

**Medical, Nursing and Pharmacy Students' Attitudes
Toward Alcoholism in Queensland, Australia**

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by

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INTRODUCTION

Individuals in the medical related professions such as doctors, nurses and pharmacists will generally have contact at some point in their career with alcohol abusers or alcoholic persons. (1-3) Moreover, studies with a variety of medical and helping professionals, indicate that their attitudes towards alcoholics or alcoholism have a significant relationship to interpersonal interactions with and treatment outcomes for alcoholic persons. It is thought by many that a major impediment to achieving better help or referral for the alcoholic, on the part of community helping professionals, is their attitude towards alcoholism. (4-6)

In recent years various studies have been accomplished outside of Australia among community helping professionals and their attitudes towards alcoholism. In examining their attitudes by the demographic variables of year in school, sex, religion and profession some differences have been reported. Ferneau and Gertler (7) found that as psychiatry students go through their residency, they become more negativistic towards alcoholics, especially in the aspect that alcoholism is not an illness. Eron (8) found no difference between senior and freshmen medical students on humanitarian attitudes towards the alcoholic. However, fewer humanitarian feelings were found in senior nursing students as compared to freshmen students. Moody (9) found no difference between final year and first year nursing students on attitudes towards alcoholism; however, Ferneau and Morton (10) found that between one year and the next nursing students were less inclined to view alcoholism as an illness.

When sex and religious variables have been examined, Kilty (11) found that male social workers and Protestants were more accepting of the disease concept of alcoholism than females and other religious groups. Linsky (12) found that the religious groups who were most favourable towards drinking, such as Catholics, were also more favourable in regards to alcoholism.

Nurses from a Catholic institution were found by Gurel and Spain (13) to have more positive feelings towards alcoholics than nurses at a non-denominational institution.

There are differences between community helping professionals on how they view the etiology of alcoholism. Lemos and Moral (14) found that psychiatrists compared to nurses, social workers and physicians were less likely to view alcoholism as an illness. Knox (15) found that fewer psychologists and psychiatrists compared to social workers defined alcoholism as a disease. In other studies by Knox (16,17) she also found that psychologists and psychiatrists were less likely to view alcoholism as a disease and more likely to view it as a behaviour problem or character disorder. Among physicians Wolf et al. (18) found that they tended not to view the alcoholic as having a physical illness and ignored the psychological aspects of the disease, and Ferneau and Morton (10) found that nurses more strongly than the norm believed that alcoholism was an illness.

Various studies have indicated that community helping professionals have negative attitudes towards alcoholics. MacDonald (19) found that physicians had unfavorable attitudes towards alcoholics and found them not as rewarding to treat. Sowa (20) with a study of various helping professionals, found that doctors, social workers and psychiatrists compared to nurses and clergy had more negative attitudes towards alcoholics and alcoholism. On the other hand Schmid and Schmid (21) found that nursing students had less accepting attitudes towards alcoholics than physically disabled persons. Many helping professionals have been found to have moralistic attitudes towards alcoholics. Ferneau and Morton (10) found that nursing students felt that alcoholics were more weak-willed than the norm. Moody (9) and Chodorkoff found that authoritarian nursing students were more likely to have negative attitudes towards alcoholics. Likewise Gray et al. (22) and Mendelson et al. (4) found that physicians were more apt to have less humanistic attitudes

towards alcoholic people compared to other groups. On the other hand, Pittman and Sterne (23) found that social workers were least moralistic followed by physicians, both of whom were less moralistic than either nurses or clergy.

While studies have been published in other countries in the area of attitudes towards alcoholism, by practising or student helping professionals, a review of the literature reveals no such investigation of Australian practising or student medical professional's attitudes towards alcoholism or alcoholics.

Thus the purpose of this study was to investigate the attitudes towards alcoholism and alcoholics of medical, nursing and pharmacy students in Queensland, Australia. This present report forms part of a larger study of alcohol and drug-taking behaviors and attitudes towards alcoholism of pre-professional students. (24,25)

METHODS

Sample

All first and final year students from the pharmacy school, the first and fourth year students at the medical school (the last year for which medical students are together in large lecture classes) at the University of Queensland, and the first and final year students in four nursing schools representing a large and a small public and private institution in Brisbane, were asked to participate in this project.

Before administration of the questionnaire, the purpose of the study, procedures used to safeguard students anonymity and the fact that participation was voluntary were discussed. From the total possible number of medical, nursing and pharmacy students 32 individuals either did not wish to participate in the study or returned questionnaires with most of the data missing. This percentage ranged from 4% for medical and 9% for the pharmacy and nursing students. The final sample included 791 students, of which 431 were medical, 213 nursing

and 147 pharmacy students. Of these students 48.7% were male and 51.3% female, 51.3% first year students and 48.7% were last year students. Of the total sample 53.3% indicated that religion was important to them and 46.7% did not feel that religion was important to them.

The Questionnaire

Items to obtain demographic information such as sex, year in school and importance of religion were constructed based on WHO recommendations for standardization of research in the areas of drugs and alcohol. (26) The Tolor and Tamerin (27) Attitudes Towards Alcoholism Questionnaire (ATA) to gather information about attitudes towards alcoholism was used. It has 24 items which are divided into six independent scales. It is easy to administer and has been used in previous studies with helping professionals. (28) The scales include: Psychological Etiology, which refers to statements that embrace the notion that the cause of alcoholism is psychological: Physical-Genetic Etiology, which applies to statement concerning the idea that alcoholism has physical or inherited causes; Moral Weakness, which consists of assertions embracing the view that the alcoholic has weak moral character; Medical illness which refers to propositions articulating the notion that the alcoholic is sick and that alcoholism can be treated as an illness; Humanism, which contains assertions supporting a kind, fair and humanistic treatment of the alcoholic and Social Rejection, which refers to statements that support the view that the alcoholic should be avoided or rejected. The higher the score on a particular scale the more the individual agrees with the concept. The reliability on the six scales ranged from .62 to .77 and they are only minimally related to sex, age and education of the respondent according to the authors. (27) Details concerning the reliability of the instrument with Australian students are discussed in another report. (24) For the six scales the reliability ranged from .53 to .77.

Calculations

The Statistical Package for the Social Science program (29) was used to calculate t and F scores to determine possible differences between the groups and their attitudes towards alcoholism.

INSERT TABLE 1 ABOUT HERE

RESULTS

Attitudes Compared to the Norm

Table 1 shows the results of the attitude scores for the different courses. On all of the attitude scales except medical weakness there is a significant difference between the norm (based on 135 students) and the groups studied here. (27) For psychological etiology of alcoholism, medical ($t=-2.8$ $df=564$ $p<.05$) and pharmacy students ($t=-2.4$ $df=280$ $p<.05$) scored significantly lower than the norm ($X=12.6$ $SD=2.1$). There was no significant difference for nursing students. For Social Rejection, medical ($t=3.50$ $df=280$ $p<.05$), nursing ($t=3.05$ $df=346$ $p<.05$) and pharmacy ($t=1.8$ $df=280$ $p<.05$) students all scored significantly higher than the norm ($X=9.6$ $SD=2.1$). A significantly lower score was found for medical ($t=-8.1$ $df=562$ $p<.001$) nursing ($t=-2.98$ $df=346$ $p<.05$) and pharmacy ($t=3.33$ $df=280$ $p<.05$) students compared to the norm ($X=10.4$ $SD=2.45$) for physical-genetic etiology of alcoholism. On the moral weakness scale, medical ($t=5.67$ $df=564$ $p<.001$) nursing ($t=5.19$ $df=346$ $p<.001$) and pharmacy ($t=5.5$ $df=280$ $p<.001$) students were significantly more negative compared to the norm ($X=6.7$ $SD=1.9$). Likewise the medical ($t=4.5$ $df=564$ $p<.001$), nursing ($t=-2.52$ $df=346$ $p<.05$) and pharmacy ($t=-5.51$ $df=280$ $p<.001$) students had less humanitarian feelings towards the alcoholic compared to the norm ($X=12.9$ $SD=1.8$).

These Australian students in this sample appear to have more negativistic feelings towards alcoholics and alcoholism than the American sample norm. However, other than for medical students on physical-genetic etiology and pharmacy students for moral weakness, the difference was less than one scale

point. Therefore, even though the differences between the two groups were statistically significant this may not be a practical difference in terms of response towards alcoholism and the alcoholic.

Attitudes by Course

Table 1 shows that there is no significant difference on any of the attitude scales due to course. This appears to be in contrast with other studies which have shown that nurses are more likely to view alcoholism as a psychological or physical illness compared to psychiatrists (14,10) or that physicians are less apt to view alcoholism as a physical illness, (18) are more humanistic (23) and tend to have more negative attitudes (20) than nurses towards alcoholics.

INSERT TABLE 2 ABOUT HERE

Attitudes by Sex

However, Table 2 shows that there is a significant difference ($F=2.4$ $df=2$ $p < .001$) between males in the three courses with male medical students having the lowest score on physical-genetic etiology and female medical students having the lowest scores on the psychological etiology of alcoholism ($F=5.6$ $df=2$ $p < .01$) among females in the three courses. Among pharmacy students females have significantly higher scores on psychological etiology ($t=2.9$ $df=145$ $p < .05$) and humanism ($t=3.4$ $df=145$ $p < .05$) than males. Table 1 shows that females in all of the courses also have significantly higher scores on psychological etiology ($t=-3.6$ $df=752$ $p < .001$) compared to males.

Attitudes by Year in School

When the year in school variable was examined (Table 1) it was found that first year students score significantly higher on the scales which subscribe alcoholism as to physical-genetic illness ($t=5.4$ $df=758$ $p < .01$) and Moral weakness ($t=2.4$ $df=772$ $p < .05$).

Table 2 shows that both first year medical ($t=4.0$ $df=413$ $p<.001$) and nursing students ($t=7.4$ $df=210$ $p<.001$) also scored higher on the belief that alcoholism is a physical-genetic illness and first year medical students score higher in the belief that alcoholism is a medical ($t=3.4$ $df=428$ $p<.05$) and moral ($t=2.1$ $df=419$ $p<.05$) weakness. Last year pharmacy students ($t=3.2$ $df=144$ $p<.05$) were more apt to see alcoholism as a psychological problem. When first year students in all three courses were compared, nurses were found to score the highest in the belief that alcoholism is caused by psychological problems ($F=4.5$ $df=2$ $p<.05$) and pharmacy students scored the lowest, and among last year students, medical students ($F=8.4$ $df=2$ $p<.001$) scored the lowest on this scale (Table 2).

Last year medical students of the three groups also scored the lowest ($F=18.0$ $df=2$ $p<.001$) on the physical-genetic causes of alcoholism. Some studies (9,8) have shown that few differences occur in attitudes towards alcoholics as students go through their medical or nursing courses. However, other studies have shown that as psychiatrists (7) and nurses (10) go through their courses of study they are less apt to see alcoholism as a physical or medical illness. The results of this study appear to support some of these findings. Other studies (8) have shown that nursing students tend to become less humanistic towards the alcoholic which was not found in this study. Final year medical students in this study tended to decrease their feelings that alcoholism was a moral weakness as opposed to studies which have reported more negative feelings towards the alcoholic as medical personnel go through their course of study. (7,1)

Attitudes by Importance of Religion

There are several differences between those individuals who consider religion important compared to those who do not feel that religion is important to them. Individuals who are very religious have higher scores subscribing to the belief that alcoholism is caused by psychological ($t=-4.6$ $df=721$ $p<.001$),

and physical-genetic ($t=-2.5$ $df=752$ $p<.05$) problems and by moral weakness ($t=-2.5$ $df=752$ $p<.05$) compared to non religious persons. For nursing students there were no significant differences due to importance of religion. However, medical students, who felt that religion was important, scored higher on psychological ($t=-2.3$ $df=415$ $p<.05$) and physical-genetic ($t=3.0$ $df=421$ $p<.05$) etiology of alcoholism. They also scored higher on alcoholism being a moral ($t=-3.4$ $df=415$ $p<.05$) and medical weakness ($t=-2.3$ $df=411$ $p<.05$). There were no significant differences among the three courses for the importance of religion on any of the scales. Non-religious nursing students however scored the highest on the psychological etiology of alcoholism ($F=9.3$ $df=2$ $p<.01$) compared to non-religious students in the medical or pharmacy groups. This would appear to support other studies which have suggested that there are differences in attitudes towards alcoholics due to the importance of religion.

SUMMARY

On the whole the medical, nursing and pharmacy students in this sample had more negative feelings towards alcoholics and the cause of alcoholism compared to the American students who were the norm for the instrument. Medical and pharmacy students were less apt to ascribe a psychological etiology to alcoholism and all groups were more socially rejecting and less humanistic towards the alcoholic compared to the norm. They also felt that alcoholism was more of a moral weakness and less of a physical-genetic problem compared to the norm. Though the differences were statistically significant for most of the groups, they were under one scale point which might not have practical significance in terms of interaction on the part of these individuals with alcoholic persons. However, the results could indicate that these students have attitudes towards alcoholics which could cause them problems with referrals and treatment interactions in their professional capacity.

There appears to be few differences due to sex other than females and female pharmacy students were more apt to view alcoholism as a psychological problem compared to males. Female pharmacy students also tended to be more

humanistic than male pharmacy students in their feelings concerning alcoholic persons.

Final year students tended to be more negativistic on several scales compared to first year students. This appears to support other studies which have also reported that students become more negativistic towards alcohol dependent persons and alcoholism as they go through their course of study. Final year students were less likely to believe that alcoholism was a medical illness which could be treated or that it was caused by physical-genetic problems. Last year medical and final year nursing students were less likely to see alcoholism as a physical-genetic problem and last year medical students were less apt to view it as an illness compared to the first year students in these groups. However, pharmacy students in their final year of school were more apt to envision alcoholism as a psychological problem, and final year medical students less likely to view alcoholism as a moral weakness.

When the importance of religion variable was examined, it was found that very religious students were more likely to believe that alcoholism is caused by physical-genetic and psychological problems than non-religious students. This was also true of very religious medical students. Very religious medical students were more likely to feel that alcoholism was a disease and they were found to have more humanistic feelings than non-religious medical students towards the alcoholic. Very religious pharmacy students were more likely to believe that alcoholism was a psychological problem and were more humanistic towards the alcoholic. However, very religious students had more negative moralistic feelings towards the alcoholic compared to students to whom religion was not important.

In view of the fact that there appears to be a difference in these Australian students attitudes towards alcoholism compared to the American norm, it is recommended that more cross-cultural studies be carried out to determine if differences in attitudes among the medical related professions exist in other cultures and if there is a relationship to referral and treatment outcomes for alcoholics

in different cultures which might reflect attitudes towards alcoholism. It is also recommended that individuals in the medical related professions, who have high probability of treating or interacting with alcoholic persons, be given more information on the nature of alcoholism so as to increase their knowledge of the etiology of the disease, and to help them gain more positive feelings towards alcoholic persons, as individuals who can be helped.

TABLE 1.

Comparison of course of study, sex, year in school and importance of religion on attitudes towards alcoholism.

	Psycho- logical	Social Rejection	Physical/ Genetic	Human- itarian	Moral Weakness	Medical Weakness
	X (S.D.)	X (S.D.)	X (S.D.)	X (S.D.)	X (S.D.)	X (S.D.)
COURSE OF STUDY						
Medicine n=431	12.2 (1.9)	10.1 (2.3)	9.2 (2.2)	12.3 (1.9)	7.5 (2.5)	10.1 (2.1)
Nursing n=213	12.7 (1.9)	10.1 (2.4)	9.9 (2.3)	12.5 (1.8)	7.5 (2.5)	10.3 (2.1)
Pharmacy n=147	12.2 (1.9)	10.4 (2.2)	9.8 (2.0)	12.1 (1.9)	7.7 (2.4)	10.2 (1.9)
SEX						
Males n=385	12.1 (2.0)*	12.1 (2.2)	9.3 (2.2)	12.1 (1.9)	7.7 (2.5)	10.1 (2.0)
Females n=405	12.5 (1.9)	10.2 (2.2)	9.6 (2.2)	12.4 (1.9)	7.5 (2.4)	10.2 (2.1)
Year In School						
First n=406	12.3 (1.9)	10.2 (2.4)	9.9 (2.2)*	12.2 (2.0)	7.8 (2.6)+	10.5 (2.1)
Last n=385	12.3 (1.9)	10.2 (2.1)	9.0 (2.0)	12.4 (2.0)	7.3 (2.3)	10.1 (2.0)
IMPORTANCE OF RELIGION						
Very n=422	12.7 (2.0)*	10.2 (2.2)	9.7 (2.3) ⁺	12.2 (2.0)	7.8 (2.3)*	10.0 (2.0)
Not n=369	12.1 (1.8)	10.0 (2.3)	9.2 (2.0)	12.3 (1.9)	7.3 (2.5)	10.3 (2.0)
TOTAL n=791	12.3 (1.9)	10.2 (2.3)	9.5 (2.2)	12.3 (1.9)	7.6 (2.4)	10.2 (2.0)

* $p < .001$

+ $p < .05$

TABLE 2

Sex, year in school and Importance of Religion of medical, nursing, and pharmacy students in relation to attitudes towards alcoholism.

	Psycho- logical	Social Rejection	Physical/ Genetic	Human- itarian	Moral Weakness	Medical Weakness
	X (S.D.)	X (S.D.)	X (S.D.)	X (S.D.)	X (S.D.)	X (S.D.)
SEX						
Medical						
Male	12.2 (1.8)	10.1 (2.3)	9.1 (2.1)	12.3 (2.0)	7.7 (2.5)	10.1 (2.0)
Female	12.1 (1.9)	10.2 (2.1)	9.3 (2.1)	12.2 (1.7)	7.3 (2.4)	10.1 (2.1)
Nursing						
Male	11.8 (2.5)	10.2 (2.6)	10.1 (2.0)	12.9 (2.2)	7.6 (2.1)	10.1 (2.0)
Female	12.8 (1.8)	10.1 (2.4)	9.8 (1.9)	12.5 (2.2)	7.5 (2.5)	10.4 (2.0)
Pharmacy						
Male	11.8 (1.8) ⁺	10.3 (2.0)	9.9 (2.1)	11.7 (2.1) ⁺	7.8 (2.7)	10.3 (1.9)
Female	12.6 (1.8)	10.5 (2.4)	9.7 (1.9)	12.6 (1.7)	7.6 (2.1)	10.1 (2.0)
YEAR IN SCHOOL						
Medical						
First	12.3 (1.8)	10.1 (2.4)	9.6 (2.3)*	12.1 (2.0)	7.9 (2.7) ⁺	10.5 (2.0)*
Last	11.9 (1.9)	10.1 (2.1)	8.7 (1.9)	12.3 (1.7)	7.1 (7.7)	9.5 (2.1)
Nursing						
First	12.9 (1.8)	10.1 (2.1)	10.6 (2.2)*	12.4 (1.8)	7.5 (2.4)	10.6 (2.3)
Last	12.6 (2.0)	10.2 (2.3)	9.2 (2.2)	12.6 (1.8)	7.5 (2.6)	10.2 (1.9)
Pharmacy						
First	11.7 (2.0) ⁺	10.4 (2.3)	9.9 (2.0)	11.9 (2.1)	7.8 (2.5)	10.2 (2.1)
Last	12.7 (1.7)	10.3 (2.1)	9.7 (1.9)	12.3 (1.7)	7.6 (2.3)	10.3 (1.7)
RELIGIOSITY						
Medical						
Very	12.4 (1.9) ⁺	10.1 (2.7)	9.4 (2.1) ⁺	12.2 (1.9)	8.0 (2.3) ⁺	10.3 (1.9)*
Not	11.9 (1.9)	10.1 (2.2)	8.9 (2.1)	12.3 (1.9)	7.1 (2.3)	9.8 (1.9)
Nursing						
Very	12.8 (1.9)	10.1 (2.5)	10.0 (2.1)	12.5 (1.9)	7.7 (2.4)	10.4 (2.2)
Not	12.8 (1.9)	10.2 (2.3)	9.7 (2.1)	12.6 (1.9)	7.3 (2.5)	10.3 (2.0)
Pharmacy						
Very	12.7 (1.7) ⁺	10.3 (2.7)	9.9 (2.1)	12.6 (1.7) ⁺	7.8 (2.3)	10.2 (1.9)
Not	11.8 (2.1)	10.4 (2.2)	9.8 (1.8)	11.7 (2.1)	7.6 (2.5)	10.3 (2.0)
TOTAL n=791	12.3 (1.9)	10.2 (2.3)	9.5 (2.2)	12.3 (1.9)	7.6 (2.4)	10.2 (2.0)

* $p < .001$

+ $p < .05$

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