



HEALTH BELIEFS AND PRACTICES ON MATERNAL AND CHILD CARE AMONG THE ISUMACHER PEOPLE OF SUMADEL, TINGLAYAN KALINGA: A BASIS FOR STRENGTHENING MNCHN PROGRAM OF DOH

Krichelle JP D. Carungi,
Shiwata M. Chulsi,
Leizel D. Cabildo,
Shinery Love A. Cauilan,
Jessy Dalayap,
Kyla Mae A. Mahoy,
Gerald T. Batugal,
Lara Collin C. Pattaguan

ABSTRACT

This study, aims to determine the health beliefs and practices on Maternal and child care among the Isumacher people in Sumadel, Tinglayan Kalinga as a basis for strengthening the MNCHN program of DOH. In this study, the researchers utilized descriptive correlational research design in order to determine the significant difference and relationship of the profile of the Isumacher people to their health beliefs and practices on maternal and childcare. A total of one hundred thirty-eight (138) respondents were selected and purposive or judgmental sampling was utilized in determining the respondents. A survey questionnaire was used and collected data were analyzed statistically. The analysis includes the utilization of frequency count and percentage distribution for the profile variables of the respondents. Based on the findings, the greatest number of the respondents are Roman Catholic, 51 years old and above, married, elementary and had more than 31 years of residency in Sumadel, Tinglayan Kalinga. A weighted mean was also used in determining the health beliefs and practices of the Isumacher regarding Maternal and Childcare in terms of prenatal and postnatal. The analysis finds that the respondents believed that eating male pork during pregnancy may cause their unborn child to have boils, and that it is important to offer a simple ritual called "ontad" after birth to welcome the newborn. Also, health practices include drinking plenty of water, eating plenty of healthy foods, washing hands with soap and water before and after holding the baby, washing the baby's face and neck daily, bathing the baby with thorough drying, and keeping the baby warm. Additionally, using one-way analysis of variance (ANOVA) and an independent sample T-test, results showed that the profile variables of the respondents had an impact on the respondent's health beliefs and practices on Maternal and Childcare which implies that one's demographic profile can influence one's perception of health, health beliefs,



and health practices. Furthermore, the study also showed using regression analysis that there is a significant relationship between health beliefs and the respondents profile variables with their health practices in maternal and childcare, this suggests that an individual's profile variables and health beliefs can influence their health practices, and how they respond to modifications in their lifestyle, health-care interventions, and compliance recommendations.

Key words: *Maternal and childcare, Pre-natal, Postnatal, Health beliefs, Health practices, Isumacher*

INTRODUCTION

Religious beliefs and cultural norms played a significant role in shaping maternal and child care practices. These factors influenced the decisions and behaviors of pregnant women or those planning to conceive regarding their own well-being and that of their unborn child. Research published in the International Journal for Equity in Health highlights various factors that influenced maternity and childcare, including a woman's age, exposure to media, level of education, economic status, and place of residence (Tsawe, et al., 2015). Maternal and Child Health plays a crucial role in realizing the Department of Health's vision of fostering a healthy environment for Filipinos. Generally, maternal health pertains to a woman's well-being during pregnancy and childbirth. During these phases, providing top-notch care for mothers and their infants is paramount to safeguarding their safety and health. Each pregnancy and delivery experience are unique, and with every childbirth, a woman faces potential risks. These risks encompass postpartum hemorrhage, infections, hypertension, unsafe abortions, anemia, and heart complications. In the municipality of Tinglayan, located in the province of Kalinga, the Isumacher tribe is one of the six tribes residing in the area. They inhabit two barangays, Sumadel 1 and Sumadel 2, and boast a rich cultural heritage with deep-rooted traditions in healing practices and in maternal and childcare beliefs. Renowned for their ancient healing customs, which at times diverged from conventional treatment methods.

Various studies had been conducted in the province of Kalinga, shedding light on different aspects of the local culture. These studies encompassed topics of Kalinga customs and beliefs, the tribal system of Kalinga, marriage rituals, arts and crafts, traditional attire and tattoo culture, as well as literary art unique to the Kalinga community. Furthermore, documentation of healing rituals had been undertaken in specific areas of Kalinga, notably in Pasil and Casigayan in Tabuk, Kalinga.

Furthermore, while a study conducted in Sumadel, Tinglayan, Kalinga explored the utilization of medicinal plants within the community, it fell short in delving into the cultural, belief, historical, and traditional aspects of the Isumacher people as they pertain to the use of traditional methods in maternity and infant care. Despite numerous studies and initiatives aimed at improving maternal and childcare, the Philippines still grapples with a significant number of maternal and newborn deaths, presenting a formidable challenge to the health care system. These challenges could be partly attributed to women's



sociocultural perspectives and practices, religious beliefs, socioeconomic constraints, ethnicity, age, and educational attainment, all of which shaped their attitudes and decision-making regarding health care utilization. Moreover, geographical factors and circumstances, such as challenging road conditions, limited transportation options, and even inadequate telecommunication infrastructures, influences the accessibility and utilization of health care services. Addressing these multifaceted issues is crucial in improving maternal and child health outcomes and ensuring equitable access to health care services for all. Therefore, investigating the cultures and beliefs, the differences and relationship regarding maternal and child care practices of the Isumacher people in Sumadel, Tinglayan, Kalinga, as well as identifying barriers to the utilization of available services could yield insights crucial for reducing morbidity and mortality rates, additionally, such research could provide valuable information for enhancing health care service delivery and informing policy-making efforts aimed at bridging the gap between available health care services and the needs of mothers within these communities.

METHODOLOGY

Research Design

The researchers utilized a descriptive correlational design to described, showed, and summarized the data gathered regarding the health beliefs and practices of the Isumacher in Sumadel, Tinglayan Kalinga. Descriptive was utilized as it accurately and systematically explained the situation, also as it revealed basic features discovered during the investigation. Additionally, correlational analysis was utilized to draw conclusion, evaluate and establish the relationship between the health beliefs and practices of the Isumacher.

Respondents of the Study

In this study, the researcher utilized purposive sampling or judgmental sampling. A total number of 138 respondents were selected. Purposive sampling was used because of the specific attributes that we were looking for in a respondent.

Research Instrument

The researchers gathered data by means of survey questionnaires. The questionnaire was organized into three sections: (a.) respondent's profile; (b.) questions regarding maternal and childcare health beliefs; and (c.) questions about maternal and childcare health practices.

Data Gathering Process

The following procedures were used by the researcher in gathering authentic and reliable data: Upon approval of the study, A letter of request for permission and approval to conduct the study were sent to



the Municipal Mayor and Barangay Captain. Upon approval of the Municipal Mayor and Barangay Captain, the respondents were identified.

Data Gathering Process

The following procedures were used by the researcher in gathering authentic and reliable data: Upon approval of the study, A letter of request for permission and approval to conduct the study were sent to the Municipal Mayor and Barangay Captain. Upon approval of the Municipal Mayor and Barangay Captain, the respondents were identified.

The researchers personally administered the survey to the respondents and assisted the respondents in answering the survey. Additionally, the respondents received a complete overview of the research endeavor to ensure that the respondents were objective in answering the survey and understand that the data gathered were used solely for the purpose of research undertaking. The consent was taken verbally from the respondents. Moreover, Privacy and confidentiality were applied by (a) not requiring them to reveal their names to ensure anonymity of their responses and protect their identity (b) ensuring that the data collected were not disclosed to unauthorized persons.

Data Analysis

The researcher used survey questionnaires as the data gathering tool and composed of three parts. The first part determined the profile of the respondents, the second part of the survey questionnaires assessed the health beliefs on maternal and childcare, and the last part assessed the health practices on maternal and childcare of the respondents.

The collected data were analyzed using (a.) frequency count and percentage distribution on the demographic profile of the respondents, (b.) weighted mean on the health beliefs and practices of the respondents, (c.) analysis of variants on the significant difference between the health beliefs on Maternal and Child Care of the respondents when grouped according to the profile variables, and (d.) regression analysis on the significant relationship between the health beliefs and practices of the respondents.

RESULT AND DISCUSSION



TABLE 2.1 ASSESSMENT OF THE RESPONDENTS IN THE HEALTH BELIEFS OF THE ISUMACHER ON MATERNAL AND CHILD CARE IN TERMS OF PRENATAL.

| STATEMENTS | MEAN | DESCRIPTION |
|----------------------------------------------------------------------------------|-------------|-------------------|
| Eating dark-colored foods during pregnancy, my child will have a dark skin tone. | 1.07 | STRONGLY DISAGREE |
| Eating male pork during pregnancy may cause the unborn child to have boils. | 3.33 | STRONGLY AGREE |
| CATEGORICAL MEAN | 2.16 | DISAGREE |

Table 2.1, the respondents disagreed with the categorical mean of 2.16 in the assessment of prenatal health beliefs and among Isumacher. The statement, "Eating male pork during pregnancy may cause the unborn child to have boils," received the highest mean score of 3.33 from the respondents, showing that they strongly agreed. On the contrary, the respondents strongly disagreed to the belief that "Eating dark colored foods during pregnancy will cause my child to have dark skin tone," leading to the lowest mean of 1.07.

The respondents strongly agree with the highest mean of 3.33 in the statement "*Eating male pork during pregnancy may cause the unborn child to have boils*", which implies that the Isumacher still adheres to certain traditional and religious beliefs with regards to taking care of their pregnancy. On the contrary, the respondents strongly disagree with the lowest mean of 1.07 in the statement "*Eating dark colored foods during pregnancy will cause my child to have dark skin tone*".

According to Philippine Institute of Traditional and Alternative Health (PITAHC), Department of Health (DOH), the elders of the Isumacher have more traditional views in terms of health and disease (PITAHC & DOH, 2000). This is evident in the study as the profile of the respondents revealed that majority of the respondents have live in Sumadel, Tinglayan Kalinga for 31 years and more. As such, the respondents strongly adhere to certain beliefs during pregnancy particularly in eating male pork during. In addition, *mangngilin ka* which means avoid doing evil and adhering to certain rituals is a common advice of elders in Kalinga, this is to protect oneself from harm and illnesses (Gamboa, 2017). Hence, it implies that years of residency contributes to certain beliefs that have been passed on from generation to generation.

**TABLE 2.2 ASSESSMENT OF THE RESPONDENTS IN THE HEALTH BELIEFS OF THE ISUMACHER ON MATERNAL AND CHILD CARE IN TERMS OF POSTNATAL.**

| STATEMENTS | MEAN | DESCRIPTION |
|---------------------------------------------------------------------------------------------------------------------------------------|-------------|----------------|
| I believe that it is important for the family to offer a simple ritual called “ontad” immediately after birth to welcome the newborn. | 3.78 | STRONGLY AGREE |
| I believe that I have to avoid taking a bath for three days after birth to prevent me from getting sick. | 2.31 | AGREE |
| CATEGORICAL MEAN | 2.95 | AGREE |

Table 2.2 showed that the respondents agreed with the categorical mean of 2.95 in the assessment of Health Beliefs on maternal and child care among the Isumacher people in terms of postnatal. The respondents strongly agreed with the highest mean of 3.78 in the statement “I believe that it is important for the family to offer a simple ritual called ontad immediately after birth to welcome the newborn”, Additionally, when it comes to the statement “I believe that I have to avoid taking a bath for three days after birth to prevent me from getting sick”, the respondents agreed with the lowest mean of 2.31.

The respondents strongly agree with the highest mean of 3.78 in the statement “I believe that it is important for the family to offer a simple ritual called ontad immediately after birth to welcome the newborn”, which implies that the Isumacher still adheres to certain religious beliefs with regards to taking care of their newborn child. On the other hand, the respondents agree with the lowest mean of 2.31 in the statement “I believe that I have to avoid taking a bath for three days after birth to prevent me from getting sick”.

Since, majority of the respondents are middle adults and have lived in Sumadel, Tinglayan, Kalinga for more than 30 years, certain rituals specifically offering a simple ritual called ontad to welcome a newborn, were strongly believed and practiced in taking care of their newborn child. This implies that age contributes to certain health beliefs which affects lifestyle and behavior, as middle adults have the tendency of consciously or unconsciously alter patterns in their life (Britannica, 2023). For instance, the stronger a person believed in something the higher the chance of attributing these beliefs into one’s lifestyle and the longer you lived in the community the higher the chance of adopting these beliefs.

**TABLE 3.1 ASSESSMENT OF THE RESPONDENTS IN THE HEALTH PRACTICES OF THE ISUMACHER ON MATERNAL AND CHILD CARE IN TERMS OF PRENATAL.**

| STATEMENTS | MEAN | DESCRIPTION |
|----------------------------------------------------------------------------|-------------|-------------------|
| Drink plenty of water. | 4.00 | STRONGLY AGREE |
| Lower daily caffeine intake to no more than 300 mg per day or 1 cup a day. | 1.43 | STRONGLY DISAGREE |
| CATEGORICAL MEAN | 3.11 | AGREE |

Table 3.1 showed that the respondents agreed with the categorical mean of 3.11 in the assessment of Health Practices on maternal and child care among the Isumacher people of Sumadel, Tinglayan Kalinga in terms of prenatal. The respondents strongly agreed with the statement “Drink plenty of water”, which had the highest mean of 4.00. On the contrary, the respondents strongly disagreed with the statement “Lower daily caffeine intake to no more than 300 mg per day or 1 cup a day”, which had the lowest mean of 1.43.

The respondents strongly agree with the highest mean of 4.00 in the statement “*Drink plenty of water*”. On the contrary, the respondents strongly disagree with the lowest mean of 1.43 in the statement “*Lower daily caffeine intake to no more than 300 mg per day or 1 cup a day*”.

Since majority of the respondents are middle adults, it implies that age contributes in engaging into practices that promotes wellness. Physiologically and psychologically, middle adulthood is a period wherein there is a gradual decline of physical abilities and awareness of death or mortality. Accordingly, during this stage the potentialities of the past were reminisce and recollect in order to make adjustments in the limitations of the future (Britannica, 2023). Individuals also of this age group are more aware of health problems hence they may consciously or unconsciously alter patterns in their lives.

TABLE 3.2 ASSESSMENT OF THE RESPONDENTS IN THE HEALTH



PRACTICES OF THE ISUMACHER ON MATERNAL AND CHILD CARE IN TERMS OF POSTNATAL.

| STATEMENTS | MEAN | DESCRIPTION |
|--------------------------------------------------------------------------------------------|-------------|-----------------------|
| Eat plenty of healthy foods like meat, fish, beans, vegetables, fruits, eggs and milk. | 4.00 | STRONGLY AGREE |
| Drink plenty of water. | 4.00 | STRONGLY AGREE |
| Drink iron supplements and vitamins as prescribed by the health workers. | 3.30 | STRONGLY AGREE |
| Wash hands with soap and water before and after handling the baby | 4.00 | STRONGLY AGREE |
| Wash the baby's face and neck daily | 4.00 | STRONGLY AGREE |
| Bathe the baby when necessary and thoroughly dry and dress the baby keeping the baby warm. | 4.00 | STRONGLY AGREE |
| Keep the newborn's umbilical cord stump clean and dry. | 4.00 | STRONGLY AGREE |
| During cold weather, put a hat on the baby's head and an extra blanket at night. | 4.00 | STRONGLY AGREE |
| CATEGORICAL MEAN | 3.84 | STRONGLY AGREE |

Table 3.2 showed that the respondents strongly agreed with the categorical mean of 3.84 in the assessment of health practices on maternal and child care among the Isumacher people of Sumadel, Tinglayan Kalinga in terms of postnatal.

The respondents strongly agreed with the highest mean of 4.00 in the statement

"Eat plenty of healthy foods like meat, fish, beans, vegetables, fruits, eggs and milk", "Drink plenty of water", "Wash hands with soap and water before and after handling the baby", "Wash the baby's face and neck daily", "Bathe the baby when necessary and thoroughly dry and dress the baby keeping the baby warm", "Keep the newborn's umbilical cord stump clean and dry", and "During cold weather, put a hat on the baby's head and an extra blanket at night". On the other hand, the respondents also strongly agreed but with the lowest mean of 3.30 in the statement "Drink iron supplements and vitamins as prescribed by the health workers".

**TABLE 4. DIFFERENCES IN THE ASSESSMENT OF RESPONDENT' HEALTH BELIEFS AND PRACTICES IN MATERNAL AND CHILD CARE WHEN GROUP ACCORDING TO THEIR PROFILE VARIABLES**

| VARIABLES | | HEALTH BELIEFS | | HEALTH PRACTICES | |
|--------------------------------|-----------|----------------|-----------|------------------|-----------|
| | | PRENATAL | POSTNATAL | PRENATAL | POSTNATAL |
| AGE | f/t-value | 4.707 | 7.352 | 8.625 | 4.403 |
| | p-value | .004 | .000 * | .000 * | .005 |
| CIVIL STATUS | f/t-value | .544 | 5.973 | 2.078 | 1.259 |
| | p-value | .582 | .003 | .129 | .287 |
| HIGHEST EDUCATIONAL ATTAINMENT | f/t-value | 1.139 | 2.339 | 8.805 | 1.650 |
| | p-value | .323 | .100 | .000 * | .196 |
| RELIGION | f/t-value | 3.805 | 1.331 | 6.331 | 1.436 |
| | p-value | .006 | .262 | .898 | .007 |
| YEARS OF RESIDENCY | f/t-value | .405 | 5.353 | 6.331 | 1.436 |
| | p-value | .750 | .002 | .000 * | .235 |

Table 4 revealed that there is a significant difference in the respondent's health beliefs and practices on maternal and childcare based on their profile variables age, civil status, highest educational attainment, religion and years of residency.

Regarding age, there is a significant differences of health beliefs and health practices on maternal and childcare in terms of prenatal with a p-values of .004, and .000 as well as in postnatal with a p-value of .000, and .005.



In the context of health beliefs, post-hoc analysis revealed that ages 21-30 years old have a higher mean when it comes to health beliefs in terms of prenatal, this implies that 21-30 years old have a higher belief. On the other hand, in terms of postnatal, data revealed that ages 51 years and above, have a higher mean which implies that ages 51 years old and above had a higher belief.

With regards to health practices, post-hoc analysis revealed that ages 31-40 years old have a higher mean when it comes to health practices in terms of prenatal, this implies that 31-40 years old have a higher practice. On the other hand, in terms of postnatal data revealed that ages 21-30 years old, have a higher mean which implies that ages 21-30 years old and above had a higher practice.

TABLE 5. ASSESSMENT OF THE RELATIONSHIP OF HOW THE PROFILE AND HEALTH BELIEFS OF THE RESPONDENTS IN MATERNAL AND CHILD CARE

| VARIABLES | HEALTH PRACTICES | |
|---------------------------------------------------------------------|------------------|-----------|
| | PRENATAL | POSTNATAL |
| HEALTH BELIEFS OF THE RESPONDENTS IN MATERNAL AND CHILD CARE | | |
| AGE | p-value | .000 * |
| | r-value | .383 |
| | r2-value | .147 |
| CIVIL STATUS | p-value | .000 * |
| | r-value | .385 |
| | r2-value | .148 |
| | p-value | .000 |
| | r-value | .413 |
| | r2-value | .170 |
| RELIGION | p-value | .001 |
| | r-value | .337 |
| | r2-value | .114 |
| YEARS OF RESIDENCY | p-value | .000 * |
| | r-value | .424 |
| | r2-value | .180 |
| PRENATAL | p-value | .000 |
| | r-value | .430 |
| | r2-value | .185 |
| POSTNATAL | p-value | .000 * |
| | r-value | .448 |
| | r2-value | .201 |
| | p-value | .000 * |
| | r-value | .285 |
| | r2-value | .235 |



AFFECT THEIR HEALTH PRACTICES

The table above illustrated that the respondents' profile variables are significantly related to Isumacher's prenatal and postnatal health practices. Whereas in age, it has a p-value of.000 in terms of prenatal and a p-value of.000 in terms of postnatal and this implies that it is highly significant to the health practices in terms of prenatal and postnatal. Whereas the r-value in prenatal is.383 and the r-value in postnatal is.297, and it implies that it has a positive linear relationship with prenatal and postnatal health practices, however it has a low correlation.

In relation to civil status, it has a p-value of.000 in terms of prenatal and a p-value of.002 in terms of postnatal, indicating that it is highly significant to the prenatal and postnatal health practices of respondents. In addition, the r-value in prenatal is.385 and the r-value in postnatal is.299, which suggests that it has also a positive linear relationship with the health practices prenatal and postnatal but then it has a low correlation.

Religion has a p-value of.000 in terms of prenatal and a p-value of.000 in terms of postnatal, and this implies that it is highly significant to the health practices. For the r-value in prenatal is.414 and the r-value in postnatal is.424 respectively, implying a positive linear relationship and a moderate correlation with the respondent's health practices as to prenatal and postnatal.

In the context of highest educational attainment, it has a p-value of.000 in prenatal and a p-value of.001 in postnatal, so their p-values are less than.005, which indicates that it is highly significant in the matter of prenatal and postnatal health practices of the respondents. Also, the r-value in prenatal is.413 and the r-value in postnatal is.337, implying that both health practices with regards to prenatal and postnatal has a positive linear relationship but in prenatal it has a moderate correlation to health practices whereas the postnatal had a low correlation in health practices.

And with regard of years of residency, it has a p-value of.000 in terms of prenatal and a p-value of.000 in terms of postnatal, and it is shown that it is highly significant with the health beliefs of respondents. In addition, the r-value in prenatal is.416 and the r-value in postnatal is.430, it implies that it has a positive linear relationship and a moderate correlation with the respondents' prenatal and postnatal health practices.

Consequently, their p-values are all less than.005, which implies that there is a significant relationship between the Health Practices in terms of Prenatal and Postnatal. Primarily, because according to the World Health Organization, different factors interplay to influence the health practices of each individual. People's health practices are influenced by their socioeconomic status, where they live, the state of the environment, their religious affiliation, and education level, how old they are and their relationships with friends and family all have a significant impact on health practices.



The table additionally suggests that there is a significant relationship between prenatal health beliefs and practices with a pvalue of .000 and postnatal care, with a p-value of .000 and its rvalue ranges from .40 to .59 so it has a moderate correlation. It is supported in a study titled “Health Literacy by Lynn NielsenBohlman, Allison M. Panzer, and David A. Kindig” that Cultural health beliefs influence the ways people think and feel about their health and health practices, when and from whom they seek health care, and how they respond to changes in their lifestyles, health-care interventions, and treatment compliance recommendations (Nielsen-Bohlman, Panzer, & Kindig, 2004).

CONCLUSIONS

The researchers concluded from this study that an individual's profile variable has an impact on the health practices of individuals, specifically the years of residency or how long they lived there. Wherein, generally speaking, the greater the years they reside, the more likely they will adhere to the culture's health practices. Furthermore, the researchers concluded that these health beliefs are innate in their culture, and some are not objectively proven, however, they relied on it as a basis for their lifestyle choices with regard to health practices, particularly during pregnancy and childcare.

RECOMMENDATIONS

Based on the results of this study the following are recommended:

1. A health education with regards to advantages and disadvantages of physical activities particularly lifting heavy objects during pregnancy which may put both the mother and child at risk.
2. A health education with regards to increased caffeine intake during pregnancy which may increase risk for complications on the part of the fetus.
3. A health education regarding the importance of undergoing ultrasound during pregnancy

REFERENCES

Ageing, E. (2019). *Views on aging: Older adults' self-perceptions of age and of health*. National Library of Medicine, Nacional Center for Biotechnology Information. Retrieved from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7752928/>

Alcabedos, M., & Fontanilla, R. (2024). *THE IMPACT OF THE MATERNAL AND CHILD HEALTH CARE PROGRAM IMPLEMENTATION OF MEDICAL COLLEGES OF NORTHERN PHILIPPINES – COLLEGE OF NURSING IN SAN ISIDRO, IGUIG, CAGAYAN: A PROGRAM EVALUATION: Reproductive Health, Maternal and Child Health Care, Nutrition, Prenatal Care, Postnatal Care.* <https://journal.mcnp.edu.ph/index.php/bsnm/article/view/15>



Barr, J., & Marugg, L. (2019). *Impact of marriage on birth outcomes: Pregnancy Risk Assessment Monitoring System, 2012-2014*. National Library of Medicine, National Center for Biotechnology Information. Retrieved from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6699055/>

Center on Society and Health. (2015). *Why Education Matters to Health: Exploring the causes*. Retrieved from <https://societyandhealth.vcu.edu/work/the-projects/why-education-matters-to-health-exploring-the-causes.html##gsc.tab=0>

Fontanilla, R. C., Catuiza, F. L., Nano, A. B., & Adaya, A. V. (2023). *Nutritional Status to Academic Performance of The School-Aged Children: A Basis for Inter-Collaborative Extension Services Program. The Seybold Report* ISSN, 1533-9211

Fontanilla, R., Mandac, R. G., Michael, U. J., Florentino, J., & Paracad, N. A. B. (2023). *Department of Health Programs: The Perspective of a Geographically Isolated and Disadvantaged Area of Peñablanca, Cagayan. Herculean Journal*, 1(1).

Fontanilla, R. (2023). *Nourishing Minds: A literature review on the link of nutrition, academic engagement, and student success*. [herculeanjournal.com. https://doi.org/10.17605/2zdprd70](https://doi.org/10.17605/2zdprd70)

Tsawe, M., Moto, A., Netshivhera, T., Ralesego, L., Nyathi, C., & Sathiya, S. A. (2015). *Factors influencing the use of maternal healthcare services and childhood immunization in Swasiland. International Journey for Equity in Health*. Retrieved from <https://equityhealthj.biomedcentral.com/articles/10.1186/s12939-015-01622#:~:text=Certain%20factors%20which%20were%20found, and%20child%20health%20services%20differently.>