

■ GLOBAL PERSPECTIVE

Can Applied Entrepreneurship Education Enhance Job Satisfaction and Financial Performance? An Empirical Investigation in the Australian Pharmacy Profession
by Kevin Hindle and Neil Cutting

Pharmacy is a "dual market" industry—a pharmacist must combine retailing services with professional services. An Australian pharmacist faces difficulties from both directions in today's market. On the retail side, there is growing competition from non-pharmacy retailers, with many manufacturers selling their goods through non-pharmacy outlets. On the other side of the business, successive Australian governments have gradually reduced the prescription margins available to the pharmacy from the National Health Scheme. Moves towards decreasing industry regulation may soon allow ownership of pharmacies by non-pharmacists such as supermarkets, chain stores, and other retailers. To avoid this, the retail pharmacy industry needs to demonstrate how the community benefits from existing restrictions to pharmacist-only ownership by changing the focus to a more professional and patient-oriented approach, while simultaneously improving business skills.

Hence, many pharmacists are belatedly recognizing the need to better blend the retail and professional services sides of their businesses by seeking to become more entrepreneurial. However, until the advent of the Pharmacist Advice Program, most had not had any structured education in entrepreneurship. This set of circumstances provided the opportunity for empirical investigation of some proposi-

tions at the heart of the developing field of entrepreneurial pedagogy.

Summary Literature Review

The Literature of Entrepreneurship Pedagogy

The literature of entrepreneurship pedagogy is too extensive to fully review here. However, it can be summarized by saying that empirical tests of key propositions are in short supply and badly needed as demonstrations of the efficacy of entrepreneurship education programs.

The Pharmacy-Specific Literature in Australia

The need for pharmacists to develop their professional service has been voiced for fifteen years. Shepherd (1986) concluded that services such as verbal or written health-related information could become a part of pharmacies' marketing differentiation. Lurey (1987) called for aggressive marketing strategies, while Smith and Garner (1987) found that pharmacists could make a significant contribution to health care by providing clinical services. Patient counseling and pharmacist intervention can offer demonstrated advantages to the community. Both Oddis (1988) and Hepler (1990) concluded that true cost savings to the community in terms of improved patient outcomes,

better compliance, and reduced incidence of adverse reactions can be achieved by pharmacists monitoring patients more effectively. This was supported by Bloom (1990), who found that although pharmacy services improved patient care and reduced costs, there were limits and physical barriers to the provision of such services.

Some studies suggest that there is also value to the pharmacist in patient counseling. Meade (1992) concluded that 91 percent of pharmacists think good patient counseling helps them compete in the marketplace. An anecdotal American report (Smith 1991) concludes that patient counseling is one of the best marketing tools available to community pharmacists, while Crawford (1992) argued that the provision of more pharmaceutical services was vital for the survival of the profession. Hirsch, Gagnon, and Camp (1990) found that physicians and patients wanted personalized services in relation to medications. Whitehead et al. (1997) in an Australian qualitative study asserted that there were financial benefits for pharmacists who provide patients with drug information. A study by Merrilees and Miller (1997) commissioned by the Pharmacy Board of New South Wales (NSW) looked at the client-pharmacist interface, concluding that Forward Dispensing pharmacies out-performed other forms of dispensing pharmacies in terms of both the quantity of counseling advice given and meeting their patients' needs. However, prior to this research, no *quantitative* study has been specifically addressed to Penna's call for research into organizational models in community pharmacy (Penna 1987).

Experimental Framework

For this study, the Pharmacy Advice Program was used as an example of applied entrepreneurial education. The program is an entrepreneurial education initiative designed to equip practitioners with the ability to apply the innovative principles of

"Forward Dispensing" (fundamentally, minimizing the clerical aspects of dispensing and increasing customer contact). Developed by John Morgan, a Melbourne pharmacist well-versed in the theory and practice of entrepreneurship education, the program was officially launched in April 1997 and has since been strongly promoted as a way to develop a more entrepreneurial pharmacy that will improve job satisfaction and financial performance. The program aimed to enhance entrepreneurial behavior in pharmacists by training them in John Morgan's innovative forward dispensing model for retail pharmacy. In this model, the dispensing pharmacist sits at a counseling desk opposite the seated patient in the retail area of the shop. This arrangement allows communication with the patient during the dispensing process. The pharmacist can counsel the patient on medication use and related matters while the paperwork and labeling is completed in the dispensary by a technician.

This study sought to evaluate the professional and financial benefits of the program. To pharmacists, such an empirical investigation offers two substantive benefits. First, at the individual level, if program claims are supported, pharmacists will be assured that participating in the program is likely to lead to both professional and financial rewards. Second, the pharmacy industry may gain the strategic reward of the government seeing the value in the current ownership restrictions as generating community benefits through improved pharmaceutical care and patient outcome—a benefit unlikely to emerge from an "open retailing" model of dispensing. To scholars of entrepreneurship, the Pharmacist Advice Program is a well-defined example of applied entrepreneurship education with clear objectives. In addition, empirical results from the substantive study might make a significant contribution to the development of formal theories of entrepreneurial pedagogy.

Method

This research utilized experimental methodology using post test-only control group design. It explored the propositions that pharmacists who learned and applied the principles taught in the Pharmacist Advice Program would have greater job satisfaction (H_1), better sales performance (H_2), and better profit performance (H_3) than pharmacists who did not utilize the program. "Job satisfaction" was measured by a question positioning respondents' job attitudes on a common scale. "Profit" was measured in terms of both gross profit and net profit. "Sales" were measured by total sales. The data were collected by a questionnaire that primarily utilized Likert five-point scales and was divided into three sections. The first section obtained general characteristic information of the respondent and the pharmacy. The second section differentiated between test and control group respondents' attitudes towards forward dispensing as a source of increased sales and profits. This section also contained the job satisfaction question. The third section was used to measure financial performance and various factors which may have impacted on financial performance.

The intervention sample frame comprised the first 38 NSW pharmacies which had implemented the Pharmacist Advice

Program. The response rate was 66 percent (25 out of 38 responded). The control sample was comprised of 100 randomly selected pharmacies from a list of 1,850 pharmacies supplied by the NSW Pharmacy Board. The response rate was much lower than for the test group (23 percent). This provided data from two groups of approximately equal size (25 vs. 23).

The Mann-Whitney U test was used for hypothesis testing. The data were analyzed using the Statistical Package for the Social Sciences (SPSS).

Results

Table 1 compares the descriptive data for the two groups of pharmacies. Demonstrating the similarity of all respondent pharmacies, the table shows no statistically significant difference (at $p < .05$) in the characteristic data between the two groups except for location (varying by the size of the shopping center where the pharmacy was located). However, at the more appropriate $p < .01$ for repeated comparisons, there is no significant difference.

The next step was to determine whether the experimental group experienced greater job satisfaction than the control group. Table 2 shows the results. Job satisfaction was ranked from 1 = highly satisfied to 5 = highly dissatisfied. The mean rank for the experimental group was

Table 1
Characteristic Comparisons between Test and Control Groups

Variable	U	W	Z	2-Tailed p
Age	215.5	540.5	-1.0732	.2832
Sex	249.5	480.5	-0.4012	.6883
Years registered	209.5	534.5	-1.2088	.2267
Location	172.5	403.5	-2.1126	.0346
Size of premises	165.0	441.0	-1.3589	.1742
Years ownership	235.5	560.5	-0.6172	.5371
Sales level	191.5	491.5	-1.4260	.1539

Table 2
Program Implementation vs. Job Satisfaction

	Mean Rank	Sum of Ranks	Cases
Experimental group	17.26	431.5	25
Control group	30.93	649.5	23
Total			48
2-Tailed <i>p</i>	<i>U</i>	<i>W</i>	<i>Z</i>
.0002	106.5	431.5	-3.7106

much lower than for the control group and therefore the *Z* value was negative. The Pharmacist Advice group enjoyed a significantly (*p* of 0.0002) higher level of job satisfaction than the control group.

The next area for comparison was percentage changes in sales and profits. The comparison failed to reveal any statistically significant differences between the two groups. Other factors which may have masked the effect were then examined. Respondents who reported changes in retail environment were removed. This included those who had experienced changes in competition, hours open, and floor space. There was still no significant difference between the groups in sales and profits. Then those pharmacies in the experimental group that had not completely implemented the program in all facets were removed. There was still no significant difference in sales and profits between the groups.

Also relevant to the impact of the program on sales and profits, the respondents were asked to rate their perception of the relevance of forward dispensing (its application being the cornerstone of the Pharmacist Advice Program) as a source of increased sales and profits. The results are shown in Table 3. The rankings were 1 = extremely relevant to 4 = irrelevant and 5 = don't know. Because the mean rank for the experimental group is much lower than for the control group, the *Z* value is negative. These results show a

highly significant two-tailed *p* of 0.0002. It can thus be concluded that there is a significant difference between the experimental group and the control group in their beliefs about the potential impact of forward dispensing on sales and profits. Interestingly, 70.8 percent of all pharmacists surveyed (control and experimental groups combined) ranked "forward dispensing" as "relevant to extremely relevant" as a source of increased sales and profits. This dropped to 50 percent for members of the control group. Only 12.5 percent of all respondents believed it to be irrelevant, and they were all from the control group.

Discussion

Pharmacists who acquired and implemented the entrepreneurial education offered in the Pharmacist Advice Program experienced greater job satisfaction than those who had no known entrepreneurial education. The study failed to demonstrate marked financial advantages accruing to those who undertook entrepreneurial education, but there are still grounds for believing that the link may well exist. There are several reasons why the analysis of increased sales and profits was inconclusive. In many instances, financial responses were estimations, not actual figures. Profits for most pharmacies were reported prior to the introduction of the Australian Goods and Services Tax (GST) and were often only recorded on an

Table 3
Forward Dispensing Relevance as a Source
of Increased Sales and Profits

	Mean Rank	Sum of Ranks	Cases
Experimental group	16.88	422.0	25
Control group	31.88	659.0	23
Total			48
2-Tailed <i>p</i>	<i>U</i>	<i>W</i>	<i>Z</i>
.0002	97.0	422.0	-3.7710

annual basis. The survey was sent out in August when the vast majority of pharmacists did not have the details on their annual profit. Therefore, the profit data could be of low quality. There are other problems in focusing only on recent increases in sales and profits. Many firms in the treatment group had implemented the Pharmacist Advice Program several years before this research was conducted and the period of greatest increase in sales and profits may have already passed, with the firm now settled into more modest growth. Pre-testing and respondent contact showed that most pharmacists are well aware of changes to sales resulting from changes in operational practice but the difficulties of objectively measuring such changes were too great for the limited resources available to this study. Future research involving higher quality, more detailed financial data and comparative opinion measurement is highly desirable.

At the specific level of substantive theory, this research is extremely relevant to the development of the pharmacy profession in Australia. At the more general level of formal theory, despite the limitations of its small size and single-industry focus, this research does strongly support a link between applied entrepreneurial education and job satisfaction, a relationship hitherto absent from the literature. The lack of evidence for a link between entrepreneurial education and sales/profit performance is

understandable given the limits of the project. The study's contribution in this area is its demonstration that future research linking entrepreneurship education to financial performance will require sophisticated project designs and substantial project resources. Overall, the study makes a useful contribution to both the pharmacy profession and the developing field of entrepreneurship education.

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