

The Versatility of Hyacinth Bean (*Dolichos lablab* Linn.):
Phenomenological-Empirical study

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ABSTRACT

One of the herbs that has a long history and has become a significant influence in social, economic, and environmental activities is Dolichos lablab Linn (Hyacinth bean). In a traditional community like Ilocos Sur, the plant is used as food, and herbal medicine and potentially creates new income sources for rural and coastal communities. To explore the versatility of Dolichos lablab in the traditional practices of healing improved the existing knowledge of the plant and contribution to socio-economic and socio-cultural development. Because it focuses on the lived experiences of seven key informants, a phenomenological approach is appropriate. Results showed that the Dolichos lablab plant used by the Ilocano affects human health experiences, improves existing knowledge, contributes in promoting socio-economic cultural development, and may serve as a basis for further investigation for documentation. This study focuses on providing knowledge on Lablab and its interaction with cultural value, economic abundance, food, and medicinal use.

Keywords: *Herbal therapies, Hyacinth bean, Traditional, survival*

INTRODUCTION

One of the great significant focuses of global scientific research is the search for alternatives. The intention focuses on the transformation and innovation of science and many cultural applications in society.

Plants influenced the use of natural resources in rural communities. Several people or social units (i.e., persons, households, or communities) participating in such studies have documented those cultural motives such as relations of reciprocity among persons and communities, rituals and ceremonies, some spiritual aspects, and efforts to maintain customs and traditions (Rangel-Landa, S., Casas, A., García-Frapolli, E. *et al*, 2017).

Plants like *Dolichos lablab* Linn. (Hyacinth Bean), was observed that the local term used is *parda* (Ilokano) and the national term *bataw* (Tagalog) (Stuart, G. 2012). This plant has made its presence felt and has generated a growing interest in its nutritive value, practical health care or alternative medicinal values, and economic potential.

One of the most promising medicinal plants is *bataw* (Hyacinth Bean), scientifically known as *Dolichos lablab* Linn. This plant is in the Leguminosae or Fabaceae family. This bean is one of the more ancient cultivated plants, possibly dating back more than 3000 years (E-agriculture, 2017). Its wild forms are found in India, which is most likely where it originated. It was most likely introduced to China, Western Asia, and Egypt from India. This variety produces lovely white flowers and thin pods. They are perennial vines with a short lifespan. The leaves are composed of oval, three-pointed leaflets that measure 6-12 cm by 5-9 cm.

Some cultivars have white scented flowers, and the fruit is a pale green legume pod that is 6.00 cm long by 2.00 cm wide and flattened. It has 4-5 seeds and matures to a light brown color. *Dolichos lablab* Linn. (bataw) can be grown in both hot and dry seasons in tropical regions such as the Philippines, with flowers appearing 45 to 60 days after sowing in both cultivars. It is a bushy plant that is photoperiod insensitive, fairly homogeneous, and pest resistant. In nature, it is an annual or a short-lived perennial. It is a climbing vine with beautiful, fragrant small white flowers and light green flat seed pods. *Dolichos lablab* (Hyacinth bean) is a twining vine with purplish stems that grows in the home garden as an annual vine for ornamental flowers and bean pods. It grows on a sturdy trellis to support the vine's weight. It prefers sun and light moist well-drained soils. It is usually planted after the frost danger has passed. It thrives in hot, humid climates (The National Academic Press, 2020).

Being close to the plant has enabled communities to live in a more sustainable manner. Nature has created the ideal plant; one that is native to the area (Berkes, insert date). In older people of various ethnicities, legumes are the most important dietary predictor of survival. *Dolichos lablab* is a legume that provides food for humans, animals, and the soil. Lablab is a versatile legume with numerous applications and a high nutritional value for humans, animals, and the soil, making it an important underutilized crop (Beckett, 2004.). Other traditional medicine research, particularly in herbology and plants used in healing, already follows conventional methods. Lablab is a popular, even vital, food in parts of tropical Asia. This crop, for example, provides a significant portion of the protein in the daily diet of the rural population of southern India. Young lablab pods are widely consumed in these and other parts of India as vegetable-boiled like French beans, dumped into curries, and so on. The immature seeds are sometimes extracted from the green pods and boiled or roasted for dinner (Stuart, 2012).

The upland areas of Ilocos Sur are a well-known treasure of plant diversity, with diverse lifestyles in the community. Many plants have medicinal value and are used by locals to treat a variety of ailments. The traditional community is well-versed in plants with cultural applications. *Dolichos lablab* is one of the most diverse domesticated legume species and has multiple uses among the vegetable species in the area. As a sole crop, this is also a preferred agricultural plant. The species is primarily grown as a component of home gardens. Because of its constant and close association with the agroecosystem, Ilocos Sur has gained a good understanding of both the beneficial and harmful properties of the plant *Dolichos Lablab* Linn. (Hyacinth bean). However, the vast knowledge-based information available on this valuable plant is eroding as a result of changing socioeconomic and cultural values, illegal plant collection, and changes in lifestyles and behavior. The loss of traditional knowledge within cultures, as well as the rigid changes that are taking place, are simply irreversible in terms of species extinction. As a result, serious efforts are being made to document the plant's various uses before it becomes a "lost crop."

Tay- ac is a barangay in the municipality of Bantay, in the province of Ilocos Sur, with a population of 2, 595 according to the 2020 Census. This accounts for 6.99% of Bantay's total population. Tay- ac's population is made up of households, students, farmers, health officers, and traditional healers who are mostly young dependent adolescents. These are

economically active and potentially employable individuals. *Dolichos lablab* is one of the most diverse, domesticated legume species in the area and has a variety of uses. As a sole crop, this is also a preferred agricultural plant. The species is primarily grown as a component of home gardens.

Moreover, there are still gaps that need to be filled in the study and documentation related to the ethnic botanically useful species that will be added by highlighting the older folks, and youngsters to provide enhanced information on health and socioeconomic status.

This research will serve as the foundation for the conservation and at the same time, expository benefits of the plant. Further, it aims to introduce the plant, and know its significance, especially to those who are not familiar with it. Moreover, the study aims to explore the versatility of *Dolichos lablab* (Hyacinth Bean) which is used in a traditional community. It focuses on providing knowledge on *Lablab* and its interaction with cultural value, economic abundance, food, and medicinal use. *Dolichos lablab* will contribute a significant role in the lives of the community involved in preserving the plants' cultural activities and other roles in preserving ethnicity.

METHODOLOGY

The exploration of *Dolichos lablab* in the traditional practices of healing improves the existing knowledge of the plant. This study utilized the phenomenological approach to comprehend the lived experiences of individuals. Using convenience sampling, the study involved key respondents from the province of Ilocos Sur, who are 24 years old and above either male or female. Other participants were community members with a minimum of 10 years of residence from 24- 75 age, either male or female, and capable of expressing themselves. The collected data subsequently underwent thematic analysis.

Table 1

Socio-demographic profile of the respondents

Code	Sex	Age	Civil Status	Occupation
01	F	45	Married	Housewife/ Farming
02	F	60	Married	Ancestral healer
03	M	75	Single	Farmer
04	F	24	Single	None/ student
05	M	44	Married	Market vendor/ farmer
06	F	45	Married	Health officer/farmer
07	M	60	Married	Traditional practitioner/ farmer

Although non-healers were not always on-ground to share information, they were also considered part of the study as long as they are ten years resident at any age, male or female. It should be noted that both men and women use the plants. Although these respondents use medicinal plants to treat illnesses, they do not consider themselves to be practitioners of a profession/occupation. The majority of respondents were farmers, and this was their primary source of income.

RESULT AND DISCUSSION

The following results are the three major themes emerged from the analysis.

Theme 1. Dolichos lablab Linn. is used as a viable economic option within the constraints of survival.

Community folks claimed that herbal plants that grow in the backyard area are cheaper. Informant (01), believe that “nu awan sidami ta awan sabali nga pangalaan, agpuros kam ti bunga ti parda. Naalisto nga lutwen”. Further, informant (05) agreed and added that “aglaklako ak pay ti parda adda pay agangkat kanyak nga market vendor” Moreover, Informant (3) noted “nga agal alisto nga mangan ti bigat, and Informant (10) ket inkam pagmurmurayan nga agpuros ti parda diay arubayan mi.” Marginalized people could afford to look for natural and fresh vegetables and readily available.

Ilocanos, particularly respondents, emphasize the significance of Dolichos lablab. Ilocanos eat this vegetable on a regular basis. This demonstrates that Dolichos lablab has a significant impact on the economic and productive aspects of people's lives, protecting them from physiological deficiencies manifested in their economic status.

Theme 2. Dolichos lablab is used for social and cultural enhancement appraisal approaches.

Some applications of the plant were noted, and they have a different understanding of how certain diseases were cured as local traditional healers. In some cases, the plant was known to the younger adult, but they did not use it for medicinal purposes. They claimed that the practice was extremely profitable, and that the old concept of treating such diseases is being replaced by improved skills and the use of modern equipment as needed. Only a few people, mostly young adults, use the plant.

Informant (04) stated that the plant is frequently used as a ceremonial tool, as an artistic medium to express indigenous traditions, similar to how flowers are used to make offerings. Informant (10) added that the plant's leaves are a Christian botanical symbol for immortality during Palm Sunday ceremonies. He went on to say that its flowers are frequently used symbolically in romantic courtship; they represent love, fidelity, and longevity.

Other discoveries revealed that planting Dolichos lablab is not only a recreational activity, but is also deeply rooted in their culture as a part of spiritual offerings dating back to ancient times. The respondents' claim is similar to the experiences of the early Tinguians in Abra, who believe that the spirits require Dolichos lablab to travel throughout eternity.

The ancestral healers, according to Informant 02 included prayers as their spiritual rituals to strengthen the medicinal effect of the plant and the sign of modalities of treatment is suggested by the appearance of the leaves (roughly, slight affliction, stickiness, and brittleness of the leaves). This shows folkloric modalities in treating ailments.

Theme 3. *Dolichos lablab* is used in treating health-related problems.

The widespread use of herbal remedies and preparations derived from indigenous plants and based on local beliefs and traditions remains the "backbone" of health care (WHO, 2017).

According to one of the respondents (Informant 01), *D. lablab* has been used to treat a variety of diseases, including snake bites. This custom has been handed down from generation to generation. As a result, it came to be widely regarded as both safe and effective. However, when asked if they knew what substances the plant contained and, if not, if they were interested in learning, the healers revealed that they had no idea.

One informant said, that "medicinal plants used as traditional medicines is well known in Ilocos Sur". Another informant added, "most of the old folks, especially the "herbolarios," in Ilocos Sur believe that the leaves of *Dolichos lablab*, in poultice form, are used to treat diarrhea and heal wounds." Some of the informants also admitted to relying on plant therapeutic properties. The majority of freshly collected plant materials include leaves, flowers, stems, and roots for medicinal use. Numerous studies have identified compounds within *Dolichos lablab* plants; thus, results indicate that the leaf and pod extracts could serve as a potential source of antioxidant and can be used as a therapeutic agent in diseases caused by excessive generation of free radicals like cardiovascular diseases and even cancer (Lqbal & Linn, 2015).

One traditional healer (Informant 04) said, "I used the plant leaves, seed and stems to cure symptoms of the disease". In the province of Ilocos Sur, the traditional healers discover beneficial ailments in the plant; they purify and determine the proper dosage of the plant. According to informants 1 and 7, "Long time eater ak ti bunga parda nga isu ti ipagarup ko nga pinagbaba ti cholesterol ko." This informant's experience demonstrates that he was unaware of the plant constituents.

As a result, they are compelled to employ the plant as a herbal remedy. Farmers, for example, used *Dolichos lablab* leaves as medicine to treat common infections and diseases such as coughs and colds. In Southern Tamil India, *Dolichos lablab* (parda) is used to prevent illness and alleviate symptoms such as cough, sore throat, and ear inflammation (Dahake, Joshi & Patel, 2017).

As one respondent shared, an old man used to claim that he had a skin rash, another person with a swollen leg and another child complained of a stomach ache.

Another (Informant 08) admitted that "*makay ayo nga kanen diay bunga na*". Informant (04) shared t "*saanak pay nga nabayag nga agus usar ngem naibaga diay gagayyem ko agas kano ti nadunor*". The experience of the informant only demonstrates that the plant has been used and passed down from generation to generation.

One traditional healer (09) claimed, "I started healing as a hilot (early adult life). I usually place the leaves on the surface area of the complaint and replace them again if the

material sticks to the surface. The appearance of the leaves (roughness, slight affliction, stickiness, and brittleness) are signs of modalities of treatment.”

The leaves of *parda* are infused in local rum and orally administered to treat delayed menstruation problems and abdominal pain. Another traditional healer reported during the interview that the leaves of the plants are used in treating menstruation-related syndrome. Moreover, the same informants, that the plant is helpful to hasten childbirth in the gestating patients who are about to give birth.

Although the informants were unable to explain the connection between the plants and disease treatment, one informant (10) willingly disclosed that the plant was used to treat menstrual syndrome but not as an abortifacient. *Lablab* is used for social and cultural enhancement appraisal approach, folk medicine, and treating health-related problems as a result of numerous studies on the use of local plants for an economical alternative within the boundaries of survival. Furthermore, the widespread use of herbal remedies and preparations derived from indigenous plants through the application of local traditions and beliefs remains the "backbone" of health care. Further, based on the interviews conducted, it was found that the plant *Dolichos lablab* can improve the way of life of Ilocano and can maintain their identity as Ilocano who work together for a common goal.

CONCLUSIONS

Dolichos lablab has numerous applications. It could be used as an alternative medicine to treat certain ailments. It also continues to be an important part of livelihood, as a source of income, as an edible, medicinal, and ceremonial plant, as a satisfying custom associated with a well-being premise combining both material and spiritual needs, as well as maintaining social relations and traditions that are part of the cultural identity. This leads to the conclusion that the use of the plant as food, medicine, and recreational activity is influenced by the socio-economic situation in the province.

RECOMMENDATIONS

Innovations in cultivating *Dolichos lablab* (Hyacinth bean) may be introduced to increase its productivity and to ensure faster returns of investments on the part of the farmers. Similarly, initial investments pay off in other businesses, such as landscaping. Better outcomes for more resilient and less expensively maintained aesthetic parks and gardens.

ETHICAL STATEMENT

This study was reviewed and approved by the University of Northern Philippines Ethics Review Committee. Ethical principles observed in the study include the conflict of interest, principle of informed consent, principle of privacy and confidentiality, principle of vulnerability, recruitment, benefits, compensation, and community considerations.

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