

**UNIVERSITI TEKNOLOGI MARA**

**PHARMACOETHICS VALUES AND FACTORS  
AFFECTING THEM: A COMPARISON  
BETWEEN COMMUNITY PHARMACISTS IN  
MALAYSIA AND THE UNITED STATES OF  
AMERICA**

**WAN SAZRINA WAN ZAID**

**PhD**

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**WAN SAZRINA WAN ZAID**

Thesis submitted in fulfillment of the requirements  
for the degree of  
**Doctor of Philosophy**

**Faculty of Pharmacy**

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## Candidate's Declaration

I declare that the work in this thesis was carried out in accordance with the regulations of Universiti Teknologi MARA. It is original and is the result of my own work, unless otherwise indicated or acknowledged as referenced work. This thesis has not been submitted to any other academic institution or non-academic institution for any other degree or qualification.

In the event that my thesis be found to violate the conditions mentioned above, I voluntarily waive the right of conferment of my degree and agree to be subjected to the disciplinary rules and regulations of Universiti Teknologi MARA.

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## ABSTRACT

Community pharmacists claimed to encounter conflict between professionalism and business interest. This study examined the ethical compliances of community pharmacists in Malaysia and the USA; to devise an instrument to study Pharmacoethics Values among community pharmacists based on the Code of Conduct for Pharmacists and Bodies Corporate by the Pharmacy Board of Malaysia; and to find out the factors contributing to the low Pharmacoethics Values among the community pharmacists in both countries. The novel pharmacoethics devise, which was constructed and tested for its validity and reliability using exploratory factor analysis, Cronbach alpha ( $\alpha$ ) value and test-retest, was mail-sent to all 1426 registered community pharmacists in Malaysia and 120 hand-delivered and immediately collected, to conveniently chosen respondents in the USA. Data was analyzed using SPSS for Windows version 12.0. Accordingly, descriptive statistics, Kruskal-Wallis, Mann-Whitney U or Spearman's rank order correlation coefficient were used to analyze the data and test at the 0.05 level of significance. In Malaysia, out of 1242 questionnaires delivered, 266 responded with consent. Factor analysis yielded four ethical domains, which were then named Business Practice, Ethical Practice, Professional Practice and Personal Attitude. Demographically, ownership status (Malaysia=56.8% pharmacy owner, USA=58.3% pharmacist only); type and size of pharmacy outlets; levels of income; and ethics exposure during undergraduate training (Malaysia=64.3%, USA=94.2%) were significantly different between Malaysia and the USA. The other findings were that the community pharmacists in the USA significantly behaved more ethically than the community pharmacists in Malaysia in two of the pharmacoethics dimensions, namely Ethical Practice and Personal Attitude. The Pharmacoethics Values were in the range of 'mostly compliant' for all four pharmacoethics dimensions for the USA and two pharmacoethics dimensions for Malaysia and 'moderately compliant' for the other two. Gender and age affect Pharmacoethics Values in both countries, where ownership status and type of pharmacy outlets, only affect the Pharmacoethics Values in Malaysia. Lengths of practice and location of the pharmacy outlets only affect the Pharmacoethics Values in the USA. Other factors tested did not significantly affect the Pharmacoethics Values in both countries. In spite of its limitations, this study holds a promising future in studying pharmacoethics in Malaysia.

## ABSTRAK

Ahli farmasi komuniti dikatakan menghadapi konflik di antara profesionalisme dan kepentingan perniagaan. Kajian ini menilai pematuhan etika ahli-ahli farmasi komuniti di Malaysia dan Amerika Syarikat; mencipta satu instrumen untuk mengkaji Nilai Farmakoetik di kalangan ahli-ahli farmasi komuniti berpandukan kepada 'Code of Conduct for Pharmacists and Bodies Corporate by the Pharmacy Board of Malaysia'; dan untuk mengkaji faktor-faktor yang menyumbang kepada Nilai Farmakoetik yang rendah di kalangan ahli-ahli farmasi komuniti di kedua-dua negara. Alat farmakoetik yang asli ini, yang mana telah digubah dan diuji kesahihan serta kemantapannya menggunakan eksplorasi analisis faktor, nilai Cronbach alpha ( $\alpha$ ) dan uji-dan-uji-kembali, telah dihantar (pos) kepada semua 1426 ahli farmasi komuniti berdaftar di seluruh Malaysia dan 120 dihantar kepada responden di USA yang dipilih secara mudah melalui tangan dan dikutip segera. Analisis data dibuat menggunakan SPSS untuk Windows versi 12.0. Mengikut kesesuaian, statistik deskriptif, Kruskal-Wallis, Mann-Whitney U atau korelasi mengikut turutan Spearman's  $r$  digunakan menganalisis data dan diuji di tahap signifikan 0.05. Untuk kajian di Malaysia, dari 1242 soal-selidik yang berjaya dihantar, 266 telah menghantar maklumbalas dengan persetujuan. Analisis faktor membuahkan empat domain etika, yang kemudiannya dinamakan Amalan Perniagaan, Amalan Etika, Amalan Profesional dan Sikap Peribadi. Secara demografinya, status pemilikan (Malaysia=56.8% pemilik farmasi, USA=58.3% hanya sebagai ahli farmasi); jenis dan saiz premis; pendapatan ahli farmasi; dan pendedahan kepada etika diperingkat prasiswazah (Malaysia=64.3%, USA=94.2%) adalah berbeza secara signifikan di antara Malaysia Amerika Syarikat. Penemuan lain adalah ahli-ahli farmasi komuniti di Amerika Syarikat secara signifikannya berkelakuan lebih beretika jika dibandingkan ahli-ahli farmasi komuniti di Malaysia di dalam dua daripada keseluruhan dimensi farmakoetik, iaitu Amalan Etika dan Amalan Peribadi. Nilai Farmakoetik yang diperolehi adalah di dalam lingkungan 'kebanyakannya patuh' untuk keempat-empat dimensi farmakoetik untuk Amerika Syarikat dan dua dimensi farmakoetik untuk Malaysia dan 'sederhana patuh' untuk yang dua lagi. Jantina dan umur mempengaruhi Nilai Farmakoetik di kedua-dua negara, di mana status pemilikan dan jenis kedai farmasi, hanyalah mempengaruhi Nilai Farmakoetik di Malaysia. Tempoh pengalaman bekerja dan lokasi kedai farmasi hanya mempengaruhi Nilai Farmakoetik di Amerika Syarikat. Faktor-faktor lain yang diuji tidak mempengaruhi secara signifikan Nilai Farmakoetik di kedua-dua negara. Walaupun dengan segala kekurangannya, kajian ini menjamin masa depan yang cerah di dalam kajian terhadap farmakoetik di Malaysia.