Worldwide Preferences for Natural Remedies for "Nervousness" and Common Colds

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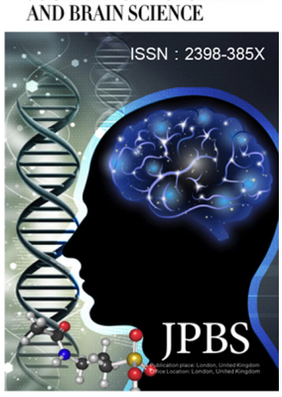

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ABSTRACT

In order to assess the prevalence of use of natural remedies for "nervous" disorders, a global random online survey was conducted in July 2017 using RDITTM sampling methodology. There were 75,101 respondents worldwide. For both nervousness and common colds, the preference was for natural plant remedies over prescription drugs, with at least a 3:2 margin for most of the 50 countries surveyed. The preference for natural products was not restricted to any specific demographic although respondents over age 65 were less likely than younger respondents to endorse this preference. The two countries that were exceptions to this general observation were Japan and Thailand, and the reasons for this are probed in the discussion. Despite known safety hazards of natural remedies, their use has become a universal phenomenon.

Key Words: Alternative; Complementary; Herbal; Supplemental; Nervousness; Drugs

1 INTRODUCTION

The word "natural" is associated in people's minds with purity and safety [1], which may be why, when ill, many of us prefer to self-treat with natural products rather than seek prescriptions from doctors. This is true despite the fact that, in most countries, natural remedies are not covered by national insurance [2]. Of particular interest to psychiatry is the reportedly high use of complementary medicines among individuals who meet criteria for mental disorders [3]. Over the past few years, those who self-identify as suffering from stress have increasingly turned to herbal remedies [4]. Perhaps paradoxically, the greater the severity of the self-reported anxiety, the more enthusiastic the endorsement of herbal medicines. This may be because conventional therapies have not worked well for the severely and chronically anxious [5, 6].

There are undoubtedly reasons why some individuals rely more on natural remedies than on pharmaceuticals. Pharmaceutical products are negatively viewed by many as symbols of unwanted modernity, capitalism, industrialization, urbanization, globalization, Westernization and/or technology. It may be a point of pride to express a preference for traditional medicines, a way of establishing one's identity perhaps, and distinguishing oneself from the mainstream [7, 8]. If this were the case, differences in preference for natural remedies should distinguish some countries from others.

We were interested to see whether a preference for natural remedies held true for the treatment of anxiety or, in popular language, "nervousness ". We wanted to know whether people living in different regions of the world would show such a preference to different degrees and whether it would manifest differently in individuals of different educational background, in men and women, the young and the elderly.

2 METHODS

In July 2017, we conducted a 50-country online survey asking random respondents about their preferences for natural remedies versus prescriptions for "nervous conditions" and for a control condition, the common cold. We used the global sampling methodology, Random Domain Intercept Technology (RDITTM). Exposure to our questions is triggered when Web users manually type in a lapsed or dormant Website destination (e.g., www.phoneyurl.com) into the Web address (URL) bar [9, 10]. When Web users land on a RDIT-controlled website, we are able to collect response data that are totally anonymous. The method encourages quick, instinctive answers from random individuals who are not self-selected survey takers and who have no incentive to respond other than a curiosity about the questions posed. The methodology has been previously used to measure global mental health stigma [11] and also the prevalence of suicidal ideas on college campuses [12]. It has shown high test-retest reliability in global surveys [13] as long as the questions that are posed are relatively few, short, and straightforward.

In the dominant language of each targeted country, we asked the age, gender, and education level of respondents, and we posed the following two questions:

1. If cost and ease of purchase were identical, for a cold, would you prefer a prescription drug or a natural product? (Select one or the other)
2. If cost and ease of purchase were identical, for feeling nervous, would you prefer a prescription drug or a natural product? (Select one or the other)

3 RESULTS

We received 62,823 full responses from 50 countries. No major differences were found between colds and nervous conditions. For both conditions, respondents preferred natural products by an almost 3:2 margin in 46 out of 50 countries (Tables 1 & 2). Japan and Thailand were the only two countries that endorsed a preference for prescription drugs for both feelings of nervousness and for colds (Fig. 1 & Fig. 2). South Koreans showed a preference for prescription drugs for colds and split 50:50 when it came to nervous conditions. Respondents from Mexico were equally interested in natural and prescription drugs for both conditions. Men and women did not differ in their preferences, neither did people from different educational backgrounds. For nervousness only, respondents over 65 were 6 % less in favor of natural products than were younger respondents.

Table 1. Q1 - If cost and ease of purchase were identical, for a cold, would you prefer a prescription drug or a natural product? (Weighted responses, source: US Census Bureau IDB)

Country	Prescription Drug	Natural Product	Respondents
Algeria	41 %	59 %	1332
Argentina	45 %	55 %	1383
Australia	36 %	64 %	1616
Bangladesh	40 %	60 %	1781
Brazil	31 %	69 %	1831
Canada	37 %	63 %	1580
Chile	35 %	65 %	1240
China	34 %	66 %	1283
Colombia	31 %	69 %	1357
Egypt	42 %	58 %	1368
Finland	42 %	58 %	1319
France	29 %	71 %	1486
Germany	34 %	66 %	1705
Greece	29 %	71 %	1140
Hungary	28 %	72 %	1382
India	20 %	80 %	2563
Indonesia	34 %	66 %	1681
Iran	31 %	69 %	1393
Iraq	43 %	57 %	1322
Italy	41 %	59 %	1265
Japan	57 %	43 %	1364
Kenya	32 %	68 %	1418
Korea, South	51 %	49 %	1722
Malaysia	34 %	66 %	1271
Mexico	49 %	51 %	1708
Morocco	44 %	56 %	1338
Nigeria	36 %	64 %	1738

Pakistan	42 %	58 %	1711
Peru	38 %	62 %	1463
Philippines	27 %	73 %	1828
Poland	38 %	62 %	1327
Portugal	36 %	64 %	1230
Romania	34 %	66 %	1339
Russia	37 %	63 %	1438
Saudi Arabia	48 %	52 %	1254
Serbia	35 %	65 %	1346
South Africa	21 %	79 %	1408
Spain	41 %	59 %	1471
Sudan	48 %	52 %	1463
Syria	41 %	59 %	1276
Taiwan	47 %	53 %	1662
Thailand	55 %	45 %	1617
Tunisia	48 %	52 %	1176
Turkey	41 %	59 %	2478
Uganda	29 %	71 %	1428
Ukraine	37 %	63 %	1625
United Kingdom	35 %	65 %	1473
United States	34 %	66 %	1575
Venezuela	41 %	59 %	1489
Vietnam	42 %	58 %	1438

Table 2. Q2 - If cost and ease of purchase were identical, for feeling nervous, would you prefer a prescription drug or a natural product? (Weighted responses, source: US Census Bureau IDB)

Country	Prescription Drug	Natural Product	Respondents
Algeria	40 %	60 %	1160
Argentina	40 %	60 %	1193
Australia	33 %	67 %	1302
Bangladesh	43 %	57 %	1321
Brazil	31 %	69 %	1650

Canada	37 %	63 %	1266
Chile	30 %	70 %	1083
China	33 %	67 %	1117
Colombia	29 %	71 %	1162
Egypt	39 %	61 %	1194
Finland	43 %	57 %	1052
France	29 %	71 %	1280
Germany	36 %	64 %	1385
Greece	27 %	73 %	1011
Hungary	27 %	73 %	1161
India	20 %	80 %	2041
Indonesia	29 %	71 %	1473
Iran	24 %	76 %	1216
Iraq	44 %	56 %	1107
Italy	34 %	66 %	1022
Japan	58 %	42 %	1200
Kenya	34 %	66 %	1143
Korea, South	50 %	50 %	1458
Malaysia	30 %	70 %	1041
Mexico	50 %	50 %	1468
Morocco	46 %	54 %	1175
Nigeria	43 %	57 %	1340
Pakistan	43 %	57 %	1295
Peru	36 %	64 %	1279
Philippines	29 %	71 %	1524
Poland	35 %	65 %	1101
Portugal	36 %	64 %	1005
Romania	29 %	71 %	1155
Russia	34 %	66 %	1209
Saudi Arabia	47 %	53 %	1032
Serbia	33 %	67 %	1159
South Africa	24 %	76 %	1190
Spain	37 %	63 %	1144
Sudan	45 %	55 %	1202
Syria	36 %	64 %	1139
Taiwan	41 %	59 %	1422
Thailand	58 %	42 %	1321
Tunisia	45 %	55 %	1029
Turkey	39 %	61 %	2068

Uganda	38 %	62 %	1107
Ukraine	39 %	61 %	1360
United Kingdom	33 %	67 %	1276
United States	32 %	68 %	1257
Venezuela	40 %	60 %	1313
Vietnam	40 %	60 %	1215

Fig. 1 Q1 - If cost and ease of purchase were identical, for a cold, would you prefer a prescription drug or a natural product? (Weighted responses, source: US Census Bureau IDB)

Fig. 2 Q2 - If cost and ease of purchase were identical, for feeling nervous, would you prefer a prescription drug or a natural product? (Weighted responses, source: US Census Bureau IDB)

4 DISCUSSION

The results of the survey show a decided 3:2 preference for natural products for both nervousness and for colds. Our purpose had been to compare the use of natural remedies for nervousness versus their use in a minor condition such as the common cold since the medical literature suggests that herbal products are mainly used to treat conditions subjectively perceived as minor. We reasoned that nervous complaints, because they are stigmatized in many parts of the world, would be more likely than would a cold to be self-treated. This turned out not to be the case. The literature cites echinacea, Chinese herbal cold and allergy products, elderberry extracts, andrographis paniculata, pelargonium sidoides and acanthopanax senticosus as potentially effective treatments for colds [14-17] and as many as 27 types of herbs for nervous conditions, the most common of which are St John's wort, kava, valerian, hops, passionflower, and ginkgo biloba [18, 19].

Almost all the countries we surveyed preferred natural products to prescribed drugs for both conditions. Japan and Thailand stand out as preferring prescription drugs for the two conditions while South Korea and Mexico endorsed both types of treatment equally.

With respect to Japan, herbal medicine, along with medicines derived from animals and minerals, play a large part in the Japanese personalized holistic treatment system called Kampo (from Kan for Chinese, po for system). In 2001, Kampo was incorporated into the curriculum of medical schools throughout the country [20] and over twenty different Kampo medicines are listed in the Japanese pharmacopoeia [21]. Almost 90 % of Japanese doctors are said to prescribe Kampo medicines [22, 23] on the basis of sho, the Kampo diagnostic system. Herbal preparations in Japan can either be sold as over-the-counter preparations, or as prescriptions. In contrast to western medicine, the goal of treatment is not to abolish symptoms but to restore harmony within the person and between the person and his or her environment [24]. This goal is the same for Chinese and Korean medicines but, in those two countries, there are traditional medicine doctors who prescribe only traditional herbal medicines and western medicine doctors who prescribe only western medicines. In Japan, by contrast, medical doctors who have been trained in western methods often prescribe Kampo. This may explain the survey's seemingly discrepant results for Japan.

The only other country, besides Japan, that preferred prescribed medicine was Thailand. Thai Traditional Medicine (TTM), the mainstream medical system in Thailand until 1888, while currently available in many modern hospitals in Thailand, is not well integrated with modern medical practices in the country [25]. Although TTM is used in the rural areas of Thailand, those who live in urban centers tend to dismiss it as unscientific [26]. This point is underscored in The World Health Report on complementary medicine in Thailand [27] and may help to explain our findings.

Despite the fact that the literature reports that herbs are more popular with women than with men [2, 28, 29], our survey found little difference. The literature reports that the middle aged are the demographic most likely to use natural products [2]. Our results show that respondents over 65 were not as interested in natural products for "nerves" as were younger respondents. At this age, the term "nerves" may signal something more serious than it does in younger age. Although those with more education have repeatedly been reported more likely to use herbal products than their less educated peers [28, 30, 31], we did not find this.

There are many possible reasons for preferring natural medicines, one being dissatisfaction with one's experience of physicians, with the relative ineffectiveness of previous medical treatment, with the perception of being offered no choice in a doctor's office, and, importantly, with the many adverse effects of conventional drugs. In a US mail survey of 1,035 respondents, all these issues were examined, and found insufficient to account for people's preferences [30]. Nevertheless, many reports highlight dissatisfaction with modern medicine's hurried consultations, over-emphasis on laboratory tests, and drug side effects that many find difficult to tolerate [32-34]. Standard medical claims that natural medicines are less effective than conventional drugs are based on the fact that they have not been proven effective in randomized double blind clinical trials. Different health traditions, however, do not define "effectiveness' in the same way. In Europe and North America, effectiveness is equated with the amelioration of the symptoms. Elsewhere, the effectiveness of a medication is judged by its ability to restore balance, to target the unique root causes of illness in a particular person, to prevent future problems in that person. That is where the effectiveness of alternative medicines are said to lie [35]. Effectiveness thus defined depends not only on the chemical content of a product but also on the context of its administration, which encompasses the beliefs and expectations of the recipient and the relationship between recipient and prescriber. The popularity of herbal treatment is said to depend to a large extent on the collaborative nature of alternative

medicine, the generous time practitioners devote to their patients, the dialogue they enter into [36]. As a consequence, patients feel in control of their own health, a control they generally do not feel when visiting western doctors [36-39]. Alternative medicine practitioners are perceived as less authoritative, less coercive, allowing patients more autonomy in decision-making. They are also said to allow more family involvement, an important consideration for many who come from a tradition where health decisions are made by family elders. Alternative medicine practitioners are also perceived as more flexible, very willing to work with western doctors, while western doctors adamantly refuse to work with them [35].

Based on the literature, one of the main explanations for choosing natural medicines is one of philosophical congruence. A firm belief in environmentalism, feminism, personal growth psychology and an interest in spirituality go along with a preference for natural remedies [39, 40]. Taking natural substances when one is ill matches one's beliefs about the causation of illness, and is congruent with one's values, beliefs, and philosophical orientations [30, 31, 41]. For instance, nature is seen by many as benevolent and all that is natural is therefore seen as clean, pure, fresh, unpolluted, non-chemical and safe. There are also those who place a greater value on care than on cure. Among individuals who prefer natural remedies, there may be those who reject scientific authority and who believe strongly in freedom of choice. Adherents of natural medicine easily dismiss as flawed clinical trials that do not show a positive effect of the products they believe in. This comes from a philosophical belief that the whole exceeds the sum of the parts - that herbal formulations have a synergistic effect that cannot be demonstrated when studying one herb at a time [42]. Herbal remedies are understood to not target symptoms, but, rather, whole individuals at a particular juncture in the course of an illness. Any one remedy given at any one time is not expected to benefit everybody. For those in favor of alternative medicine, the evidence that is more persuasive than the evidence of clinical trials is that based on personal experience. It is buttressed by the conviction that, since most natural medicines have existed for centuries, they have been time-tested and proven safe, in contrast to new medicines, to which significant side effects emerge sometimes several years after launch.

In 2007, US adults spent $33.9 billion on alternative medicines; nearly two-thirds went to the purchase of products, one third to practitioner visits [43]. There are other costs to the use of natural products. When an illness proves more serious than at first realized, dependence on such products may delay therapy that could have been more effective [42]. Some users may develop a sensitivity to herbal products. All drugs, including natural products, can cause adverse reactions if the dose is high and/or if the recipient experiences an idiosyncratic (allergic) reaction. Major concerns include the occasional development of anaphylaxis, asthma, urticaria, or contact dermatitis [44]. Because natural products are presumed by many to be entirely safe, women have been using them during pregnancy [45], with unknown, potentially adverse, effects on the fetus.

As herbal usage grows, interaction with conventional drugs [46] is becoming an increasingly prevalent problem, especially with respect to the interaction between certain herbs and anticoagulants. Bleeding may be excessive when an anticoagulant such as warfarin is combined with ginkgo (Ginkgo biloba), garlic (Allium sativum), dong quai (Angelica sinensis), or danshen (Salvia miltiorrhiza). Ginkgo also interacts with the antidepressant, trazodone [47, 48]. The most common interactions in psychiatry are with the herbal antidepressant, St. John's wort, which is a potent inducer of the liver enzyme, cytochrome P450 (CYP) 34A, and of the P-glycoprotein (PgP). St. John's wort may also inhibit or induce other CYPs, depending on the dose, route and duration of administration [49]. This herb decreases the blood concentrations of amitriptyline, an antidepressant, midazolam, an antianxiety medication, and methadone, a treatment for opiate addiction. It also triggers serotonin syndrome (high body temperature, agitation, increased reflexes, tremor, sweating, dilated pupils, and diarrhea) when co-administered with selective serotonin-reuptake inhibitors such as sertraline or paroxetine. While some herbal supplements have few interactions with prescribed drugs, some have been shown to be definitely unsafe, especially so in pregnant women and in children [49, 50].

In addition, there are risks of wrong handling and manufacturing that lead to herbal products being mislabeled, contaminated, or substituted. Studies of Ayurvedic preparations have uncovered contamination with potentially toxic levels of heavy metals including lead, mercury, and arsenic in more than 20 % of samples [51, 52]. A major concern is the lack of standardization among natural products. Moreover, in contrast to conventional pharmacotherapy, there is no comprehensive list of potential reactions that can be consulted when difficulties emerge.

5 LIMITATIONS

The survey has several limitations. Only individuals with Internet access (skewed toward young males, the relatively well-to-do, and the better educated) during July 2017 were reached. Currently, only approximately 40 % of the world has access to the Internet. Furthermore, in order to avoid burdening respondents with survey fatigue and increasing self-selection bias, only two health conditions were investigated. Comparisons of "nervousness" with conditions more serious than the common cold would have been interesting. It would also have been interesting to probe respondents' reasons for their choice. Since many conventional drugs (e.g. digitalis, reserpine, scopolamine, quinine) have been derived from herbs, and since doctors sometimes prescribe herbal preparations, the distinction between natural and prescription drugs may have been confusing to respondents. This may have been especially the case in Japan where herbal products are prescribed by physicians.

6 CONCLUSION

Survey respondents from almost all countries prefer natural medicines to prescriptions when treating nervous conditions, although no more so than when treating the common cold. No real difference in preference was found between men and women nor among the different levels of education of the respondents. The elderly were somewhat more in favor of conventional medicines for nervousness. Identity politics and philosophical leanings have been held responsible for biases toward or away from natural remedies, explanations that may perhaps underlie the results of this survey. A compelling conclusion, borne out by the relative lack of inter-country variability demonstrated in this study, is that the preference for natural remedies is broadly-based and, in an increasingly interconnected world, has become a universal phenomenon.

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