

Self-Medication in Developing Countries

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ABSTRACT

This paper sketches the self-medication situation in the developing countries. From a biomedical view-point the risks that are involved in developing countries are reportedly higher than in industrialized countries. This can be related to the fact that in many developing countries prescription drugs are freely available over the counter. Drug regulations are limited or not implemented and health care is malfunctioning. The economic-infrastructure and cultural-cognitive contexts that determine differences in self-medication practices are reviewed.

Key words: Developing countries; Review; Self-medication.

Introduction

We have come to realize that self-medication using pharmaceutical products is the "rule" rather than the exception in medical care in the industrialized countries of Europe, North America and the Pacific. This is certainly true if we include "non-compliance" with prescriptions in the definition of self-medication. Depending on how the concept is defined and the methodology used to measure it, it is estimated that self-medication constitutes 50–90% of all therapeutic interventions.

For some observers the high prevalence of self-medication is a reason for optimism. It demonstrates the continuous growth of consumers' self-awareness and self-reliance and their escape from the dependency and alienation brought about by medicalization. It reflects, as Bezold remarks, "a new attitude toward health, including increased self-responsibility for health" [1].

Others are less pleased. Some are worried about the biomedical effects of "irrational" self-medication. Others regard self-medication not as an escape from medicalization but rather as the appearance of a more subtle, less visible form of medicalization. To them, self-medication constitutes self-imposed subjugation to medical technology, whereby the medical regime is rendered "invisible". The consumer no longer subjects himself to the directives of a physician whom he meets face to face, but to the more disguised persuasions of pharmaceutical and related industries. We tend to believe that the optimists and pessimists — as so often is the case — are both right. Self-medication is a deeply ambiguous phenomenon.

Nevertheless, our pessimism gets the upper hand if we consider self-medication in developing countries. Let us be clear right from the start: self-medication may be very common in the industrialized world but is hardly equivalent to that in developing countries. Both in a quantitative and qualitative sense, self-medication in Sweden, for example, dwindles to nothing if we compare it to similar practices in any developing country. This may seem to be a provocative statement, especially if we take into account the fact that no solid data on this issue are available for developing countries. The patchy data from a few case studies are so overwhelming, however, that we need no longer doubt that self-medication in the Third World is of enormous magnitude and constitutes a grave problem.

In this paper, we can do little more than sketch the situation in very broad terms. It will be a depressing picture. There are many cheerful things to say about developing countries, even in the field of medicine (e.g. concerning herbal medicines). But any account of the use of Western pharmaceutical products is bound to be a sad one, particularly if it is examined through biomedical glasses.

Hazardous self-medication

Children

The biomedical risks of self-medication are best illustrated by examining it in vulnerable groups such as children and pregnant women. With regard to the first category, a study by Hardon in a rural village in the Philippines revealed that antibiotics are routinely given in self-medication for non-severe childhood diarrhoeal illness, despite the fact that antibiotics are officially only available by prescription [2]. This practice is not in accordance with the established biomedical norm stipulating that acute childhood diarrhoea must be treated by oral rehydration therapy. The widespread use of sub-optimal dosages of antibiotics in the treatment of non-severe diarrhoea is a major public health threat. Not only do mothers mistakenly believe that they are helping their children get better, the widespread inappropriate use of antibiotics contributes to the development of resistant bacterial strains. Though not often publicized, resistance to antibiotics is one of the main problems facing curative medicine in developing countries [3]. In a more recent study in two urban Filipino communities [4] and in a comparative case study in Brazil [5], similar patterns of antibiotic misuse were reported. In fact for Bra-

zil, Haak reported that between 50–66% of all medications given in self-care were used irrationally — in a biomedical sense — while one-third were potentially dangerous [5]. Preparations containing dipyrone, piperazine, penicillin ointments, local disinfectants containing mercury, products combining one or more antibiotics or antibiotics with steroids were the “dangerous” drugs most often used. All of these drugs have been banned in one or more countries. Other — less detailed — evaluations of the appropriateness of self-medication practices suggest that irrational and hazardous drug use is prevalent in the treatment of childhood disorders all over the world [6–11]. The result is that children die of preventable diseases, even in situations where a potential cure exists.

Pregnant women

With respect to the second vulnerable group, pregnant women, another — less acknowledged — self-medication problem can be identified: the use of powerful drugs to induce a menstruation if a woman thinks that she is pregnant. Quinine, high-dose hormonal drugs, aspirin and antibiotics are used by women as abortifacients, even though they are in fact not effective as such and may cause birth defects. The use of these drugs as abortifacients follows traditional practices of using herbal medicines for this purpose. Women believe that Western drugs can terminate early pregnancy when the foetus is still vulnerable. The belief in the drugs' effectiveness is reinforced by hot and cold principles in some societies where the drugs are classified as “hot”: “hot” substances are thought to cause substances to expand, liquify and leave the body. The use of Western pharmaceuticals to induce abortion has been reported in studies in Colombia [12], Ghana [13], India [14], Peru [15] and the Philippines [16]. It most likely occurs in many developing countries where women do not have access to safe abortion facilities.

These examples are symptoms of a health-care context in which drug distribution is uncontrolled and in which people use drugs according to their own ideas concerning efficacy. To understand the practice of self-medication, we believe it is essential that both the economic-infrastructure and cultural-cognitive context of self-medication in developing countries be understood. It is these two types of context that make self-medication practices in developing countries so different from those in industrialized societies.

Economic-infrastructure context

Economic factors impinging on the practice of self-medication operate both on the macro and micro levels. The gloomy economic situation in which most developing countries find themselves is one of the main causes of the defective functioning of their health services.

In Cameroon, for example, van der Geest found that the public health system functioned badly [9]. Hospitals were frequently short-staffed and lacked medicines and other essential items; when physicians were available, they could do little else than write prescriptions for medicines which were unavailable in the hospital and had to be bought elsewhere, sometimes far away. The situation was worse for rural health centres many of which were without medicines (and sometimes personnel) several times per year. Although the government promised free health care, including free medicines, people often had to fend for themselves, buying drugs outside the health service and visiting private practitioners, some of whom were legal and qualified, some illegal but qualified and others both illegal and unqualified.

The consequence for self-medication was that beside the non-functioning official system a relatively well-functioning alternative system had come into being in which medicines were supplied and "prescribed". Frustrated by the absence of medicines at the local health centre, people had no other choice than to self-medicate. They bought their own medicines at pharmacies, general provision stores, market stalls and kiosks alongside the road or obtained them from itinerant drug vendors visiting their village. Developing countries, one could say cynically, are a "paradise" for self-medication. One can get almost anything without having to consult a physician. These medicines include both over-the-counter drugs and so-called prescription-only drugs. The latter could perhaps be termed "under-the-counter" although there is nothing secretive about their sale. Even in the pharmacies, which operate legally under the supervision of a qualified pharmacist, prescription-only drugs can be bought without a prescription. People acquire their knowledge about the use of these medicines from relatives, neighbours, sales people and old prescriptions, as we will see below¹.

¹Recently Odebiyi and Femi-Oyewo have reported on the corresponding situation in Nigeria. Self-Medication with Prescription Drugs: A Pattern of Health Behaviour among Students in a Nigerian University. *J Soc Adm Pharm* 1990;7:130-131 (Editor's note).

The first aspect of the economic context thus comprises deficient medical services which force people to self-medicate; the distribution of medicines is no longer under professional control. One can buy almost any drug without a doctor's prescription. Cameroon is not unique; the same situation exists throughout the Third World. As has been frequently pointed out in the past decade [17], this lack of control over the supply of medicines gives multinational pharmaceutical companies considerable leeway and allows them to market several dubious medicines in these countries, thus aggravating the negative conditions for self-medication.

The second aspect, closely linked to the previous one, concerns prescription and sales practices. The poor financial position of government-employed health workers drives them to increase their earnings by setting up some kind of private practice. Parallel public and private employment, often illegal, has become a common survival strategy for doctors, nurses and lower-level staff such as hospital cleaners. One of the easiest ways to make some extra money is to sell medicines, which may or may not originate from the sellers' institute pharmacies. Such doctors and nurses are inclined to over-prescribe in order to make their clients buy more medicines. Hardon, who carried out research on self-medication in the Philippines, showed the consequences of such over-prescribing by health professionals for self-medication purposes [2,4]. People tended to keep their old prescriptions and use them as guidelines for further self-medication. Thus over-prescription by physicians led to over-use of medicines in self-care.

Another category of people involved in drug selling are vendors who are also struggling to survive. They, too, are likely to try to sell as many medicines as possible to clients who may scarcely be aware of which medicines they really need. The fact that the vendors themselves do not have much pharmaceutical knowledge means that their commercial efforts are not hindered by medical concerns about the effects of their practice [18]. The same applies to the growing number of traditional practitioners who include modern pharmaceuticals in their treatments [6].

A third aspect of the economic situation is that people who do have prescriptions cannot afford to have them filled completely. They may decide quite arbitrarily to buy some of the medicines and not others. Or they may discover that certain medicines on the prescription are

unavailable so that they can only obtain part of the prescribed medication and not necessarily the most important part. Doctors' prescription habits in developing countries are beginning to draw attention — and criticism — but virtually nothing is known about what the clients do with those prescriptions [19,20]. Taking into account the physicians' lavish prescription habits and their clients' meagre budgets, one has ample reason to be concerned about the purchase and subsequent use of medicines. An additional problem is the much-reported practice of people stopping medication early — when the symptoms abate — to save money. In a market-place in Cameroon customers rationalized their purchase of too small quantities of medicines by accommodating their medical demands to their financial means. For example, a young man suffering from a venereal disease only bought two penicillin tablets because he did not have more money: "two is better than none", he rationalized [21].

A fourth aspect favouring dubious self-medication is discussed in Hardon's study of two Manila slums [4]. She reported a strong tendency towards symptom-related medication and a subsequent over-use of analgesics, cough and cold remedies and antibiotics. Mothers in the area explained that they had no other choice. Parents can hardly afford to be sick or stay away from work to look after a sick child. Living and working conditions force people to look for quick and powerful medications. A well-known saying is that sometimes the best medicine a physician can prescribe is no medicine. Ironically, however, that "medicine" proved too expensive for many people in the Manila slums. One could indeed — metaphorically — say that their life is so painful that they constantly need "painkillers" to survive. In the Filipino case it was further observed that, more or less for the same reason, people were often unwilling to use herbal alternatives as community health workers advised; for their type of life, plant-based medicines took too much time to prepare and were not powerful enough.

Cultural-cognitive context

It is not only the dire economic situation, both at the government and household levels, which makes people practise a dubious kind of self-medication. An additional problem is that Western medicines, which have been produced within a biomedical cultural framework,

are recast in another knowledge system (or "explanatory model" in Kleinman's words) and applied in a way which may be totally different from that envisioned in the original biomedical system. Anthropological studies of this process of cultural reinterpretation and subsequent use are beginning to appear. We will discuss some of them to illustrate our point.

One of the first to draw attention to this phenomenon was Logan, who showed that Guatemalan villagers categorized Western medicines as "hot" or "cold" in accordance with their own illness classification system [22]. Acceptance or rejection of a particular medication depended on this classification and not on biomedical knowledge. Penicillin, for example, was regarded a "cold" medicine and found acceptable for fever (a "hot" illness) but rejected in the case of bronchitis, which was categorized as "cold".

Colour is another complex aspect of the cognitive framework of medicine use. Especially in African cultures illness and healing are often linked to colour symbolism. Ngubane, in her study of Zulu conceptions of medicine, writes:

"Both black and red are used to expel from the body system what is bad and also to strengthen the body against future attacks. Ridding the body of what is bad and undesirable does not mean that a person is in good health. To regain good health white medicines are used" [23: p. 113].

This traditional concept implies a preferential sequence of colours in medication. Red, which stands for transformation, comes first; black and white, which represent static conditions, follow. It is not unlikely that that sequence is also preferred in the use of Western pharmaceuticals, both by certain practitioners as well as patients.

Bledsoe and Goubaud found that people in Sierra Leone also paid attention to colour in their selection of medicines, though in a different manner [24]. One woman, for example, used a yellow anthelmintic drug for malaria "...because she said, when you have malaria your urine is very yellow." She believed she could expel the sickness with a yellow tablet by "figthing fire with fire".

Notions of "compatibility" are also used to evaluate drug efficacy. Hardon, for example, heard from her informants in Manila that medicine must "fit" the person using it (in the local language: the medicine must be *hiyang*) [4]. People believed that a drug which is good for one person can be wrong for another. Thus if

someone came to the conclusion that a particular medicine was not good for him, he refused to take it, even if the drug seemed suitable from a biomedical point of view. For the same reason he could decide to take a medicine which was "wrong" according to the doctor.

Our last example is again taken from Africa. Etkin and her co-authors, who studied the use of plant medicine among the Hausa in Northern Nigeria, noticed that people view illness as a process [25]. A central feature of the theory which guided their selection of medicines was "...the understanding that symptoms of a disease — or even different diseases — develop sequentially, one eventuating from another" (p. 921). They therefore used different medicines at different stages of the disease. Each medicine had specific qualities to fight the symptoms at that particular stage. According to the authors, this idea was now also being applied in the use of Western pharmaceuticals. These medicines were used in combination with herbal ones and their use was stopped as soon as their target symptom had been resolved. The authors provide a few examples (e.g., measles) in which Western medicines were used according to those traditional principles, which were entirely different from the biomedical ones. The taste of a medicine, for example, indicated for which symptom it should be used.

Conclusion

We have tried to sketch very briefly and superficially the context of self-medication in developing countries. The poor economic situation in which people find themselves leads to undesirable forms of self-medication. Local cultural conceptions of illness and therapy pose additional problems as they take self-medication further away from the — in biomedical terms — "rational" path.

Self-medication may have its attractive side in industrialized countries, where it is guided by relatively responsible information gained from books, magazines, prescription inserts and other media and where dangerous drugs are — more or less effectively — kept from unprofessional use. Self-medication in the industrialized world could perhaps be called a consumer luxury; in developing countries, however, it is not a choice but a necessity. There it is mainly a matter of poverty, producing more harm than healing. Information about the correct use of medicines is moreover difficult to obtain. Consumers in the Third World must rely on popular advice provided by neighbours and relatives, over-prescribing physicians or, worse, the commercial tales of drug vendors and — in urban areas — television ads [3,26].

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