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ENHANCING KNOWLEDGE AND IMMUNIZATION STATUS FOR HMONG CHILDREN

DNP Project
Submitted in Partial Fulfillment
of the Requirements for the Degree of
Doctor of Nursing Practice

St. Catherine University
St. Paul, Minnesota

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ST. PAUL, MINNESOTA

This is to certify that I have examined this
Doctor of Nursing Practice DNP project
written by

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and have found that it is complete and satisfactory in all respects,
and that any and all revisions required by
the final examining committee have been made.

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Abstract

The purpose of this descriptive study was to obtain Hmong parents perspectives on childhood immunizations. Hmong is a group of people who makes healthcare decisions based on their root belief system and trusted information. This study was conducted by a doctor of nursing student at St. Catherine University in St. Paul, Minnesota at a privately owned primary care clinic, serving a patient population of more than 95% Hmong. It was noted that immunization rates were very poor in this clinic population among pediatric patients from birth to two years of age. This descriptive study used a one to one phone interview design study. The interview questions were derived from the Health Belief Model (HBM) to obtain the perspective of Hmong parents about childhood immunization under age two. Results show that Hmong parents believe in the knowledge, training, and skills of the clinic staff to guide them in deciding whether vaccination is the right choice for their child. Research has shown that parents rely upon and trust their healthcare practitioners. This study affirms the necessity of providing education about childhood immunization for parents in primary care clinics.

Keywords: childhood immunization, parent perspectives, Hmong, immunization teaching tool

Childhood immunizations have been shown to prevent death from vaccine-preventable diseases among children worldwide (Centers for Disease Control and Prevention [CDC], 2016). Despite the worldwide success of vaccines decreasing the spread of infectious disease, there are still groups of people disproportionately not utilizing or accepting vaccine recommendations (World Health Organization, 2017). Children rely on others to assure they are protected from harm and illness. Children depend on their parents to make the best choices for supporting their growth and health. When parents do not understand the benefits of vaccination, children may not receive the vaccines that prevent them from serious communicable disease. This Doctor of Nursing Practice (DNP) project seeks to explore the perspectives of Hmong parents on childhood immunization in one primary clinic where the immunization data show that only one third of pediatric patients under two years of age are fully compliant with the recommended vaccination schedule.

Different cultures yield different perspectives on health and healthcare. In the Hmong culture, Western medicine is used only when patients are symptomatic, or they have exhausted the herbalist and shaman (Baker, Dang, Ly, & Diaz, 2010). Hmong patients seek the help of Western medicine as a last resort (Baker et al., 2010). The parents' role in making healthcare decisions for themselves and their families is based on their root belief system.

Adults make healthcare choices based on information that is trustworthy, increases their confidence in their decision-making process, is tailored to their needs, and directed at finding simple, quick solutions (CDC, 2016). Hmong parents are no different in this decision-making process.

Background

Sixty percent of all Minnesota children are fully immunized with recommended vaccines under the age of two years old, while 54.2% of all those in Ramsey County meet that criteria (Minnesota Department of Health, 2016). The average percentage of pediatric patients receiving vaccines at well child visits in one St. Paul, Minnesota clinic that serves a large population of Hmong pediatric patients during the months of January through December of 2015 was 33% (Clinic billing department, 2016). No data were available for completed and incomplete vaccine series for pediatric patients under the age of two years, so the average of 33% was applied to this specific age group.

The protective effect of herd immunity increases protection even for those who either are not vaccinated or those for whom the vaccines were not effective (U.S. Department of Health and Services, 2017; College of Physicians of Philadelphia, 2017). For most diseases, vaccination rates must meet the threshold of 80%-95% to obtain herd immunity (College of Physicians of Philadelphia, 2017).

According to the Census Bureau (2010), the total Hmong population in Saint Paul was 29, 125. In this clinic, over 95% of the patients are Hmong, and the remaining five percent are a mix of non-Hispanic origin or other race (P. Xiong, personal communication, September 6, 2016). The patient population range from birth to geriatric with the majority being older than 45, 75% receive Medicare or Medicaid, 20% have private insurance, and 5% are self-pay. There is a high illiteracy rate among the majority of the patients older than 45 (P. Xiong, personal communication, September 6, 2016).

The clinic's current method of operation for vaccination of pediatric patients is to place a reminder phone call to parents as the child's birthdate approach, or near upcoming vaccination

due times for infants, as recommended by guidelines issued by the Centers for Disease Control and Prevention (CDC). A registry is formed of well-child visits in the preceding year for one patient, then referenced by the medical assistant (MA) staff to make reminder phone calls closer to the due times for vaccinations. The clinic's method of calling patients back to receive routine vaccines has not been effective. The staff has noticed parents refusing to make appointments at the time of the reminder call.

Among the many preventative measures taken, focusing on the Hmong children will help to improve future outcomes in this population group. Obtaining Hmong parents' perceptions on childhood immunization will provide an insight into the specific needs and expectations of this target group and emphasize changes that can be made to improve vaccine rates for the clinic. This, in turn, will positively impact the community by increasing herd immunity.

Literature Review

Research has shown little information about the perspectives of Hmong parents on childhood vaccinations. One research study on the perceptions of barriers to childhood immunization was a community-based participatory research done in California by Baker, Dang, Ly, and Diaz (2010). The 417 participants in the study were recruited during The Hmong New Year events in San Joaquin Valley and Central Valley. Data collection was achieved using the 23-item Search for Hardship and Obstacles to Shots (SHOTS) survey. Baker, Dang, Ly, and Diaz concluded that the top three contributing factors to perceived barriers to immunization are nativity, socioeconomic position, and preference of Hmong health care practices. Other factors contributing to perceived barriers to immunization were income, language, and no health care, with language as the strongest association; education, and age of arrival were the least significant factors (Baker et al., 2010).

A qualitative study done in Hawaii by Neiderhauser and Markowitz (2007), sought to find barriers to unimmunized children under the age of two years old. The study had a total of thirteen focus groups on four different islands with a total of 64 participants. Neiderhauser and Markowitz concluded from the study five core themes: barriers to childhood immunization included parental issues (such as substance abuse, lack of motivation, complex schedules), parents' lack of knowledge about the importance and long term effects of vaccines, parents' mistrust of information given to them about vaccines, lack of transportation, and financial issues.

A qualitative study about parents' vaccine decision-making was done in the Netherlands among parents from different ethnic backgrounds. The study had six focus groups conducted with 33 mothers from six different ethnic backgrounds (Netherlands, Morocco, Afghanistan, Somalia, Poland, and Belgium). Factors found to be important as to whether parents sought vaccines or not were: confidence towards the Dutch National Immunization Programme (NIP), cultural and religious practices encouraging vaccination, perceived social norms that children are expected to get vaccines, negative experiences with vaccinations, and insufficient knowledge about what vaccines protect from what disease (Harmsen et al., 2015). The authors believe the group had positive feelings toward vaccination even with little to no knowledge of the importance of vaccines suggesting more effort is needed towards educating parents with different cultural and ethnic backgrounds.

In summary, the literature shows similar findings to this current study. Common barriers to childhood immunization for parents are language, lack of knowledge of the purpose of vaccines for certain types of communicable diseases, fear about the side effects, and lack of sufficient information about vaccines. Parents heavily rely on providers to supply that information.

Research Design and Methods

This is a descriptive study with a one to one phone interview designed for data collection. Participants were selected from a convenience sample within a primary care clinic with a focus on pediatric patients under the age of two years old. Interviews were conducted with the parents of these children. Although the immunization status of the child was not included as criteria, participants were chosen according to the last well-child visit where vaccinations could have been given. Each participating parent who participated received a ten-dollar gift card for their time.

Participants were involved in a one to one phone interview with the project leader lasting twenty minutes. Verbal consent was obtained at the time of the phone call. The parent who answered the phone call was the person asked to partake in the interview. During the interview, the parent who answered the phone call was asked to confirm if he or she was the parent of the child under age two. Once the parent had been confirmed with the child, each participant answered a total of eight set demographic questions followed by six set questions about their perceptions of childhood immunization. The interview sessions were conducted by the project leader, and neither the child's name or other identifiers were posted or linked to the interviewees' responses.

The Health Belief Model (HBM) was developed by social psychologists Hochbaum, Rosenstock, and Kegels in the 1950s, aimed at the beliefs and attitudes of individuals toward taking a health-related action and has been used in areas of concern with high risk behaviors, health promotion, and preventative care (University of Twente, 2017). The HBM is the chosen framework for this project because the model takes into consideration individual understandings drawn from the four concepts of perceptions (susceptibility, severity, benefits, and barriers) and

allows for self-reflection in engaging (cues to action and self-susceptibility) self in the decision to act.

The HBM has six conceptual elements illustrating the threat and net benefits of a condition: perceived susceptibility, perceived severity, perceived benefits, perceived barriers, cues to action, and self-efficacy (University of Twente, 2017, Jones & Bartlett Learning, n.d.).

The HBM was used to identify specific perceptions of Hmong parents on childhood immunization by incorporating the concepts of the HBM into interview questions. Six interview questions were formulated as exhibited in Table 2.

Table 2

Interview Questions Derived From The HBM

| HBM concept | Interview Question |
|---------------------------------|---|
| <i>Perceived susceptibility</i> | Do you believe that vaccine-preventable diseases can easily be spread among children of all ages? Why or why not? Hmong translation: <i>Koj puas xav hais tias cov kab mob uas tsimnyog txhaj tshuaj tivthaiv yuav muaj peevxwm kis tau yoojyim rau tej menyuam txhua lub hnuubnyoog? Yog uacas koj ho ntseeg li ntawd?</i> |
| <i>Perceived severity</i> | How do you perceive the severity of the effects of vaccine-preventable diseases in children once they have been infected with one of these diseases? Hmong translation: <i>Koj puas xam pom tias cov kab mob uas tsimnyog txhaj tshuaj tivthaiv no yog raug rau tus menyuam twg tus menyuam ntawd yuav mob nyhav npaum li cas?</i> |
| <i>Perceived benefits</i> | How would immunizing babies and young children affect them and their families from getting vaccine-preventable diseases? Hmong translation: <i>Kev txhaj tshuaj tivthaiv kab mob rau cov menyuam mosliab thiab cov hlob zog lawm yuav pab tau lawv thiab lawv tsev neeg li cas?</i> |
| <i>Perceived Barriers</i> | Why do you think some Hmong parents may not want to bring their baby or toddler into a clinic to get immunized? Hmong translation: <i>Koj xav hais tias yog tim li cas ib txhia ua niam ua txiv ho tsis xav koj lawv cov menyuam mosliab thiab cov uas twb nkag taus lawm mus txhaj tshuaj?</i> |
| <i>Cues to Action</i> | What would help you the most to get your child vaccinated at due times? Hmong translation: <i>Yuav pab koj li cas es thaum txog caij txhaj tshuaj koj thiaj kam koj koj tus menyuam mus txhaj tshuaj?</i> |
| <i>Self-efficacy</i> | What can the clinic do to help you feel confident about your actions in helping prevent your child from getting a vaccine-preventable disease? Hmong translation: <i>Tsev kho mob yuav pab koj li cas kom koj thiaj ruaj siab koj koj tus menyuam mus txhaj cov tshuaj tivthaiv kab mob?</i> |

Ethical Considerations

Each participant received an explanation that all information would be confidential with no participant identifiers connected to responses after data collection, and only the analyzed data will be shared with the clinic staff for constructing an intervention. The participants' name and their child's name were kept confidential from the clinic staff to not compromise care for non-participants. Approval was obtained from the university's Institutional Review Board to ensure that research involving human subjects be conducted by all federal, institutional, and ethical guidelines.

Data Analysis

The data was analyzed using thematic content analysis. Responses were categorized into themes pertaining to that question. The project leader conducted the interviews using the same questions, which were asked in the same order. The project leader is fluent in Hmong and English. The responses were validated by the project leader in the language answered back to the participant before moving on to the next question. All responses were translated into English and written down in English immediately following each question. No extra information or opinion was provided on immunizations. If a parent had a specific question to clarify a question or to define a term, all responses were given on an individual basis.

Results

A total of 66 potential participants were selected from the clinic's list of pediatric patients under the age of two years in 2015, and the clinic's electronic medical system (EMS) was used to pull current phone numbers for the parents. Of the 66, 47 calls were made to obtain the 20 participants. Thirteen (65%) participants were mothers ages 24 to 39 and seven (35%) were fathers ages 26 to 55. Half of the parents (three fathers and seven mothers) were born in

Thailand, 35% (four fathers and three mothers) were born in Laos, and 15% (three mothers) were born in the United States. The average residency period for the fathers in the United States ranged from 11 to 36 years, and two to 39 years for mothers. Twenty-five percent of mothers had received a high school diploma compared to 20% of fathers. There were twice as many mothers (20%) than fathers (10%) with bachelor's degrees. Along with the demographic questions, participants were asked about fluency of spoken and written English. The survey concluded that 50% of mothers were fluent in writing and speaking English compared to 30% of fathers.

Perceived Susceptibility

Thirteen of the participants (65%) believed that vaccine-preventable diseases can easily be spread among children of all ages. Thirty percent (six) do not believe that these types of diseases can be contracted by children, and one participant did not know. One parent commented, "Yes, and without vaccines, the country will be filled with sick kids". Another parent also commented, "Yes, if no vaccines were given, a child can get infected as early as birth". One parent was glad to have her children up to date on their immunizations. "I have not seen the diseases spread to my kids; they have all been vaccinated".

Perceived Severity

Most of the parents (55%) believed that contracting a vaccine-preventable disease as a child under the age of 24 months can be severe, while six (30%) of parents stated that the severity is based on the child's immune system and which disease was contracted. One parent disagreed and said contracting vaccine-preventable diseases is not a severe condition. Among the remaining two parents, one did not know how severe the effects of vaccine-preventable diseases are for children and one parent did not have an opinion. One parent's concern was expressed as, "Pretty serious, because kids under two years old does not have a strong immune system".

Perceived Benefits

The perceived benefits from the participants were strongly correlated with family health. Sixteen (80%) parents agreed that immunizing babies and young children will prevent the family from getting the diseases. In addition, two parents (10%) believe that vaccines help decrease the severity of the symptoms and decreasing parental anxiety. A participant stated, “It acts like a barrier in the family and protects everyone”. One parent expressed his thoughts as, “it is very important for all kids to be healthy, and vaccines are needed for that”.

Perceived Barriers

Several reasons were given for not wanting to bring a young child in for immunization. The most common reason was the anticipated pain at the injection site and fever from the vaccine (30%), especially for infants. Twenty percent (four) of parents expressed a lack of knowledge about the type and effectiveness of the vaccines. Other reasons for missed vaccine appointments were not having active insurance (10%), forgetting (10%), fearful of the adverse effect of the vaccines (5%), and not believing in vaccines (5%). A statement about the fears of vaccine administration came from one parent stating, “We are fearful of pain at the injection site, fever, and not knowing anything about how effective are the vaccines”. One parent commented about how the clinic staff can help alleviate some of the anxiety while vaccines were being administered. “Staff should provide vaccine information even when the parent don’t ask because the parent may not know what to ask”. Two parents supported giving vaccines to their children as a routine for staying healthy.

Cues to Action

Parents would like to continue to get call reminders, mail-in reminder letters or cards, or a take home magnet (55%) to help with remembering upcoming appointments. Other participants

mentioned having a reliable provider, flexible scheduling options, having active insurance, and being educated on vaccine schedules would help with bringing their child in when vaccines are due. One parent made it apparent that the clinic will need to do a little more for their patients. “Send reminders to parents, reach out to make sure kids are up to date, the county has done more than the clinic”. Planning was expressed to help one parent. “Pre-schedule appointments one year out and have reminder calls when it came close to that time”.

Self-efficacy

Participants expressed that clinic staff plays an important role in equipping parents to make informed decisions about childhood vaccination. More than half (65%) of parents shared they rely on the clinic staff as the drivers for instilling the confidence in them to choose to vaccinate their child; parents depend on the knowledge and competency of staff to ensure their decision is the right one. One parent stated, “The clinic and parents are responsible for working together and bring kids into the clinic and keep up with preventable cares”. Another parent stated, “Explain the actions of the vaccines and be open minded with parents”.

Discussion

This project identified Hmong parents’ perceptions to childhood immunization in a primary care clinic used primarily by Hmong patients. Results show the Hmong parents’ perceptions about childhood vaccines are that: vaccine-preventable diseases can be easily spread among young children, and once contracted, cause serious harm; are a good health preventative measure for families; and vaccinations commonly cause fever and pain at the injection site. Parents also expressed they lacked knowledge about the efficacy and side effects of vaccines, and would appreciate a reminder system. Many of the parents stated they trust the clinic staff is knowledgeable about vaccines and rely on their advice toward vaccination practice.

The findings in this project were like others in the literature, lending validation to the belief that parents have similar fears about childhood immunization. Parents also lack understandings about how vaccines work, the effectiveness of vaccines, the side effects from different types of vaccines, and beliefs (Harmsen et al., 2015; Harmsen et al., 2013; Niederhauser & Markowitz, 2007). This study has shown that the Hmong parents also have a high trust in healthcare providers' knowledge in assisting them with vaccination decisions which supports the study by Niederhauser & Markowitz showed parents' insight on organization barriers that can hinder parents getting their children immunized.

Study Limitations

The study was limited to one clinic with the majority patient population being one ethnic group. The sample size was small compared to the total number of patients in the clinic, and may not have been representative of the patient population. Also, the data collected were analyzed by one person which may lead to error and bias.

Recommendations

To make changes toward enhancing the knowledge and immunization rates for the Hmong pediatric patients of this clinic, specific interventions must be tailored and implemented. One suggestion is to develop and provide a training program for the clinic staff to improve their clinical knowledge and competency with vaccine administration to better serve their patients. From the data collected in this study, the next step would be to implement a teaching tool for staff and parents on childhood vaccines to decrease the knowledge deficit of parents, and to produce competent staff when providing childhood vaccines. Due to the concerns of health illiteracy in the clinic, staff must be equipped to present health care information succinctly. Health care staff are viewed as a reliable source and anchor for parents' decisions about

childhood immunization (Austvoll-Dahlgren, & Helseth, 2010; Harmsen et al., 2013; Oku et al., 2017). An effective immunization program is achieved through communication from knowledgeable health care workers (Oku et al., 2017).

To further evaluate the effectiveness of the teaching tool, parents will be asked to complete a survey to evaluate changes in their knowledge about childhood vaccines. A comparison of vaccine rates will be made of before and after implementation of the teaching tool. A study performed in the community would be beneficial in collecting a wide spectrum of perspectives from other ethnic populations in St. Paul. The data from the study could be used in policy making and implementing changes in clinics to meet health literacy needs of patients, and ensuring patients receive preventative care by competent staff.

One effective method shown to improve childhood vaccination rates is a reminder intervention either by a phone call or text message, augmented by a second method such as providing education on the matter (Bangure et al., 2015). These interventions have been shown to be effective; therefore, implementing a culturally sensitive teaching tool with reminder phone calls or texts may show improvements in childhood vaccine rates for SPFMC.

Conclusion

Even though little research has been completed on the perspectives of Hmong parents regarding childhood vaccinations, existing research has shown similar parental concerns about childhood immunization as were found in this study. Hmong parents perceive realistic barriers like pain, fever, and side effects of vaccines. Moreover, parents have a need for information about vaccines. This presentation of information in a simple, direct manner is necessary for this population. Where the parents' decision making is based on the knowledge of another in

authority, those individuals with that power need to have the requisite knowledge to provide solid and accurate information. Staff education will help make this happen.

Prevention is an area of concern because of the high rate of health illiteracy among the Hmong patients who use this clinic. Accepting preventative health care is unpredictable in the Hmong population. Informing patients about diseases and chronic illnesses does not always drive people towards prevention. Many factors in the environment will help determine the choices patients make, and health care workers are just one of these factors.

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Conflicts of interest

No conflict of interest has been declared by the author.

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