Research

Alcohol, tobacco, and pharmacy students: Usage and views on professional issues

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Abstract

Introduction/background: This study aimed to ascertain pharmacy students' use and views on cigarettes and alcohol (including in relation to provision of health promotion advice) and to establish if alcohol intake affected academic performance. Within the United Kingdom (UK), there has been limited research conducted in this area.
Methods: Following ethical approval, pharmacy students ($n = 581$) were invited to participate in a pre-piloted electronic questionnaire, consisting of 21 questions on smoking and alcohol. Descriptive statistics and non-parametric tests were used for data analyses.
Results: A response rate of 64.5% (375/581) was obtained (69.9% female and 30.2% male). Many respondents (77.9%) reported that they drank alcohol, whereas only 3.7% stated they currently smoked cigarettes. Students who drank alcohol were more likely to fail elements of the program than those who did not. Less than half (47.8%) were in agreement that it was hypocritical for a pharmacist to give health promotion advice and then get drunk outside of work.
Discussion/conclusions: Students seem to consider that lifestyle recommendations are less relevant for themselves and also that a pharmacist's responsibility centers on providing advice, rather than being a role-model. Alcohol consumption appears to negatively influence academic achievement.
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Keywords: Alcohol; Education; Pharmacy; Professionalism; Questionnaire; Smoking

Introduction/background

According to the World Health Organization, tobacco use is associated with more than five million deaths each year. It is among one of the greatest risk factors for mortality yet is the single most preventable cause of death.[1] Similarly, in terms of disease burden, alcohol is the world's third largest risk factor; it is the leading risk factor in the Western Pacific and the Americas and the second largest in Europe. Harmful use of

alcohol results in 2.5 million deaths each year with 320,000 of those deaths being in people aged between 15 and 29.[2]

Recent years have seen many media and health promotion campaigns in the United Kingdom (UK) in which the general public has been warned about the dangers of cigarette smoking, and perhaps to a lesser extent, alcohol misuse.[3] Other measures, such as legislation banning smoking in public places and the promotion of smoking cessation schemes have also contributed to fall in smoking across the United Kingdom (UK) from 45% in 1974 to 20% in 2011.[4] Unfortunately, in comparison to interventions relating to smoking, health promotion campaigns advocating "sensible drinking" of alcohol has had less impact in the UK. A 2009 report found that while the prevalence of drinking had declined in many areas, the average alcohol

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consumption had increased.[5] In Northern Ireland specifi-
cally, there has been a sizeable increase in the prevalence of
drinking alcohol in the last two decades in adult men and
women across all age groups, but most notably in those
aged 16–24 years and women aged between 45 and 64
years.[6] When health care and other costs were calculated,
the UK government estimated the financial burden of
alcohol-related harm to be £21 billion (approximately US
$35 billion) in 2012.[7]

The UK Department of Health recommends that women
and men should not regularly drink more than 14 and 21
units of alcohol a week, respectively (one unit is 10 mL or
0.34 oz pure alcohol or the equivalent of a third of a pint of
beer or half of a glass of red wine).[8] However, it should be
noted that it is possible to keep within these weekly limits
yet drink in an unsafe way by "binge drinking." While there
is no universally accepted definition of binge drinking, it is
recognized as drinking to get drunk or drinking a lot of
alcohol in a short space of time. The Department of Health
in the UK has quantified it to be consuming six or more
units (women) or eight or more units (men) in a single
session[9] while in the United States of America (USA), the
Substance Abuse and Mental Health Services Administra-
tion (SAMHSA) consider it to be five or more drinks on the
same occasion (i.e., at the same time or within a couple of
hours of each other) on at least one day in the past 30
days.[10,11] For students in professional subjects, such as
pharmacy, this type of drinking may bring the student into
conflict with the professional standards required of them.
The Pharmaceutical Society of Northern Ireland's Code of
Ethics (for pharmacists) states that ethical requirements
apply "both within and outside the practice of pharmacy"
and include the requirement to act with "integrity and
professionalism."[12] Moreover, the UK pharmacy regulator,
the General Pharmaceutical Council (GPhC), states in its
Code of Conduct for Pharmacy Students that students
should "take responsibility for your own health especially
if it may impact negatively on other people."[13]

As smoking and alcohol have a large impact on public
health, part of a pharmacist's role is educating people about the
associated dangers; indeed, one of the core services offered by
community pharmacies in Northern Ireland is smoking cessa-
tion. It is, therefore, conceivable that in addition to the potential
effects on patient safety and professionalism, the excessive
intake of alcohol and tobacco smoking by pharmacists may
undermine their health promotion activities. Indeed, studies
have shown that health care professionals have a role to play in
society as ideal examples with regards to their lifestyles[14] and
that those who smoke are less willing to inquire about tobacco
use, and advise on smoking cessation, compared to their non-
smoking counterparts.[15–17]

Rationale and objectives

While the general public may have certain expectations
of the pharmacy profession to advocate a healthy lifestyle,

less is known about health care professionals' attitudes
relating to the concept of "practicing what you preach."
There has been little research conducted in this area on
pharmacy students, particularly in the UK. Furthermore,
research relating to pharmacy students' alcohol and smok-
ing use in the UK is sparse. Ascertaining students' use and
views of alcohol and tobacco may inform future teaching of
professional standards within the School of Pharmacy. The
objectives of this study were to ascertain pharmacy stu-
dents' reported use of tobacco and alcohol to determine if
this has any impact on academic performance and to
ascertain views on smoking and alcohol in relation to
professionalism.

Materials and methods

Data were collected using a self-completed electronic
questionnaire created using the survey website Survey-
Gizmo™ (www.surveygizmo.com), which was developed
with reference to relevant literature.[13–17] The questionnaire
(available upon request from the authors) consisted of four
sections with questions ($n = 21$; largely closed, with pre-
formulated answers) on the following areas: students' use of
tobacco and alcohol, students' academic performance,
views on tobacco and alcohol use and professionalism and
demographic information (this did not include any identi-
fiable information). Nine questions contained attitudinal
statements using a five-point Likert scale ("strongly agree,"
"agree," "neither agree nor disagree," "disagree," and
"strongly disagree"). Student's reported use of alcohol
was gauged by asking them to state the average number
of each type of beverage (from a list of common alcoholic
drinks) they consumed on each day of the week. Where
students drank an alcoholic beverage that was not on the
predefined list, they could input the name and other
information manually in a free response field. This infor-
mation was then converted into alcoholic units (where one
unit is 10 mL of alcohol) using average composition (%
alcohol) for each drink type,[8] and totals calculated on a
daily and weekly basis. For example, one glass of red wine
(175 mL) with an alcohol composition of 12% was calcu-
lated to have $(175 \times 0.12)/10 = 2.1$ units. Table 1 provides
further information on UK/USA alcoholic equivalencies.

The study population was all students ($n = 581$) enrolled
on the four-year Master of Pharmacy (MPharm) degree
program at Queen's University Belfast (QUB). The
MPharm degree is the UK-recognized qualification that
allows professional registration as a pharmacist. The School
of Pharmacy Ethics Committee reviewed and approved the
proposed research. The questionnaire was internally
reviewed for content validity by an expert in the field and
assessed for face validity by three colleagues. Postgraduate
pharmacy students ($n = 10$) piloted the questionnaire and,
as a result, minor changes were made to the wordings of
two questions. Completion time averaged seven minutes. In
February 2013, all students were invited via e-mail to