furthermore, an understanding of student nurses' attitudes may be useful in designing curriculum to assist in shaping graduates' health attitudes.

Factors Influencing Societal Health Attitudes

Attitudes are multidimensional and influenced by a broad range of factors, with a review of the literature highlighting the following factors as possible key influences.

Age: Studies have found younger people are less concerned about future health issues than their senior counterparts. For example, a study has shown younger cohorts (<34 yrs and 35-54 yrs) believed they were unlikely to experience health hazards, such as blood pressure or heart disease, when compared to people aged 55 or over (Petrovici and Ritson 2006). Another study found experimental involvement in many health threatening activities was regarded as less harmful by teenagers than by adult parents (Cohn et al 1995).

Gender: Men are more likely than women to engage in behaviours that increase the risk of disease, injury and death and they are more likely to adopt attitudes that undermine their health and wellbeing (Courtenay 2003). Women report higher levels of depression,

psychiatric disorders, distress and a variety of chronic illnesses than men (Pryjmachuk and Richards 2007) but have stronger beliefs they have control over their future health and that personal actions contribute to good health (Courtenay 2003).

Employment in Health Care Settings: Student nurses are often employed in health care settings prior to and during their nursing education, typically as assistants in nursing. A Norwegian study (Eriksen 2006) found workload, physical demands, exposure to role conflicts, threats and violence were higher in nursing homes than any other areas where nurses' aides were employed. Positive challenges and control at work was also found to be lower in nursing homes (Eriksen 2006).

Psychological Wellbeing: University students in general tend to experience greater levels of distress when compared to similar non-student populations and nursing students specifically report high levels of distress (Pryjmachuk and Richards 2007; Jones and Johnston 1997). However, there is a paucity of research investigating the potential relationship between the attitudes of nursing students towards health and their psychological wellbeing. A Japanese study investigated the relationship between workers' attitudes towards health, lifestyle and mental health (Irie et al 1997), finding favourable health practices and attitudes towards health might help to maintain positive mental health.

METHOD

Aim

This study aimed to measure the health attitudes of student nurses at an Australian University and identify the potential influence that demographic characteristics and psychological wellbeing have on these attitudes. The study sought to address two research questions:

1. How do student nurses rate their general health attitudes?
2. Which personal and psychological wellbeing characteristics significantly influence student nurses' general health attitudes?

Design

A cross-sectional survey was used to collect data between April and June 2006. This methodology was employed as it enabled health attitudes to be objectively measured on standardised instruments. Ethical approval for the study was granted by the University human research ethics committee.

Sample

All students enrolled in the Bachelor of Nursing (BN), Pre-registration Program at an Australian University were eligible to complete the survey (n=1495). Surveys were completed and returned to a locked box during tutorials, with students informed that involvement was voluntary, responses were anonymous and completion implied informed consent.

Data Collection

Personal Characteristics: The following demographic information was collected about each student nurse who completed the survey: age; gender; marital status; employment status; number of hours in employment; current occupation; previous health employment; and year of BN program.

Health Attitude Scale – Form B (HAS-form B):The HAS-form B (Torabi et al 2004) was developed to measure college students' attitudes towards health. The instrument has 15 items which relate to three subscales: 'feelings regarding health and quality of healthy life', 'beliefs regarding disease prevention and health lifestyle' and 'intentions to act for better health'. A five-point Likert scale, ranging from 'strongly agree' to 'strongly disagree', is used to rate each statement. Negatively worded responses are reversed, with higher total scores on each of the three subscales representing a better attitude towards health. Cronbach's alpha has been reported as 0.87 and the subscales of 'feelings', 'beliefs' and 'intentions to act' have demonstrated good internal consistency (Cronbach's alpha = 0.81, 0.73 and 0.75 respectively). The HAS-form B appears to have been used in limited research (Wang et al 2008). This study, therefore, offers an opportunity to test the instrument in an Australian setting and with nursing students.

General Health Questionnaire (GHQ-28):The GHQ-28 (Goldberg 1978) is a 28 item, self-administered screening instrument that is used to detect psychological distress in clinical and non-clinical settings. In this study the scoring was undertaken according to the simple GHQ scoring method, which involves binary scoring (0-0-1-1) for case identification (Richard et al 2004; Goldberg and Hillier 1979) and the wording of items means that scores do not need to be reversed, thus, the higher the score the better the self-reported psychological wellbeing. The GHQ-28 has been extensively validated and the internal reliability is high (Cronbach's alpha .90) (Hamilton and Schweitzer 2000).

Data Analysis

The Statistical Package for the Social Sciences (SPSS Inc., Chicago, IL, USA), Version 17.0 was used to analyse survey data that were collected. Basic frequencies were established for all survey questions and open responses were coded. Mean scores on the HAS-form B subscales were computed. Factor analysis, with maximum likelihood extraction and direct oblimin rotation, was applied to the data to determine if the HAS-form B 15 items loaded well onto the three subscales. One-way ANOVAs were conducted on the three subscale mean scores to test for differences in responses and for each attitudinal subscale to explore their relationship with demographic variables and psychological wellbeing.

FINDINGS

A total of 379 student nurses completed the survey, resulting in a 25 per cent response rate. However, due to the level of missing data in ten cases (>50%) 369 responses were analysed. As seen in Table 1, the mean age of respondents was 28, with the majority being: female (89.1%); either single (53.8%) or married (25.3%); and employed (74.2%) in a casual/contract (62.3%) or part-time (32.6%) position involving less than 24 hours of work per week (82.8%). Roughly half of the sample reported previous health employment experience (49.3%), namely as either a nursing assistant (54.1%) or an enrolled nurse (19.3%). A greater number of first year BN students completed the questionnaire (Y1 = 42.0%; Y2 = 28.2%; Y3 = 29.8%) and this was probably related to the higher number of this year group attending tutorials at time of data collection.

Table 1: Sample Characteristics

		(n)	(%)
Gender (n=339)	Female	302	89.1
	Male	37	10.9
Marital status (n=368)	Single	198	53.8
	Married	93	25.3
	Defacto	50	13.6
	Divorced	22	6.0
	Widowed	5	1.4
Year of BN Program (n=369)	Year 1	155	42.0
	Year 2	104	28.2
	Year 3	110	29.8
In employment (n=368)	Yes	273	74.2
	No	95	25.8
Employment status (n= 273)	Casual/contract	170	62.3
	Part-time	89	32.6
	Full-time	9	3.3
	Seasonal	4	1.5
Weekly hours worked (n=273)	1-8 hours	57	20.9
	9-16 hours	106	38.8
	17-24 hours	63	23.1
	25-32 hours	36	13.2
	33-40 hours	10	3.7
	40+ hours	1	0.4
Previous health employment (n=367)	Yes	181	49.3
	No	186	50.7
Age (n=354)	Mean = 28		
	Standard Dev. = ±10.3		
	Range = 17- 59		

General Health Attitudes

An exploratory factor analysis undertaken on HAS-form B found three factors emerged from analysis, which loaded well onto the subscales 'feelings', 'beliefs' and 'intentions to act'. As expected, the correlation matrix suggested that the three factors were interrelated, although the 'intentions to act' factor appeared most dependent of 'feelings' (0.095) and 'beliefs' (0.194).

Student nurses were generally positive in their 'feelings', 'beliefs' and 'intentions' towards health behaviour (see Table 2). There were significant differences in responses on the health attitude subscales. Specifically, there were differences between 'feelings' and 'beliefs' ($F(15,353) = 2.471$, $p<0.01$), 'feelings' and 'intentions' ($F(14,354) = 11.659$, $p<0.001$) and 'beliefs' and 'intentions' ($F(14,354) = 10.448$, $p<0.001$). These differences showed that student nurses had most positive 'feelings' towards health, followed by 'beliefs' and 'intentions to act' (means: 4.3, 4.1 and 4.0 respectively).

Table 2: Mean scores on the HAS-Form B subscales

	Feelings		Beliefs		Intentions to Act	
	(n)	(%)	(n)	(%)	(n)	(%)
'Strongly Agree' (5)	139	37.7	95	25.7	68	18.4
'Agree' (4)	204	55.3	216	58.5	229	62.1
'Undecided' (3)	26	7.0	56	15.2	68	18.4
'Disagree' (2)	0	0	2	0.5	4	1.1
'Strongly Disagree' (1)	0	0	0	0	0	0
Total	369	100	369	100	369	100

Notes to table: Due to rounding, totals may not add up to 100%

Table 3: Means and standard deviations (SD) on the HAS-form B subscales by age, gender, year of BN program, employment and psychological wellbeing

		Feelings		Beliefs		Intentions to Act	
		Mean	SD	Mean	SD	Mean	SD
Age	17-25	4.22	.568	3.98	.584	3.90	.589
	26-35	4.33	.526	4.14	.539	3.94	.560
	36-45	4.31	.520	4.24	.554	4.12	.518
	46-60	4.28	.392	4.23	.603	4.12	.588
Gender	Male	4.39	.536	4.26	.602	3.90	.666
	Female	4.25	.527	4.05	.573	3.99	.568
Year of BN Program	Year 1	4.34	.498	4.02	.605	3.94	.592
	Year 2	4.23	.571	4.06	.615	3.95	.556
	Year 3	4.18	.555	4.13	.517	4.00	.615
Employment: status	Employed	4.22	.545	4.05	.581	3.94	.588
	Not employed	4.37	.508	4.12	.585	4.01	.583
Employment: contract	Full-time	4.56	.357	4.22	.463	4.22	.543
	Part-time	4.17	.505	4.06	.580	3.90	.562
	Casual/ contract	4.23	.570	4.04	.585	3.95	.609
	Seasonal	4.20	.589	3.65	.790	3.90	.622
Previous health employment	Yes	4.23	.578	4.08	.601	3.95	.577
	No	4.29	.499	4.06	.570	3.97	.603
Psychological wellbeing (GHQ-28)	Low (0-4)	3.60	.872	3.47	.702	3.60	.400
	High (5-11)	4.07	.637	4.10	.760	3.76	.675
	High (12-28)	4.28	.526	4.07	.569	3.98	.582

Influence of Personal Characteristics

Student nurses' 'feelings' towards health appeared to be the attitudinal component influenced the most by personal characteristics. There was a significant difference in 'feelings' towards health by year of BN program ($F(2,336) = 3.128$, $p<0.05$), with students becoming more positive as they progressed through their study (see table 3). Those not in employment were found to have more positive health 'feelings' towards health than those in employment ($F(1,366) = 5.642$, $p<0.05$). Finally, the higher the participant score on the GHQ-28, the more positive the student nurses' 'feelings' towards health ($F(2,366) = 3.862$, $p<0.05$).

Attitudinal 'beliefs' and 'intentions' were also influenced by personal characteristics, although seemingly to a lesser extent. Respondents in older age groups reported more positive health 'beliefs' ($F(3,350) = 4.414$, $p<0.01$) and 'intentions' ($F(3,350) = 2.986$, $p<0.05$). There was also a significant difference in the health 'beliefs' of male and female student nurses ($F(1,337) = 4.246$, $p<0.05$), with males being more positive (see Table 3).

Previous health employment experience and hours worked in current employment did not account for significant differences across the attitude subscales.

DISCUSSION

Nurses are the largest professional group within healthcare and are often viewed as public role models for healthy behaviour (Smith and Legget 2007). Their role in primary prevention strategies that aim to promote positive health choices is arguably key and if the success of such strategies is to be maximised, a greater understanding of nurses' own personal attitudes towards health is needed. This may assist in the design of curriculum to help improve graduates' health attitudes and educate for the health advocacy role. This study sought to offer some initial insights into the potential influence that personal characteristics have on health attitudes of student nurses' at an Australian University.

Findings suggest the more life experience and health related learning a student nurse has (i.e. older and later stage of BN program) the more positive her/his attitude's to health. Continuous education, therefore, may be important in promoting positive attitudes in students as they progress into graduate nursing. Integrating a strong focus on the links between education and successful health promotion into the BN curriculum may also encourage nurses to be 'learners for life' and to be reflective of their role as primary health advocates. Interestingly, respondents not in employment were most positive in their feelings towards health than those in employment. A likely reason for this is the extraneous stress placed on students when they both work and study, with this stress affecting their feelings toward health. This latter theory fits with the finding that the better the student's reported psychological wellbeing, the more positive their feelings towards health. As such, adequate support structures should be implemented to maximise psychological wellbeing and ensure that the nurse is supported as they move through their career. Finally, the finding that male student nurses had more positive 'beliefs' about health than their female counterparts fits with previous research that has shown males perceive themselves as less susceptible to health risks than females. It may be that this more positive perception of health translates into more positive health 'beliefs' of males, as shown in this study.

The findings also provide important information about health attitudes and the aspects that comprise it. Firstly, it is not unexpected that student nurses would have positive attitudes to health as it makes intuitive sense that a health conscious individual with a positive attitude will gravitate to work in a health related profession. Secondly, the HAS-form B, in which attitude is measured in terms of its three components appears to be an appropriate tool to survey health attitudes. Student nurses varied in their positivity on the three subscales and these findings may have been undetected if a global attitudinal measurement had been used. Finally, the finding that 'feelings' were the most positive component and the most influenced by personal characteristics fits with previous literature that posits 'feelings' are typically the first process in reacting to a situation and forming an attitude (Slovic et al 2004; Loewenstein et al 2001). It may be the BN program for a student nurse is an important time when 'feelings' towards health are constructed and frames their attitudes towards health and effectiveness in promoting healthy lifestyle choices. Positive messages about health and a healthy lifestyle are important during these early years of study as it may indirectly impact on the success of primary prevention strategies.

In interpreting these findings it is important to consider two main issues that may have limited the study.

Firstly, the research was conducted at one Australian University making the wider generalisability of the results to other universities and countries difficult. Also, although the personal characteristics chosen to be explored were concluded from the review of literature, the results may be limited by those chosen.

CONCLUSIONS

A greater effort is required to reduce the number of chronic diseases which are often caused through lifestyle choice. Nurses are in a privileged position to model and advocate healthy lifestyles and building an understanding of the relationship between student attitudes and health behaviour will give direction to how best promote positive health attitudes to undergraduate nurses. This study found personal characteristics can influence student nurses' attitudes towards health and measuring attitudes in a three-component manner is important. Further research is advocated to replicate these findings in a broader sample and determine their true implications in the design of primary prevention strategies.

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