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# Traditional medicines used by Pakistani migrants from Mirpur living in Bradford, Northern England

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## KEYWORDS

Traditional medicine;  
Herbalism;  
Pakistani migrants;  
Bradford;  
Ethnopharmacy;  
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## Summary

**Background:** Despite the increasing relevance of trans-cultural healthcare issues in public health policies, knowledge is still very restricted about migrant communities' perceptions and use of traditional medicines (TMs) within multicultural societies in Western countries. In this field study, an in-depth study was carried out of the herbal drugs still in use among Pakistani migrants from Mirpur living in Bradford, in the north of England.

**Objectives:** To record TMs known and still used among Pakistani migrants from Mirpur presently living in Bradford; to assess the degree of overlapping between food and medicine in the provision of healthcare within domestic arenas among this community; to analyse how knowledge of TMs is changing among different generations and among the different waves of migrants who have moved from Pakistan to Bradford in the last few decades.

**Methods:** Semi-structured and focus-groups interviews with 37 members of the community, as well as other standard techniques of the ethnobiological investigations: free-listing, participant observation, and the collection and identification of the relevant plant material.

**Results:** TMs are still very popular amongst Pakistani migrants in Bradford, and are regularly delivered in domestic arenas. Two-thirds of the interviewees declared that they prefer TM treatments to conventional Western medicine. Fifty-six different remedies, mainly plant-based, are still used nowadays, and more than half of the recorded remedies represent *food-medicines*. However, knowledge of Mirpuri TMs is decreasing amongst the younger generations, and the level of knowledge of TMs seems to be dependent on the length of time since the migration from Pakistan took place.

**Conclusion:** Public health policies and strategies aimed at improving migrants' health should take into account the perception and acceptance of plant-based TMs within domestic arenas among Pakistani migrants, and especially their use against diabetes. Concerns about eventual toxicity and side effects of traditional herbal drugs, as well as their interaction with pharmaceuticals, should be carefully considered, since a few of the herbal drugs quoted in this survey are little known in Western herbalism and in modern evidence-based phytotherapy.

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## Introduction

Trans-cultural healthcare has become a crucial issue to many involved in setting governmental health-policy agendas.

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Moreover, in recent years increasing numbers of academics have begun to cross-culturally study traditional healing practices and medicines within multi-cultural societies in industrialised countries<sup>1-3</sup>. During their quest to understand how social changes, migration and displacement have influenced the way in which health is perceived and managed among migrant groups, scholars begin now to explore how traditional uses of medicines change over time and space.<sup>4</sup>

Traditional medicine (TM) has been defined by the WHO as:

'referring to health practices, approaches, knowledge, and beliefs incorporating plant-, animal- and mineral-based medicines, spiritual therapies, manual techniques and exercises, applied singularly or in combination to treat, diagnose and prevent illnesses or maintain well-being'.<sup>5</sup>

On the other hand, Resolution WHA56.31, which was presented at the 56th WHO Assembly in May 2003, and which adopted the WHO strategy for TM for the following 3 years, with its four main objectives (framing policy; enhancing safety, efficacy and quality; ensuring access; and promoting rational use), avoided a clear definition of TM and stated that '*the term traditional medicine covers a wide variety of therapies and practices, which vary greatly from country to country and from region to region*'. In the same section of this document, the terms "complementary", "alternative", "nonconventional" and "folk" medicine were defined as '*types of nonconventional health care, which involve varying levels of training and efficacy*'.<sup>6</sup>

Considerable effort has been made during the last decades to record and better understand TM, and also all kind of traditional knowledge (TK) related to health beliefs and practices, as well as Traditional pharmaceutical knowledge (TPhK)<sup>7</sup> in many developing countries, and in rural 'marginal' areas of industrialised countries, however very little research has been conducted in Western Europe.<sup>3,8-12</sup>

In the absence of any ethnographic study having been carried out on the TMs used within migrant communities in the UK, the authors of this research decided to focus their attention on the Pakistani community of Bradford, which, with its 68,000 members, represents one of the largest migrant communities in the UK. Most of these families originally came from the Mirpur area in Pakistan in the 1950s and 1960s<sup>13</sup>, but there have been continuous waves of migration since then.

The population of the Bradford Metropolitan District is approximately half a million people. Of these, roughly 300,000 live in the city of Bradford. By far the largest section of Bradford's population is grouped under the umbrella term 'Asian', estimated in the 2001 census to comprise more than 80,000 people, of whom 68,000 are of Pakistani origin or descent.<sup>14</sup> The South-Asian communities of Bradford include those who originated not only in Pakistan, but also in Bangladesh, India, East Africa, and elsewhere. In addition to Muslims (16% of the population), there are Sikh and Hindu communities, including Gujarati Hindus as well as Gujarati Muslims and Punjabi Indian Sikhs. Following initial migration and settlement in the 1960s, Bradford has, over the last three decades, established a significant Pakistani population. In 1981 this community numbered 34,116 persons; in 1991, 38,059 persons; and it is estimated that in the

year 2011 this population will number 104,000 persons, or approximately a quarter of the city's population.<sup>13</sup>

The issue of diabetes among South-Asian migrants living in the UK is a central one for public health providers, since Type 2 diabetes is already four times more common among British South Asians than among the general population.<sup>15,16</sup> At present, public health policies are concentrated on improving the efficacy of prevention, and in understanding the socio-cultural backgrounds of this phenomenon within minority ethnic groups, but as yet little has been done to analyse any ethnic-based strategies that these communities have put in place to counteract diabetes.

The objectives of this study were as follows:

- To record the TM remedies that are known and *still in use* among Pakistani migrants from Mirpur in Bradford.
- To evaluate the degree of overlap between food and medicine in the provision of healthcare within domestic arenas among this community.
- To analyse how knowledge of TMs has changed among generations and among the different waves of migrants who moved from Pakistan to Bradford at different periods of time.
- To briefly discuss the implications the data gathered in this research could have for public health policies devoted to minority ethnic communities, especially those put in place to counteract diabetes.

## Methods

### Study design

The study was conceived as an urban ethnobotanical<sup>1-3</sup> study, whose main aim was to record TMs still in use among the Mirpuri Pakistani community living in Bradford (Fig. 1); to describe in depth the details of their administration and

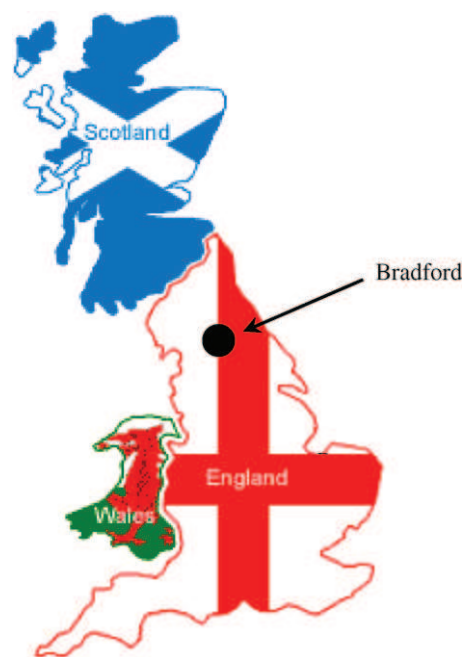


Figure 1 Location of Bradford in Great Britain.

claimed medical use (including any food/medicine overlap); to botanically and pharmacognostically identify the quoted plant-based remedies; and to assess the extent of variability of use within the migrants' community.

In order to limit the number of variables, we decided to concentrate the study on a specific group of Pakistani migrants (those coming from the Mirpur region, which is one of the major areas of origin of most Pakistani families living in Bradford), and to focus on first-generation migrants only, who migrated to Bradford at different ages and at different times.

### Data collection

The fieldwork was conducted over a period of 10 weeks from March to May 2005 by QZA and WA in the following urban areas of Bradford: Manningham, West Bowling, University, and Lidget Green. Informants were selected from first-generation migrants who had moved from Mirpur to Britain (people born in the UK of Mirpuri immigrants were excluded), and sampled using snowball techniques.

A semi-structured, in-depth interview was conducted with each of the participants. Information was sought about TM remedies still in use within the participants' households using classical ethnobotanical methodologies<sup>17,18</sup>, namely free-listing, focus-groups, participant observation, and the collection and identification of relevant plant material.

Participants were asked initially to free-list medicinal plants and other natural products that they still use in their domestic healthcare, and then they were asked to precisely describe the manipulation, administration and claimed medical use of the different preparations. When using the term *traditional*, we always emphasised that we were referring to ingredients that the interviewees thought of as having their origins in Mirpur. In a second phase of the field study, focus-group interviews were carried out to confirm data gathered during the individual semi-structured interviews.

Prior informed consent (PIC) was obtained before commencing any of the interviews. Ethical approval was granted by the University of Bradford Ethics Committee. Ethical guidelines adopted by the AAA (American Anthropological Association)<sup>19</sup> and by the ICE (International Society of Ethnobiology)<sup>20</sup> were rigorously followed.

Thirty-seven participants were interviewed (32 men and 5 women, with an average age of 47 and 56, respectively). All interviews were audio or video recorded. Pharmacognostic (dried) voucher specimens were collected, if available, and identified by the first author (AP). Nomenclature follows standard ethnobotanical or pharmacognostic works carried out on Pakistani and South-Asian flora.<sup>21–23</sup>

### Data analysis

All interviews were noted in Urdu and later translated into English. In the descriptions of the medicinal uses, original *emic* (referring to the *insiders'* point of view, or, in other terms, meaningful – either consciously or unconsciously – to our informants/interviewees) definitions were retained in most cases, in order to avoid their being artificially "translated" into bio-medical Western concepts. Information regarding the main issues addressed during the

interviews was subsequently elaborated using ANTHROPAC and SPSS software.<sup>24,25</sup>

## Results

### Pakistani traditional medicines in Bradford

Twenty-one of the 37 interviewees stated that they preferred to use traditional treatments, instead of having to rely on conventional Western biomedicine. Traditional medicine (TM) is administered within the households, generally by mothers or grandmothers. Only a few of the participants admitted visiting specific traditional healers.

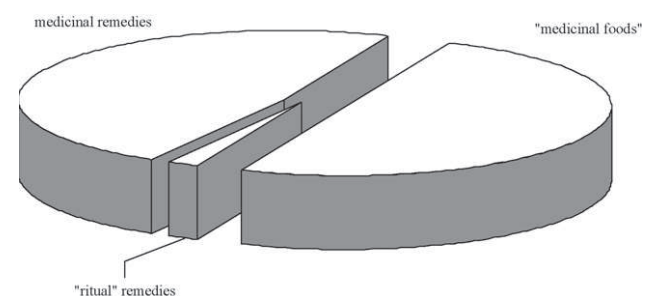
### Traditional pharmaceutical knowledge among Mirpuri Pakistani migrants

In Appendix I (published in online version at <http://www.sciencedirect.com/> as supplementary data), we present all the TM remedies reported by the informants. These 56 items are listed in alphabetical order of their Urdu folk names. Most of the plants listed are available in the Pakistani shops and markets in the area, but a few are brought back into the UK by people returning from visiting relatives living in Pakistan, either for personal use or for trading within the minority ethnic community. In this way, traditional herbal remedies continue to be spread, and to be a crucial part of the daily provision of healthcare within these households.

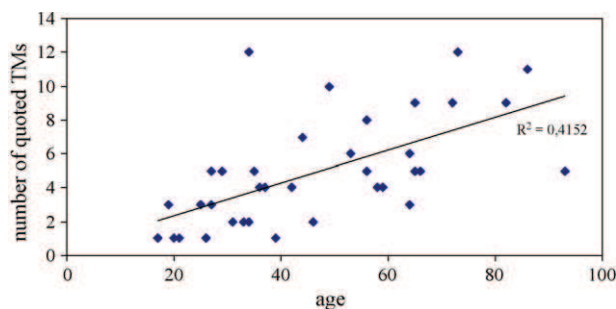
Among all the botanicals cited in the interviews are many species that are only vaguely known in the modern Western clinical phytotherapy. A few recorded species have toxicological relevance, for example, *Cannabis*, *Papaver*, and *Datura* spp. The fact that informants affirmed that they are still being used in local traditional healer praxis could suggest the existence of a very interesting and perhaps somewhat covert network of Pakistani TM practitioners and clients in the Bradford area.

### The inextricable connection between food and medicine

A large proportion of the recorded remedies represent *food-medicines* (Fig. 2), or in other words, plant foods and spices that are consumed or ingested in order to obtain a precise medicinal action.



**Figure 2** Classification of the TMs quoted by Pakistani migrants in Bradford.



**Figure 3** Diagram showing the distribution of traditional pharmaceutical knowledge by ages among Pakistani migrants from Mirpuri in Bradford.

A few ethnoscientific studies carried out during the last decades have pointed out the inextricable connection between food and ethnomedical practices.<sup>26–28</sup>

A crucial issue emerging from our data is that not only spices but also many vegetables were considered by our informants to be proper medicines, if cooked in specific ways. *Karela* (bitter melon, *Momordica charantia*), for example, is one of the most quoted remedies, and is believed to be able to control and even cure diabetes. *Karela* has recently been studied quite intently, and apart from its very interesting phytopharmacology, similar patterns of use for it have been described by Pakistani migrants living in Oslo, Norway.<sup>29</sup>

### Dynamics of traditional pharmaceutical knowledge over time

Data gained in this study show that older people are more likely to use traditional remedies than younger people; hence traditional knowledge (TK) on homemade medicines seems to be eroding within the younger generations (Fig. 3). Another important factor, which also plays a role in the diffusion of TPhK, is the length of time minority ethnic groups have been in the UK (Fig. 4). One would assume that families who migrated from Pakistan earlier on would be most likely to know and use TM remedies (following theories that define migrant groups as “frozen societies”); however no clear trend emerged from our research supporting this assumption. On the contrary, from our data it seems that a certain cultural adaptation has probably taken place, since Pakistani



**Figure 4** Diagram showing the distribution of traditional pharmaceutical knowledge by the period of time living the UK.

individuals who moved in the 1960s know proportionally less about TM than those who have more recently migrated from Mirpur.

### Discussion

Herbal medicines are a commonly used source for self-treatment worldwide. Depending on historical, social and economic factors, the use of these medical resources is more or less integrated into the institutionalised health systems. However, while migrations have continued to influence European societies over the past centuries, it is only in the last 50 years that the arrival of non-European migrants has begun to significantly affect western societies overall. People coming from abroad have always brought into Western Europe their own cultural artefacts and their medical practices and health beliefs with them, but in recent times there has been increasing concern among many European National Health Services that newcomers delay seeking medical attention and tend to use their own help-seeking strategies.<sup>30–32</sup>

On the other hand, traditional medical practices are not static. They change over time, and their cultural adaptation is actually the sum of continuous cultural negotiations.<sup>4</sup> Accordingly, ethnopharmacy<sup>33</sup> and trans-cultural health studies need inter- and trans-disciplinary approaches, with researchers crossing the borders of disciplines such as phytotherapy, pharmacy practice, pharmacognosy, medical botany, ethnobotany, pharmacology, medical and nutritional anthropology, sociology, psychology, and public health studies.<sup>34</sup>

The study that we present here shows that TMs among Pakistani migrants from Mirpur in Bradford are still alive. It also shows that most of the quoted remedies are little known in Western herbalism and modern evidence-based phytotherapy. Moreover, a large proportion of these TMs represent *food-medicines*. This finding provides very important insights and raises interesting questions for public-health stakeholders, since the *emic* perception of health among Pakistani migrants is strongly embedded in a holistic view where also the diet is crucial for maintaining and improving human health.

During the interviews, concepts of hot and cold emerged as part of the system of *Unani* medicine. These concepts were used by our informants particularly when referring to the benefits of the quoted remedies. *Unani* TM originates from Greek medicine, and has evolved and flourished within the Muslim world via Avicenna’s Canon of Medicine (*Unani* is an Arabic spelling of *Ionian*, meaning Greek).<sup>35</sup> Greek medicine was based on the concept of balancing the body’s naturally produced humours. When these humours fell out of balance, they would yield diseases (depending on circumstances), and when they were restored to balance these diseases would heal. This medicinal system involved four basic elements, four different natures and four different humours, thus differing from the Ayurvedic and Chinese medical traditional systems. The four elements in the *Unani* medicinal system are earth, air, water, and fire; the four natures are cold, hot, wet, and dry; and the four humours are blood (which is hot and wet), phlegm (cold and wet), yellow bile (hot and dry), and black bile (cold and dry) (see Fig. 5).

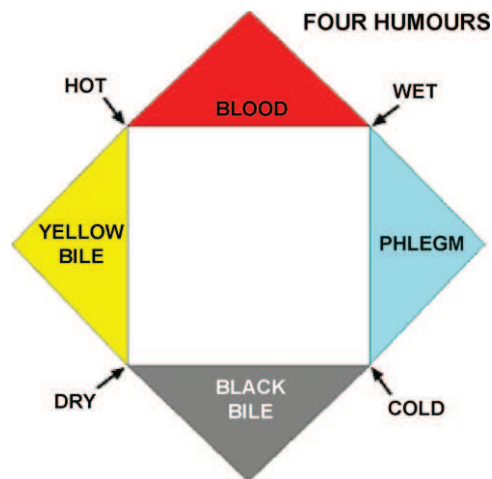


Figure 5 The Unani system.

Our data show that TK is eroded within the younger generations. This finding, which has been well analysed in other environments and diasporic contexts<sup>36</sup>, suggests that we urgently need to record these ethnomedical practices before they disappear altogether.

The study represents one of the first socio- and bio-scientifically grounded studies on TM use among migrants in the UK, and as such, it could be a starting point for further investigation on urban ethnobotany and TM use among other migrant communities within Britain. Its main relevant limitation however has been related to the issue of gender. While most of the informants were males, the same informants confirmed that within their households it is mostly the women who provide healthcare through TMs. Hence, the collected field data tend to represent TMs quoted by male ‘observers’ and maybe users, rather than TMs quoted by the main healthcare ‘deliverers’.

Comparing the data that we collected with those of the very few other studies conducted in Europe on migrants’ TMs<sup>3,9–12</sup>, we would emphasise that ‘eventual’ first traces of *metissages* (exchanges) between the traditional remedies of the migrated communities and the herbal traditions of the country in which they now live (as observed, for example, among Turkish migrants in Germany) have not yet occurred among Pakistani migrants from Mirpur living in Bradford.

This study also offers a few interesting insights for policy makers and public health scholars. As Lawton et al. have pointed out recently when commenting on their study that focuses on the barriers to physical activity amongst people of Pakistan and Indian origin with Type 2 diabetes in Edinburgh: ‘*health promoters may need to work with – rather than against – cultural norms and individual perceptions*’.<sup>37</sup>

Our study has shown that Pakistani migrants have their own strategies within their households for counteracting diabetes, and that they use a few TMs in this capacity. Detailed knowledge of these practices could be crucial for public health interventions, given the fact that it is now widely recognised that more culturally sensitive approaches are required.

We believe that further research is necessary to establish a correlation between the hot–cold classifications of herbal remedies and foods that form the basis of the con-

ceptual use of many of the products cited in this study and those identified elsewhere in Pakistan. It could be worthwhile, for example, to compare Pakistani migrants’ TMs in UK and Europe with those still in use in their regions of origin in Pakistan, as this could allow scholars to focus more closely on the issue and dynamics of change affecting TMs after emigration. We also feel that there is an urgent need to examine the degree of eventual *metissages* with Western concepts of health and diseases, with Western pharmaceuticals, and even with Western herbal/phyto-pharmaceutical remedies.

Future research could also focus more closely on the extent of TM use between genders and among diverse generations of migrants, as well as among diverse ethnic groups living in the same country, or among the same ethnic groups living in different British and European urban settings.

Interdisciplinary approaches would be also crucial in further studies aimed at assessing the safety and efficacy of migrants’ TMs, given that a few herbal remedies have a toxicological relevance, and a few plant-based TMs have not yet been well investigated bio-pharmacologically.

## Acknowledgement

Special thanks are due to all the Mirpuri Pakistani community members involved in the study, for having accepted to share their knowledge on TM; to the Bradford School of Pharmacy of the University of Bradford, for having funded the project.

## Appendix A. Supplementary data

Supplementary data associated with this article can be found, in the online version, at [doi:10.1016/j.ctim.2007.03.005](https://doi.org/10.1016/j.ctim.2007.03.005).

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