

COMPARISONS AND CONTRASTS OF CONDITIONS OF PHARMACY  
IN THE UNITED STATES AND OTHER COUNTRIES.\*BY INA GRIFFITH.<sup>1</sup>

For some time I have been interested in the conditions of Pharmacy in this as compared to those in other countries, and for the past year or more I have carried on an active correspondence with women pharmacists in several foreign countries. The results of this investigation are recorded in two parts; *first*, those aspects of Pharmacy which particularly affect women; and *second*, the conditions of Pharmacy in general, affecting both men and women.

In pursuing this subject I carried on a correspondence with twenty-five or more women in the West Indies, Europe, Asia and Africa. The results and conclusions are drawn from some sixty replies. It may be interesting to know how my correspondents were chosen. I consulted the "Index Generalis" in the University of Oklahoma Library for the names of the deans or directors in every country maintaining a school of pharmacy and asked them to send me the names of outstanding women in the profession in their various countries. The response has been most gratifying.

Time does not permit telling all the interesting incidents of my correspondence but in general it was grouped around the following list of questions:

- What is the percentage of women pharmacists in your country?
- What type work are they doing in the profession?
- Are there organizations for women in Pharmacy in your country?
- Does the wage scale discriminate between men and women pharmacists?
- Do the duties of your pharmacists extend beyond that of selling drugs and filling prescriptions, such as diagnosing and prescribing?
- Are your drug stores open for business on Sunday?
- Are your drug stores open at night?
- What are the entrance requirements in your school of Pharmacy?
- What type of work is taught in your school of Pharmacy?
- How many years work are required for completion?
- Are your pharmacists required to have practical experience before they complete their course for graduation?
- Are pharmacists in your country granted a license to practice?
- Are your pharmacists required to have practical experience before becoming licensed?
- Are your pharmacists required to take an examination before they are permitted to practice?
- Must your drug store owners pay a license fee to operate?
- Are there regulations in your country concerning the number of pharmacies that may be established?
- Is there a close relationship in your country between the pharmacist and physician?

There is no doubt that the facts are authentic because in each case my correspondent was either a member of the faculty of a school of pharmacy, a hospital pharmacist, an analytical pharmacist or a drug store owner.

Letters have come to me from seventeen countries and it is interesting to note that in only three countries is the percentage of women pharmacists as low or lower than that in the United States. The correspondent in India stated that there are

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no women pharmacists there. In Egypt the director of the school told me that women entered their college of pharmacy last year for the first time; three are now enrolled. In the Lebanese Republic women were not permitted to enter Pharmacy, Medicine or Dentistry prior to 1920, and I'm not sure of the percentage at present.

In Argentina, Cuba, Estonia, France, Poland, Lithuania and Roumania, from fifty to sixty per cent of the graduates are women, while in Denmark, England, Greece, Hungary, Italy, Norway and Switzerland the range is from ten to thirty-five per cent.

In most of these countries there are no pharmaceutical organizations for women but the women enjoy equal rights with the men in any pharmacy organizations in existence. There is a women's organization in France but it is not of much importance, while in Poland there is a department for women in the National organization. In England the National Association of Women Pharmacists was formed about the beginning of this century by a small group who felt the need for close coöperation among the women who were entering a new profession. All women pharmacists are eligible for membership. The objects of the organization are three-fold and are stated as follows: (1) The consideration and discussion of all matters affecting women pharmacists; (2) To keep a register of those members desiring employment and to bring employees into touch with employers; (3) The promotion of professional and social intercourse among the members.

The organization maintains both an employment bureau and a loan fund. The loan fund was founded to give assistance to members in cases of distress, illness or other emergency. There are now over 3,000 women on this association's register and one correspondent states she has watched conditions for women improve steadily during the past twenty years due to the activities of this association.

In answer to my question, "does the wage scale discriminate between men and women pharmacists," from France, Hungary, Poland, Norway, England, Italy and Estonia replies came that there is no discrimination. However, in Hungary the men have the advantage of obtaining state employment and in Poland, since the number of women pharmacists exceeds the men, the latter are more in demand, hence often receive higher salaries. In Italy and Estonia the wages are governed by a fixed scale. Regardless of the wage scale the information comes that the women are performing their duties nobly and that as a whole they greatly please their clientele. Women pharmacists in these seventeen countries do much the same types of work in the profession as they do in this country, that is, they are pharmacists in stores, owners of stores, hospital pharmacists, analysts in laboratories and teachers.

I was interested in the type of training these foreign co-workers received, also any other requirements they must meet. In Switzerland those who aspire to become pharmacists spend six and one-half years in preparation. After the first two years in the university the student spends eighteen months as an apprentice without pay. At the close of this period he passes an examination and receives the first diploma which entitles him to fill an assistant's post. He must remain thus one year before going on with university work. After two more years in the university the final diploma is granted which entitles the pharmacist to own his

store or to be a manager in any Swiss pharmacy. A license to practice cannot be refused a graduate who passes his final examination.

In Norway only thirty students per year are permitted to enter the study of Pharmacy and these by permission of the professors of the institution. The thirty are selected from those passing an examination. To become a store owner one must have the education, the required years as a pharmacist in a store, the money, a vacant store, and last but not least, the recommendation of the Department, then the King will allow the applicant to obtain a store.

The number of students in Hungary entering Pharmacy is limited and it is extremely difficult to be admitted. The children of pharmacists or "chemistry" owners, as they are called in Hungary, are given preference. Their training consists of two years practical work at a dispensing chemistry, followed by a two-year course at the university. When this training is completed the individual may be employed in a chemist's shop. In order to own a shop or be a responsible head of one, two additional years training are necessary. This work is usually combined with a paid position in a chemist's shop. At the completion of the university work the pharmacist must pass an examination which qualifies him to practice.

In Greece the individual planning to enter the pharmaceutical profession must work in a pharmacy one year, then undergo an examination before he is allowed to enter the school. The school work lasts for four years with annual examinations and a final examination, written, oral and practical. However, before the students are permitted to practice they must yet work a year in a pharmacy and finally pass an examination given by a special Government Commission called the Highest Sanitary Commission.

In Poland, Italy and France those who aspire to become pharmacists must have one year practical experience and four years study at the respective universities. Training in Poland includes examination of food articles and bacteriology so the pharmacist may serve as an expert witness in legal proceedings. I was interested to note that this training to be an expert witness seems of great importance. Before being permitted to practice, the Italian pharmacist must pass an examination termed the "State's Examination." In both Italy and France the store-owner must pay a license fee in order to operate.

The prerequisite for the practice of Pharmacy in Estonia is four years' study at the university and two years' practical experience followed by an examination. Upon passing this examination the individual becomes a full-fledged pharmacist. Each year the druggists of Estonia must obtain a new license which permits them to operate.

My Estonian correspondent has been most gracious in answering my questions. The mass of statistics she had available seemed amazing. One striking point of interest was, in December 1936 one hundred ninety-five women and eighty men were studying Pharmacy while in September 1937 there were only twenty-four women and six men. This decrease can be explained because a ruling was made that only thirty students were allowed to enroll.

Since in many of our towns and cities we have an excessive number of stores for the population I was interested in the conditions elsewhere. I discovered that in most of the countries interviewed the number of stores per population is

restricted. In those countries where restrictions are not in effect the correspondents felt they were desirable. In Denmark the establishment of a pharmacy is a privilege distributed by the state. In smaller towns there are one, two or three stores while in Copenhagen, a city of 800,000 inhabitants, there are sixty-five stores. In Estonia the number of stores per city is also limited. There are 1,200,000 inhabitants and only two hundred ten drug stores, one hundred ninety-two of these stores are privately owned and eighteen belong to either the national or city governments. Only a limited number of pharmacies may be established in Hungary and those upon license from the Ministry of the Interior. In Italy and Roumania the number is limited to a pharmacy for each 5,000 inhabitants. The concession system also exists in Poland, but the government reforms tend to abolish the system and according to the correspondent the future of the apothecary shops is not very bright. Switzerland has no regulation as to the number of pharmacies that may be established but my correspondent informed me that too many pharmacies had been opened and that they are trying to get such a regulation. The number of stores in France is very high and there is no restriction, but according to the correspondent restriction is desirable.

The problem of late hours and Sunday practice is keenly felt in this country. I was interested in the attitude of these other countries toward this subject. From England the information comes that the hours are long, but they vary in different districts. The city shops may close at 7:00 P.M., but in the suburbs they remain open until 9:00 P.M. on Saturdays. The shops are usually open on Sunday, but many districts have a schedule whereby every shop is open only one Sunday in three or four weeks.

In Denmark the system is a little more attractive. On Sundays the drug stores are open in towns or cities where only one is located and in those with more than one store they stay open in turn according to a voluntary agreement. The arrangement for night service, that is from 6:00 P.M. until morning, is in accordance with Sundays as to turn, but only a single pharmacist is present, and must be called by a special bell. It is interesting to note that a small extra fee of about twenty-five cents is charged.

The French apothecary shops also have an arrangement where one or more, depending upon the importance, are open on Sundays and Holidays. In the window of a closed shop is a card indicating the address of one in the neighborhood which is open so those in need of medicine never have to be without.

The pharmacies of Greece are open ten hours a day. The opening and closing time being changed according to the season.

In Hungary only those stores designated as "on duty" are open at night and on Sunday until evening, while those not "on duty" are open on Sunday from eight until 1:00 P.M.

From Italy the information comes that one-third the total number of stores in a town are open on Sunday and their time comes by turn. There is no special rule for the night work over all of Italy but in Pisa a hospital store is open until midnight and also a store on one of the main streets, but to remain open all night a special permit is necessary.

In Polish towns in which there are more than one store, by agreement they are kept open at night and during Holidays by turns. In the other towns, as the cor-

respondent expressed it, they are open constantly, Sundays, Holidays and nights.

In most towns in Switzerland there is an arrangement between pharmacists for Sunday and night duty. The hours vary with the towns. In Vevey, the home of the correspondent, the plan for a year is settled in advance. The store which has Sunday duty starts on Saturday night and has night duty as well, all week. The store remains open until 10:00 P.M. and, after this, the pharmacist answers a night bell. A fee of two francs is asked from every customer after 10:00 P.M. and until 8:00 A.M., when the store is reopened.

In Lausanne, Switzerland, the pharmacies close in turns at 7:00, 9:00 and 11:30 P.M. and none are open after that hour. A few medicines are deposited with the police and the doctor who needs them goes there and helps himself.

Since the majority of drug stores in this country carry a variety of merchandise, and the pharmacists are accused of counter prescribing, I wondered if these conditions existed elsewhere.

The English correspondent informs me that a certain amount of counter prescribing is done but that for the most part diagnosing is left to the doctor.

In Denmark pharmacists are prohibited to either attempt diagnosis or prescribe, these duties being reserved for the graduated physicians. Of Estonia we learn that the stores selling cosmetics, paints and patent medicines have nothing to do with Pharmacy. According to the correspondent the drug stores of Estonia cannot be compared with the American drug store because they are strictly medicinal institutions. They are subordinate to the State Sanitary Commission and to the Health Commissioner, consequently one speaks not of drug business but of drug service.

My correspondent in France informs me that the present laws regulating pharmacists' requirements are based upon an old law which goes back to 1803. The substance of that law as she gives it is, "Pharmacists will not be able to make or sell medicinal preparations or any mixed drugs whatsoever except after a prescription which will be made by Doctors in Medicine or Surgery or by Health Officers, and on their signatures. They will not be able to sell any secret remedy, they will comply with the formulas of compounds which they must execute and hold in their pharmacy; these formulas are inserted and described in the Dispensatory or Formulary which has been drawn up, or are to be so in the future, by Schools of Medicine. They will not be able to make in the same offices any other sales except that of drugs or medicinal preparations."

In Hungary pharmacists sell drugs only, compound prescriptions and do some chemical investigation. Only doctors diagnose and prescribe. In Italy the same conditions exist as in Hungary.

My correspondent of the Lebanese Republic tells me she is the only woman who owns a drug store; incidentally she is a graduate of the University of Maine, and Harvard. She has two stores, one in Beyrout, which she closes during the summer and another at a summer resort which she operates during the summer. At her store in Beyrout she sells only medicines and toilet articles, while in the store at the summer resort, "like the American drug store, I carry everything even Ice Cream." She tells me she had a hard time getting the confidence of the people. She has become noted for making all kinds of toilet creams.

The Polish pharmacist can only prepare and dispense medicines according to the written prescription of the physician, who alone has the right to visit the sick, diagnose the case and prescribe the medicine. A few milder medicines can be sold by the druggist without a prescription.

The pharmacists of Switzerland sell only drugs and compound prescriptions. They do not diagnose or prescribe except in minor ailments. Physicians are not allowed to dispense their drugs unless they are a certain distance from a pharmacist, except in one or two districts which have their own laws on the subject.

From the foregoing comparisons and contrasts it seems to me the following conclusions can be drawn:

1. Women have a definite place in the pharmaceutical profession abroad.
2. The number of women in Pharmacy in some foreign countries averages considerably higher than in the United States.
3. Training for pharmacists abroad is more rigid in many instances than here, and longer apprenticeship is required.
4. It appears that incomes from Pharmacy in these countries are more stable, possibly due in part to the concession system.
5. Experience in some of these countries demonstrates that the public can be educated to make purchases at hours other than at night, or on Sunday or to pay an extra fee for this service.
6. The impression given me by my correspondents indicates that these countries look upon Pharmacy as a serious and exalted service. The emphasis upon the professional side far outweighs the mercantile aspects. One correspondent called my attention to the fact that the term "drug business" is not known but the term "drug service" is used.

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### AQUEOUS ELIXIR—PROPOSED CHANGE IN FORMULA.\*

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In presenting one of the annual exhibits of the National Formulary at the Convention of the American Medical Association, one of the writers was quite surprised to find that a freshly prepared aqueous elixir had turned from a colorless solution to one with a faint pinkish tinge, from the time it had been shipped to the time the material was opened for display, a matter of only a few days. Upon returning home a check was made upon a sample prepared some time previously, and it was discovered that this also had changed color, having a decidedly reddish cast.

Recognizing the nature of the vanillin which is contained in the preparation, it was surmised that this might be the troublesome factor. In this respect it was recalled that the delightful Compound Elixir of Vanillin of the N. F. was also subject to some darkening upon aging, probably due to the same general cause. A

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