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Hygiene and Sanitation Practices of the Badjaos in IBA, Zambales

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Abstract: ***The assessed level of practices on hygiene and sanitation of Badjao pupils and students and their parents was one of the objectives of the present study. It also aimed to present the living condition the Badjao folks at the host community as well as the perceptions on appropriate and practiced hygiene and sanitation. The respondents were fourty-four pupils and six students studying in Public Elementary and Secondary Schools of Iba District, DepEd Division of Zambales this school year 2017-2018. The study made use of descriptive and qualitative research designs with survey questionnaire and structured interview as the data gathering tools. The data were processed and analyzed using percentage, frequency counts, mean and Analysis of Variance. Based on the findings, the researcher concluded that majority of the Badjao-respondent are female in their middle adolescent and are grade six pupils. The Badjao pupil/student-respondents always practiced personal hygiene, frequently practiced food and environment hygiene and sanitation. The respondents made disagreement and dissimilarities of practices, opinion and perspective towards personal, food and environmental and sanitation practices.***

Keywords: Badjaos, Hygiene, Sanitation, Practices, Pupils, Students, Indigenous

1. Introduction

1.1 Rationale

The Badjao are a sea people native to the south western parts of the Philippines, along the coast of Jolo, Siasi and Tapul Island and further south in Sitangkai and Sibutu. For centuries they have fished, dived and traded in the seas of Southeast Asia (Abrahamsson, 2011). During the last decades, they have suffered hard from conflicts, piracy, decreased fish levels which forced many Badjao to leave their home seas (Daug, et al., 2013 and Alamia, 2005). The peace-loving Badjao stayed away from the insurgency. For decades Badjao have suffered hard from large-scale migration in the Philippines (Blust, 2007). For this reason Badjao have been scattered over big parts of Philippines, Malaysia, Indonesia and Brunei. In the Philippines most refugees live in stilt houses in urban areas of Mindanao, Cebu, Bohol and Luzon; only a few remain nomadic (Nimmo, 2006 and Shoup, 2008). Some ended up in Zambales.

During a short period of time many Badjao have transferred from being dwelling sea nomads to an urban minority, with limited knowledge about city life. According to Abrahamsson (2011), a big majority have never been to school, they can seldom read or write, they have no legal papers, and they have no experience of administration and governmental rule.Their Philippine neighbors view them as uncivilized, lazy and dirty. For example, Badjao face discrimination when entering shopping malls and restaurants, their children are being teased in school and they can hardly find a job (Blust 2007). Badjao are living as refugees in their own country but most exiled Badjao continue to build their houses on stilts they have been forced to learn a new language and to find alternative sources of income (Blust 2007).For years, the Badjao became known as beggars and they themselves experienced and are still experiencing a change in their culture and identity.

High levels of social, economic and environmental disadvantage underlie the health problems in remote Indigenous communities. The survey of McDonald, et al. (2009) highlighted that poor housing conditions lead to unsanitary environments and an increase in infections. The WHO data on the burden of disease from Howard & Bartram (2013) reported that approximately 1.7 million of deaths worldwide are attributable to unsafe water, sanitation and hygiene. Ray, et al. (2010) have found the significant proportion of deaths can be prevented through safe drinking water, adequate sanitation, hygiene, immunization and proper infant feeding. According to Census India (2011), interventions in the first five years have a significant impact on the prevention of childhood morbidity and mortality.

The levels of sanitation and water services coverage as well as health attainment are low among indigenous peoples (Jimenez, 2014). Internationally, Indigenous people tend to have relatively poor living conditions and health status compared to the general population (McDonald, et al., 2009). Indigenous children are particularly vulnerable to experiencing malnutrition and infection that not only affects their growth and development, but also their cognitive development, educational outcomes and health and wellbeing throughout life (McDonald, et al., 2009). The Badjao houses lack proper sanitation. Much of their domestic waste, including excreta and rubbish, are thrown into the water and swept in different directions by the tide. Diseases such as fever, cholera, ulcers, tuberculosis, maleria and malnutrition are recurrent among in the community (International Labor Organization, 1995, as cited in Daug, 2013).

Research on hygiene and sanitation with specific reference to indigenous culture is rare. Hence, the conduct of the study to evaluate the level of awareness on hygiene and sanitation among the Badjaos students and parents in Iba, Zambales is proposed to be undertaken.

1.2 Objectives

The assessed level of practices on hygiene and sanitation of Badjao pupils and students was one of the objectives of the study. It also aimed to present the living condtion the Badjao folks at the host community as well as the perceptions on appropriate and practiced hygiene and sanitation. The respondents were puplis and students studying in Public Elementary and Secondary Schools of Iba District of Zambales this school year 2017-2018.

2. Methodology

2.1 Conceptual Framework

The social rights of the indigenous peoples like the Badjaos are protected in the Indigenous Peoples' Rights Act (IPRA) of 1997 or Republic Act No. 8371 specifically Sec. 27. IPRA is an Act to Recognize, Protect and Promote the Rights of Indigenous Cultural Communities/Indigenous Peoples, Creating a National Commission on Indigenous Peoples, Establishing Implementing Mechanisms, Appropriating Funds Therefor, and for other Purposes. Sec. 27 Children and Youth states that the State shall recognize the vital role of the children and youth of ICCs/IPs in nation-building and shall promote and protect their physical, moral, spiritual, intellectual and social well-being. Towards this end, the State shall support all government programs intended for the development and rearing of the children and youth of ICCs/IPs for civic efficiency and establish such mechanisms as may be necessary for the protection of the rights of the indigenous children and youth.

DepEd Order No. 10, s. 2016 on the other hand specifies the Policy and Guidelines for the Comprehensive Water, Sanitation and Hygiene in School (WINS) Program. The policy aims to ensure correct knowledge and understanding of effective hygiene and sanitation project. Improve hygiene and sanitation practices among learners to enable them to develop lifelong positive hygiene and sanitation behavior. Ensure the school is kept clean and safe (e.g., proper waste management and food sanitation). Engage public and private partners to program implementation and sustainability.

Presidential Decree 856 or The Code of Sanitation of the Philippines (1998) also guarantees appropriate sanitation practices at school. The code on sanitation has for its ultimate objective the improvement of the way the Filipino by directing public health services towards the protection and promotion of the health of our people. The health of the people being paramount importance, all efforts of the health services should be directed towards the protection and promotion of health. As for the school facilities, the school population should be provided potable water sewage and waste disposal system shall likewise conform to the requirements prescribed by the code.

Sanitation and Hygiene Promotion are amongst the most challenging development sectors in which to work. This is partly because effective sanitation requires the development of public policy in an arena which is intensely private and where results are only achieved when the household makes appropriate choices (Water Supply and Sanitation Collaborative Council and World Health Organization, 2005). In every country, advocates for sanitation and hygiene promotion now need to find locally-generated information to make the case for more and better investments. Often, there is a need to show policy-makers what sanitation and hygiene promotion really can be achieved.

2.2 Materials and Methods

This study about the hygiene and sanitation practices of the Badjaos in Iba, Zambales used quantitative descriptive research design, providing an accurate account of characteristics of particular individual and situation of a group.

A total of 48 students/ pupils in the public Elementary and Secondary Schools in Iba District were asked to answer a survey questionnaire seeking their personal profile, personal hygiene, food hygiene, environmental hygiene, and sanitation practices, conducted in the last quarter of 2018.

3. Results and Discussions

Figure 1 shows the map of Zambales indicating the public Elementary & Secondary schools where respondents are located. A total of 48 Badjao pulpis/students were included as respondents including their parents, leaders and other Badjao for observation.

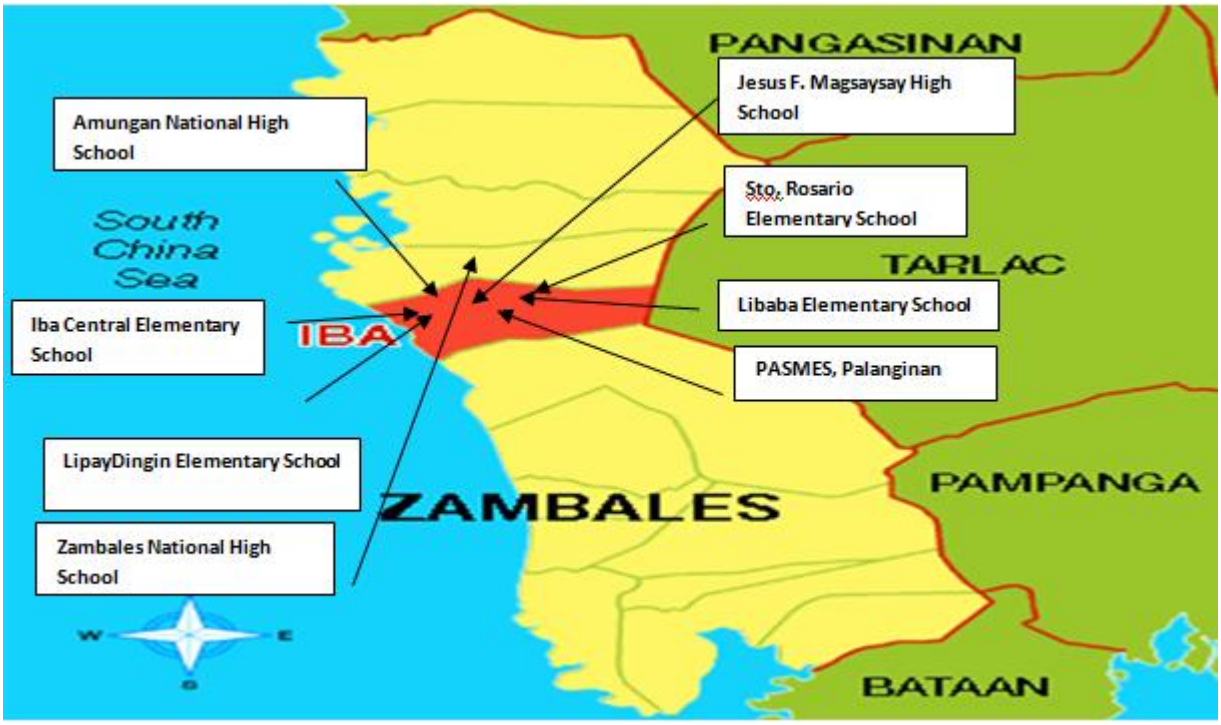

Table 1: Frequency and Percentage Distribution of the Badjao Student-Respondents' Profile

Sex	Frequency	Percent
Male	18	37.50
Female	30	62.50
Total	48	100.00
Age	Frequency	Percent
15 and above	9	18.75
14	2	4.17
13	11	22.92
12	4	8.33
11	9	18.75
10 and below	13	27.08
Total	**48**	**100.00**
Mean	**12.15 or 12 years old**	
Grade Level	**Frequency**	**Percent**
Grade 1	3	6.25
Grade 2	7	14.58
Grade 3	7	14.58
Grade 4	9	18.75
Grade 5	2	4.17
Grade 6	14	29.17
Grade 8	3	6.25
Grade 10	2	4.17
Grade 11	1	2.08
Total	**48**	**100.00**

Table 1shows of the 48 pupil/student Badjao-respondents, 18 are male and 30 are female. Majority of the respondents are female. In parallel to this result, majority of the young participants in the study of Ciobanu, et. al (2016) are female. Revealed from Table that the young Badjao participants belong to the age group of 12. According to World Health Organization (WHO) as cited in Csikszentmihalyi (2017) defines an adolescent as any person between ages 10 and 19.

Table 2: Perception on the Personal Hygiene Practices of the Badjao Student–Respondents

Personal Hygiene	WM	DE	Rank
1) I take a bath every day	4.54	Always (A)	1
2) I change my clothes every day	4.33	Always (A)	6
3) I use soap to wash my hands and body.	4.25	Always (A)	7
4) I brush my teeth two to three times a day.	4.15	Frequent (F)	8
5) I wash my hands before eating.	4.41	Always (A)	4.5
6) I use shampoo to wash my hair.	4.41	Always (A)	4.5
7) I cover my mouth when coughing	3.96	Frequent (F)	9
8) I cover my nose when sneezing	3.81	Frequent (F)	10
9) I wash my hands after using the comfort room.	4.50	Always (A)	2
10) I use slippers/shoes when walking.	4.43	Always (A)	3
Overall Weighted Mean	4.28	Always (A)	

The Badjao pupil and student-respondents answered that they always take a bath every day, wash their hands after using the comfort room and use slippers/shoes when walking. The result could mean that the respondents find the activities as very important as well as necessities, making these personal hygiene activities as always practiced. Moreover, the result indicates that the young Badjaos have an understanding of the benefits on their health and wellbeing if these are regularly practiced. According to McDonald & Bailie (2010), indigenous peoples' hygienic habits are not always rated as poor. McDonald, et al. (2009) stated that the pre-school teachers introduce young children to good hygiene practice using the toilet properly and wash their hands with soap. Many respondents of Social Sciences Research Centre of the University of Hong Kong (2005) had carried out good personal hygiene practices (washing hands after going to the toilet (99.9%). Ciobanu, et al. (2016). Washing hands after using the toilet and before meals is more frequent than after returning home.

The Badjao pupil and student-respondents at all times also practice washing their hands before eating, shampooing their hair, changing clothes every day and using soap to wash their hands and body. These findings signify that the respondents have been performing desirable food hygiene practices mainly washing hands first before eating, the need to change their clothes every day, shampooing their hair and the use of soap to wash hands and body parts. These appropriate personal hygiene practices of the young Badjaos could be attributed to learnings at school and/or at home. For the result on the Personal Hygiene Practices of the respondents, in the study conducted by Social Sciences Research Centre of the University of Hong Kong (2005), it is revealed that many respondents had carried out good personal hygiene practices using liquid soap to wash hands (93.7%). Ciobanu, et al. (2016) reported that students in schools tend to use soap when they wash hands in most of the cases when soap is provided.Divya, 2016) argued that a better personal and water and hygiene practices due to higher education status of mothers.

The Badjao pupil and student-respondents perceived that they frequently practice brushing their teeth two to three times a day, covering their mouth when coughing and when sneezing. These results suggest that brushing for the young Badjaos is a daily practice and revealed the necessity of covering their mouth in the event that they cough and sneeze. McDonald, et al. (2009) reported teachers should provide younger children about hygiene not to spit, and not to wipe the discharge from their noses on their clothing. The overall weighted mean was 4.28 with descriptive equivalent of Always (A). The Badjao pupil and student-respondents perceived frequent to different Personal Hygiene Practices.

Table 3: Perception on the Food Hygiene Practices of the Badjao Student-Respondents

Food Hygiene	WM	DE	Rank
1) I wash my hands before preparing meals	4.29	Always (A)	2
2) I cover foods on the table after cooking.	4.10	Frequent (F)	4
3) I use spoon and fork when eating meals	3.00	Sometimes (SO)	10
4) I wash meat, fish and vegetables thoroughly before cooking	3.60	Frequent (F)	9
5) I cook food thoroughly as needed	4.17	Frequent (F)	3
6) I keep foods at safe temperatures.	3.83	Frequent (F)	7
7) I store raw fruits and vegetables appropriately	3.98	Frequent (F)	5
8) I store raw meat, poultry or fish with ice or in refrigerator.	3.63	Frequent (F)	8
9) I use and drink safe water from time to time	4.42	Always (A)	1
10)I take note of the expiry date when buying pre-packaged food	3.92	Frequent (F)	6
11)Overall Weighted Mean	3.93	Frequent (F)	

Table 3 revealed that the Badjao pupils/students-respondents always practice the use and drinking of safe/potable water as well as washing of hands before meals are practiced. The respondents are probably taught at school and at home of what water is good to consume and have to be consumed at all times. Moreover, the young Badjaos have this particular knowledge and understanding of the benefit of consuming drinkable water at school, at home or other places at all times. The participants in the study of Social Sciences Research Centre of the University of Hong Kong (2005), demonstrated good food hygiene practices (washing hands before eating or handling food (97.8%). A cross-sectional study conducted by Peter & Kumar (2013) among 506 households, of 451 children aged 6–59 months, stated that improved knowledge of caregivers was associated with higher odds of better child hygienic practices.

As perceived by the Badjao pupils/students, they frequently practiced food hygiene activities include the cooking of food thoroughly as needed and covering those at the table and properly storing raw fruits and vegetables. The result signifies that the young Badjao have this sense of care on proper food preparation and keeping. The young Badjaos also manifest understanding of the health benefits if foods, fruits and vegetables are appropriately prepared and stored. Most respondents of Social Sciences Research Centre of the University of Hong Kong (2005), include cooking meat and poultry thoroughly (92.3%), storing raw food and cooked food separately (90.8%), washing meat, seafood and vegetables thoroughly before cooking. Better child health care seeking decisions according to Opara, at al. (2017) changes in traditional beliefs, attitude, and improved Water, Sanitary and Hygiene (WaSH) practices among young individuals.

It was revealed that the sometimes practiced food hygiene was the use of spoon and fork when eating meals which means that the Badjao pupils/students more often use their hands when eating. The practice of the young Badjaos could be attributed to the practice at home which they always observe and imitate. Badjao families probably prefer eat meals using their hands.

Table 4: Perception on the Environmental Hygiene Practices of the Badjao Student-Respondents

Environmental Hygiene	WM	DE	Rank
I use public toilets	3.77	Frequent (F)	4
I wash my hands after using public toilets	3.56	Frequent (F)	5
I use mask when in contact with a sick person	3.15	Sometimes (SO)	9
I wash my hands after visiting public places like markets	3.35	Sometimes (SO)	7
I wash my hands after using public transport	3.19	Sometimes (SO)	8
I put my litter at the trashcan	4.15	Frequent (F)	2
I wash my hands when handling rubbish/garbage	4.21	Always (A)	1
I wash hands after touching public installation and equipment	3.50	Frequent (F)	6
I burn my garbage at my back yard	3.90	Frequent (F)	3
I dispose my rubbish/garbage at a compost pit	2.96	Sometimes (SO)	10
Overall Weighted Mean	3.57	Frequent	

Table 4 signifies that the respondents are aware and understand that rubbishes and garbage contains elements and dirt which are sources of bacteria and other microorganisms

that can cause sickness and illnesses if not properly handled or if not prevented. For the result on the hygiene practices of the respondents in the study conducted by Social Sciences Research Centre of the University of Hong Kong (2005), it is revealed that many respondents had carried out good personal hygiene practices like washing hands after handling rubbish (93.5%).

As showed, the young Badjao-respondents frequently practiced throwing their litters in trashcans, burning their garbage in their back yard and often use public toilets. The respondents have this practice of burning their garbage at their back yard. The other frequently practiced was the use public toilets. The results were validated by the responses of the Badjao folks in their interviews conducted by the researcher. Their garbage is not collected by the municipal garbage collector. The community therefore, burn their garbage in their backyard. They have public toilet in Sitio Dulit constructed through the initiative of the municipal government of Iba. Ciobanu, et. al (2016) reported that less than 30% of respondents in all countries use the toilet in schools regularly. Most of the respondents (ca. 50%) use it sometimes or only when absolutely necessary. For Environmental Hygiene Practices, the Social Sciences Research Centre of the University of Hong Kong's (2005) respondents had commonly carried out environmental hygiene practices such as putting rubbish like cans and bottles in a covered litter bin and/or trashcans.

Table 5: Perception on the Sanitation Practices Badjao Student – Respondents

Sanitation Practices	WM	DE	Rank
I wash all your utensils/tools at home with detergent and hot water	3.35	Sometimes (SO)	8
I regularly clean my home and minimize dust and moulds	3.85	Frequent (F)	2
I maintain your home free from sharp objects	3.44	Frequent (F)	7
I maintain my home free from other physical hazards	3.92	Frequent (F)	1
I help to clean classroom and maintain its cleanliness	3.77	Frequent (F)	3
I collect solid waste from classrooms and dispose it properly	3.48	Frequent (F)	6
I dispose wastewater quickly and safely	3.54	Frequent (F)	5
I help neighbors in cleaning our area	3.00	Sometimes (SO)	10
I change water when it looks dirty after cleaning bathroom and kitchen	3.19	Sometimes (SO)	9
I observe rules in segregation of garbage I use, reuse and recycle.	3.75	Frequent (F)	4
Overall Weighted Mean	3.53	Frequent (F)	

Revealed from Table 5, that the most frequently practiced sanitation activities were on maintaining their respective homes free from physical hazards, followed by cleaning it to minimize dust and moulds. The findings signify that the respondents knew how they can maintain a safe and a clean home since the said sanitation practices were regular conducted. On the other hand, at school, the sanitation frequently practiced were helping other pupils/students to clean their classroom and maintain its cleanliness and observing/following the use, reuse and recycle rule on wastes. The identified sanitary practices at home adopted in the study of (de Toledo, 2010) include waste accumulation and human waste disposal near the households and sources of water. Attwood's (2009) participants indicated that it was the role of pre-school teachers to introduce young children to the concepts of good sanitation and safe sanitation behavior.The respondents perceived that they sometimes change the water in the container when the water looks dirty after cleaning the bathroom and kitchen and they sometimes help their neighbors in cleaning their surroundings. The respondents may have instructed or trained not to store water for long period for this will become mosquito breeding sites that can be carriers of dengue, malaria and zika viruses. Moreover, findings revealed that the respondents also seldom help their neighbors in cleaning their surroundings. Based from the interview and focus group conducted by the researcher, all the participants from the Badjao community in Sitio Dulit complained about wet ground/environment, hence they seldom clean their yards. On the other hand, Jondonero, et al. (2013) suggest to correct the inappropriate practices and behaviors by coming up with health and sanitary programs/interventions that will lead to a better quality of life among Bajaos.

4. Conclusion and Recommendation

Based on the findings, the researcher concluded that:

1) The Badjao-respondent is typical female in her middle adolescent and grade six pupil.
2) The Badjao pupil/student-respondents always practiced personal hygiene, frequently practiced food and environment hygiene and sanitation.
3) There is no significant difference on the perception of the Badjao–respondents on personal hygiene practices when grouped according to personal profile sex, however, there is significant difference on the perception when attributed to personal profiles age and grade level.
4) There is no significant difference on the perception of the respondents on food and environmental hygiene practices and sanitation practices when grouped according to profile variables.
5) There is significant difference on the perception of the Badjao- respondents' hygiene and sanitation practices.

4.1 Recommendations

In the light of the foregoing findings and conclusions of the study, the following recommendations were advanced:

1) Conduct extensive promotions at school and the host community like distribution of health pamphlets/flyers on the most positive hygiene and sanitation behaviors such as appropriate hand washing, use of comfort rooms, handling rubbish/garbage/litter; take a bath, use and drink safe water and maintaining cleanliness at home.
2) Reinforce knowledge on hygiene and sanitation by conducting practical activities and/or group activities at school aimed towards the appropriateness and benefit of using spoon and fork when eating meals, covering mouth when coughing and when sneezing and using mask when in contact with a sick person
3) The garbage collection program in the Municipality of Iba have to include and extend its services in the Badjao community in Sitio Dulit, Brgy. Palanginan.

4) Public health education for Badjaos should be conducted regularly in the host community in order to facilitate the turning of good environmental hygiene (e.g. community cleaning) behaviors into practices.
5) Keep a good standard of water sanitation at the host community to prevent the development and spread of infections and illnesses.
6) Involve Badjao parents during planning, implementation, operation and maintenance of facilities for water, hygiene and sanitation in host community.
7) Conduct a follow study focused on determining the status on health, hygiene and sanitation of the Badjao community in Iba.

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