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Socio-demographic Profile of Traditional Health Practitioners (Managtambal) Using Herbal Plants in Bolinao, Pangasinan, Northern Philippines

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***Abstract*—The study aims to know the socio-demographic profile of traditional health practitioners of Bolinao, Pangasinan which will serve as baseline data for future correlation studies on cultural transmission and erosion involving ethnobotanical knowledge. Survey method was used in the study with 19 respondents which were purposively sampled. Socio-demographic characters such as sex, age, civil status, education, primary occupation, religion, number of children, and number of years practicing traditional healing were recorded. Results showed that they are mostly male, have the age of 60 and above, married, elementary graduates, Catholic, have more than three children, have 16-20 years of experience in traditional healing and have the primary occupation of fishing. It was revealed also in the study that the presence of deployed barangay health workers discouraged the consultation of folks to traditional health practitioners although herbalists were documented as such.**

Keywords—Socio-demographic profile, traditional health practitioners, survey method, Bolinao

I. INTRODUCTION

Intricate relationship between humans and their natural resources is a requisite to traditional ecological knowledge (TEK), which is shaped through direct experience and contact with nature acquired from local communities passed from generations to generations (Eyssartier et al. 2008). Ethnomedicinal knowledge is one of the TEKs wherein plants become sources of drugs for the treatment and prevention of illnesses and promotions of good health. Alpuerto et al., (2010). In fact, the World Health Organization (2003) estimated that up to 80% of the world's population is dependent solely on the use of plants for their health and well-being.

This type of accumulated knowledge and beliefs undergoes evolution and adaptation and handed through generations via cultural transmission (Berkes et al. 2000). Such cultural traits and practices can be transmitted through at least three separate paths- however not mutually exclusive through vertical transmission (from parent-to-child), horizontal transmission (between two individuals of the same generation) and oblique transmission (from non-parental individuals of the parental generation to members of the offspring) Cavalli & Feldman (1981). The kind of cultural transmission is significant in understanding the preservation, erosion and dissemination of cultural traits and innovations (Reyes-Garcia n.d.). However, it was claimed that vertical transmission is highly conservative thus it might explain the slow evolution and innovation of traditional knowledge in the population unless other paths are also used (Eyssartier et al.2008).

Moreover, biological, ecological and socio-cultural factors with the inclusion of techniques, practices, religion and age were contended to be associated with the use of plants in the indigenous communities (Ryan et al. 2005; Wekerle et al. 2006; Turner et al. 2009; Byg & Balslev 2004; Akerreta et al. 2007). Specifically, important factors such as

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consumerism, religious conversion, access to Western Lifestyles and formal education were identified for the erosion of TEK (Steinberg 2002 & Voeks 2004). Furthermore, biodiversity conservation is threatened because of the loss of this traditional ecological knowledge (Ju et al. 2013 & Keller et al. 2005).

Thus, recording and publishing of traditional botanical knowledge is one of the efforts done because of the increasing threat of cultural erosion involving the use of plants (Gruyal 2014). Although several studies have been to document ethnomedicinal especially in parts of Europe, Asia and Africa, few documentations were done in the Philippines in most cases concentrating only in indigenous groups while the knowledge on traditional agriculturists and forest dwellers are neglected (Langenberger et al. 2005).

The Philippines is one of the culturally diverse countries with 110 indigenous communities and 175 ethnoliguistic groups (Sia 2011). One of these is Pangasinan considered to be the ninth largest Filipino group. About half of the people are Pangasinenses, a distinct ethnololiguistic group found along the central coast and interior plains of the province. The rest of the province's people are descendants of Ilocano migrants who settled the eastern and western parts of Pangasinan. Thus, making Pangasinan a melting pot of mixed-cultures and a culturally diverse area (Maganes 2012). However, its western part has two towns having their own dialect-Bolinao and this is found in the towns of Anda and Bolinao which is distinctly different from Pangasinan and Ilocano languages. The ethnicity of people of Bolinao, Pangasinan comes from their peculiar mother tongue language known as Binubolinao, which is spoken by about 42.44% of their households (LGU Profile Municipality:Bolinao n.d.) However, the language is currently threatened or nearly extinct because of the decline in the use by the younger members of the society (Tan 2013).

With the current threat in their language which indirectly affects cultural transmission of the ethnobotanical knowledge, the study aims to document the sociodemographic profile of the traditional health practitioners using medicinal plants locally known as *managtambal*. Such study will serve as baseline study for any interventions in the preservation of their culture and conservation of present biodiversity.

II. Materials and Methods

Study Area

The study was carried in the municipality of Bolinao, Pangasinan Northern Philippines. It is located on a cape of the northwestern tip of Pangasinan seated in the western part of Lingayen Gulf and bounded by the West Philippine Sea on the north and west side; on the east, by the Kakiputan Channel, and on the south by the rolling hills and plateaus of Bani. It is set along latitude 16°16' to 16°26' and longitude 119°45' to 119°57'. The municipality occupies a total land area of about 23,319.94 hectares and has 30 barangays of which 23 are coastal and 7 are land-locked (LGU Profile Municipality: Bolinao, Pangasinan n.d.).

However, there were 11 barangays of Bolinao preidentified by barangay *kagawad* and secretaries with traditional health practitioners during the preliminary meetings with the local government of Bolinao. The identification was based on the criterion that they use plants and other plant products in the healing process and theiraccessibility.

Data Collection

Permission was sought from the local government of Bolinao, Pangasinan. Secretaries of different barangays were convened to pre identify the locations of the herbalists in the municipality. Barangay Kagawads and secretaries were present during the data collection that aided the researches in the translation of some terms and actual identification of plants used for healing.

There were 19 key informants visited and interviewed using semi-structured interview. Focus and small group discussions were conducted to validate the information collected from the healers. The documentation process used were audio-visual recording of key informants, patients and small group discussions, the use of individual interview schedule, and pictorials of their practices and plant species used.

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Fig. 1. Map of Bolinao, Pangasinan showing its location relative to the location of Manila, Philippines. Red triangles indicate the barangays visited, which was pre identified with herbalists by the barangay secretaries.

III. Results and Discussion

Interviewees' socio-demographic characteristics

Table 1 shows that nineteen THPs were interviewed (11 male, 8 female). Approximately 68% of the practitioners belong to 60 and above age. On the other hand, only one belongs to lower age bracket (20-39 years old) followed by 6 respondents with age within the range of 40-59 years. This implies that fewer practitioners will be retained once the older retire which suggests that fewer individuals will hold the botanical knowledge unless transmission to willing and younger population occurs. Furthermore, older people are more knowledgeable in the medicinal uses of plants than younger people (Byg, 2004; Ryan, 2005; Saynes-Vásquez et al. 2013; Phillips & Gentry 1993). Moreover, it was claimed that there is a strong association on the process of knowledge acquisition with that of aging since time is needed to help individuals store knowledge and experience (Garro 1996). Thus, with the age distribution of the herbalists in Bolinao, Pangasinan belonging mostly to 60 and above years of age, ethnobotanical knowledge accumulated overtime. Also, this is parallel with the number of years of their practice, wherein 52.6% has engaged in traditional healing for 16 to 20 years already. The lowest is 10-15 years of practice with 5.3% distribution. In addition, several studies have shown that age seem to be the only factor linked with knowledge (Aguilar 2007 & Beltran-Rodriguez et al. 2014); however some researchers have found no connection between age and ethnobotanical knowledge (Byg et al. 2004).

TABLE 1. The Socio-demographic characteristics of the traditional health workers of Bolinao, Pangasinan (N=19)

Characteristics	Number of Interviewees		Total Percentage
	Male	Female	
Sex			
Male	11		57.9%
Female		8	42.1%
Age (years)			
20-39	0	1	5.3%
40-59	3	3	31.6%
60 and above	8	5	68.4%
Civil status			
Married	10	8	94.7%
Widowed	1	0	5.3%
Educational Level			
Elementary level	3	2	26.3%
Elementary graduate	6	3	47.4%
High school level	1	2	15.8%
High school graduate	1	1	10.5%
Vocational graduate	0	1	5.3%
College graduate	0	1	5.3%
Religion			
Catholic	9	7	84.2%
Baptist	1	1	10.5%
Methodists	1	0	5.3%
Number of Children			

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One	1	1	10.5%
More than three	10	7	89.5%
Years of practicing traditional healing (herbalists)			
1 to 5 years	1	3	21.1%
6 to 10 years	3	1	21.1%
10-15 years	1	0	5.3%
16-20 years	6	4	52.6%
Primary Occupation			
Fishing	7	1	42.1%
Business	0	2	10.5%
Mason	4	0	21.1%
None	0	5	26.3%

However, it was indicated in a research that individuals in the younger group were learning less medical ethnobotanical knowledge because of several factors such as increased access to modern services (e.g. schools and health care clinics), decreased traditional learning opportunities, changed values, and greater treatment options (Hopkins et al. 2015).

Most herbalists are married with 94.7 %. Such preference of using medicinal plants could be explained by the fact the herbalists with family members probably would like to decrease the financial charge required by the conventional medicine such as going to clinics and hospital for diagnosis and treatments (Makbli et al. 2016) since finances will be used for buying food and other basic needs. In addition, 89.55% of the respondents have more than three children which implies that there were more individuals to be fed by the herbalists. This is supported by the percentage of the dominant source of primary income which was fishing (42.1%) followed by the absence of occupation (26.3%) and the least was engagement in business (10.5%).

On the other hand, in terms of religion, 84.2% are Catholic and the remaining percentage were Methodists and Baptists. Such percentage is parallel with the results of sociodemographic survey for the entire Bolinao (Socio-economic profile Bolinao, Pangasinan, n.d.).

Furthermore, the formal educational status of both male and female interviewees was very low with elementary graduate as the highest level earned (47.4%) followed by non-graduation to elementary education (26.3%). Also, as cited by Sarki in his book socio-demographic factors and utilization of traditional medicine in Kazaure Town, Jigawa State, Nigeria. It was mentioned that educational attainment plays an important role in the individual's decision to opt for certain health services. Highly educated persons choose for modern healthcare services while less educated opt for traditional medicine. The results were similar to the study of Upadya et al. (2014), Ashu et al.(2011) , and Kisangau et al.(2007) indicating that there was a low literacy rate among traditional practitioners which poses problem in the documentation of such practices needed for the preservation of culture. Moreover, it was emphasized that one of the two main reasons is higher education which decreases the interest of the younger generation to traditional medicine (Upadya 2014). Interestingly, although a low percentage of the practitioners were vocational and college graduates, they still practice traditional healing. However, they mentioned that they were discouraged to practice by their immediate family members. Furthermore, upon interviews revealed that the presence of Barangay Health Workers in their respective barangays who are deployed by the municipal and national government does not encourage the use of medicinal plants since they claimed that the identified plants have no pharmacological bases.

IV. CONCLUSIONS

Traditional health practitioners or herbalists of Bolinao, Pangasinan socio-demographic profile indicated that they are mostly male, have an age of 60 and above, married, elementary graduates, Catholic, have more than three children, have 16-20 years of experience in traditional healing and have the primary fishing occupation.

V. RECOMMENDATIONS

It is recommended that the results of the socio-demographic factors be subjected to correlational tests to establish relationship to that of cultural transmission or erosion. Further, it is also recommended that, relationship between the use of their ethnic language Bolinao and cultural transmission of ethnobotanical knowledge be studied since it was claimed by most of the heads of their

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local government unit that there was a decrease in the use of their native language.

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