

Determining Factors Affecting Parental Non-Compliance with Vaccination Schedules of
Children Ages 6 Months to 2 Years

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of Children Ages 6-months to 2-years”

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Abstract

Low childhood immunization rates are a national healthcare concern. Many children are at increased risk for preventable childhood illnesses because of under-immunization, thus increasing the burden on healthcare workers and families and increasing healthcare costs and decreasing quality of life. This study aimed to identify predictors that contribute to non-compliance with vaccination schedules and thus aid healthcare workers in identifying children who are at-risk for under-immunization and help nurses recognize factors that could help increase compliance rates. Through a descriptive design, researchers distributed surveys to parents of young children at local health departments in order to find common reasons for non compliance and what factors could potentially increase compliance in these parents. Data was calculated through descriptive statistics, recognizing trends in various factors. Ethical considerations were taken to uphold confidentiality and decrease bias in this study.

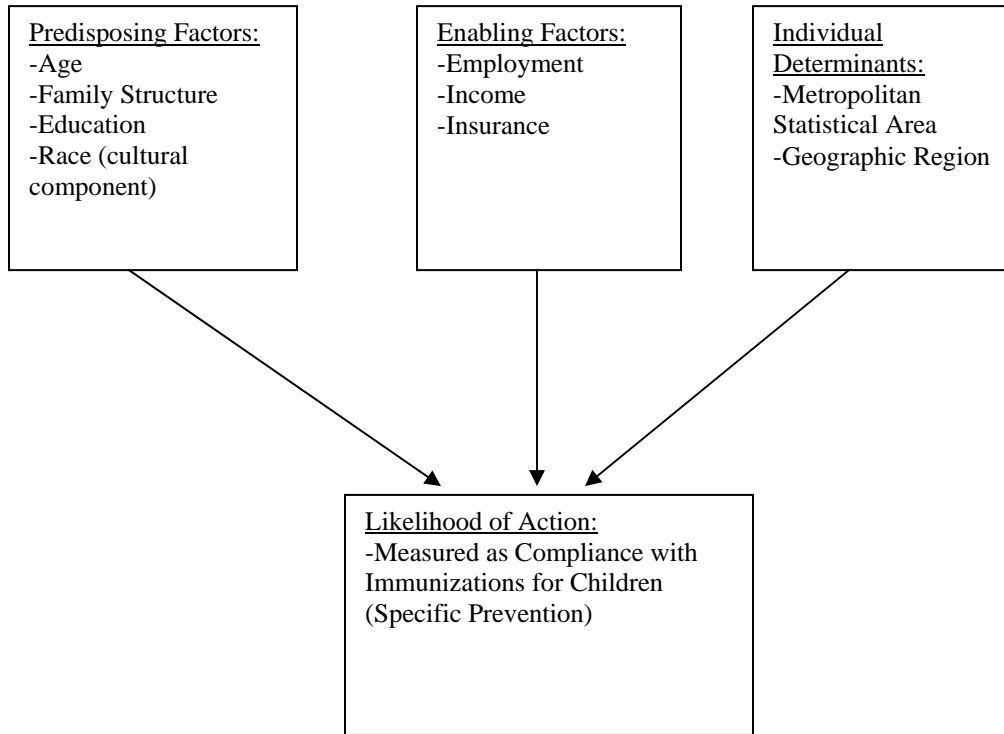
Problem and Purpose

The problem addressed in this study was the lack of childhood immunizations as an effect of parental non-compliance. This study focused on children six months to two years of age.

The purpose of this study was to first identify specific factors that influence parental non-compliance with children’s immunizations. This study also aimed to identify children who are at a higher risk for not being vaccinated. By recognizing precise factors predicting parental non-compliance and children at risk for being under-inoculated, possible nursing interventions could be further implemented.

Theoretical Framework

The theoretical framework for this study was adapted from a modified version of Andersen’s framework for healthcare behavioral prediction (Bundt & Hsou-Mei, 2004). Andersen hypothesized that specific behavioral patterns contributed to better healthcare behaviors. In their study, Bundt and Hsou-Mei modified Anderson’s model to place predictors in categories that would determine ultimate “likelihood of action” as defined as compliance to vaccination schedules. This framework is relevant to this study as it aids in emphasizing the importance of “baseline predictors” in recognizing high-risk individuals. If nurses are able to recognize these high-risk individuals, they are better able to provide adequate education and tools to encourage higher levels of compliance. See model below:



Literature Review

There is a substantial gap between immunization requirements and actual compliance even though it is known that vaccination compliance is a fundamental aspect of preventive healthcare (Bundt & Hsou-Mei, 2004). As a result, numerous studies have been conducted to find predictors of non-compliance with childhood vaccinations. Goodman, Wu, and Frerichs (2000) conducted a study on compliance rates in Kern County, California and found that parents cited non-compliance as being due mainly to child's illness, procrastination and lack of knowledge about immunizations and where to obtain services. A study done by Bundt and Hsou-Mei (2004) found that non-minority children with parents of higher socio-economical background were far more likely to have complete immunization. Parve (2004) conducted a study to identify vaccination barriers in children 12 to 24 months and found that of the parents who were surveyed, only 20% reported that their children were currently up-to-date with their immunizations.

Luman, McCauley, Shefer, and Chu (2003) focused on maternal characteristics associated with non-compliance. The maternal characteristics in this study were as follows: mothers who were African-American, had not completed high school, had an income below 50% of the federal poverty level, being divorced, separated, or widowed, and having multiple children. The study also found that mothers who were eligible for WIC (the Special Supplemental Nutrition Program for Women, Infants, and Children) and participated in the WIC program, were more likely to vaccinate their children.

Several studies have addressed factors leading to delays in vaccination. Though the child eventually gets the immunization, this concept is important because in many cases the delay causes inadequate vaccination of the child. Dombkowski, Lantz, and Freed (2004) found these factors to include: single-parent households, larger family size,

low parental education level, Medicaid enrollment, absence of primary health care provider, and lack of insurance coverage. In a study on compliance with National Immunization Guidelines, Mell et al. (2005) found that less than 8% of the children who participated in the study received all their immunizations in accordance with the National Immunization Guidelines.

Research Questions

The following research questions were addressed in this study:

What factors predict parental compliance with immunizations in children ages 6 months to 2 years?

What changes can be made to improve compliance rates?

Can these factors be used to identify children who are at risk for not being vaccinated as recommended?

Setting

The research was done in the waiting room of two local health departments in mid-west Georgia. At the health departments, questionnaires were given to participants waiting for general appointments and WIC appointments.

Design

The study was a descriptive design. The study aimed to recognize specific components affecting non-compliance with vaccination schedules, ways to improve compliance rates, and identifying children who are at risk.

Sampling Criteria

The inclusion criteria for participation in this study required that the parent or guardian at the designated health department have a child between the ages of six months to two years. The parents or guardians also had to be able to understand written English.

Sampling Procedure

The convenience sample was selected for this study. Each individual member of the research team went to a designated health department in District 4. While at each clinic, the researcher was responsible for distributing surveys to participants. The researcher asked the parent if he or she wished to take part in the study and if the parent agreed he or she was given the attached survey to complete (See Appendix A).

Instruments

The instrument used for this survey was adapted from a questionnaire used by Goodman, Wu, and Frerichs (2000) in a study of compliance rates among parents in Kern County, California (See Appendix B). Permission was obtained from the original author before modifications were done (See Appendix C). Because the original questionnaire contained questions unnecessary for this study, an abbreviated version was developed, which contained 15 questions. The questionnaire contained questions about demographics and asked parents to answer questions about preferences for vaccinating their child. Because the questionnaire has been modified, validity and reliability are unknown and require further testing.

Data Collection, Storing, and Analyzing Data

Seventy-four surveys were distributed and given out over a total of five days. The questionnaires and consent forms were collected by each research member at the end of each day. Anonymity was maintained; the surveys were placed in a sealed manila folder and kept in a locked cabinet for the participants' protection. The consent forms were kept in a separate folder to eliminate any possible connection between responses of subjects and their identifying information. Only the researchers handled the surveys and consent forms. The data was analyzed by using descriptive statistics including percentages and trends.

Ethical Considerations

All potential subjects were presented with a consent form which described the type of study being done, the purpose of the study, and the subject's rights as a participant in the study, including the right to confidentiality and the right to withdraw from the study at any time. Names were not included in any of the findings and were only used for the consent form. Subjects were given sealable business envelopes in which to place surveys once they were completed. Envelopes were collected by members of the research team only and kept in manila envelopes until data was analyzed. Once the data was analyzed and the study was complete, all questionnaires and consent forms were destroyed by shredding in the LaGrange College Nursing Department on April 18, 2007.

Findings

Seventy-four surveys were completed by participants at two health departments in mid-west Georgia. One survey was disregarded because of insufficient data, thus the sample groups consisted of 73 participants.

Most of the participants were familiar with the types of vaccinations that their children received. They also had an established primary care facility where their children received immunizations.

Eighty-six percent of the participants noted that their children were current on all immunizations. Of those who were not current on immunizations, the most common reasons for lack of compliance included: lack of knowledge about where to get immunizations or what immunizations to get, lack of funds to cover the cost of immunizations, forgotten appointments, or a child being ill at the time of the appointment (in which case it is recommended that the appointment be delayed until the child has recovered from the illness).

There was no correlation between income, age, or marital status and the level of compliance by the parent. However, all participants who reported missing a scheduled immunization for their child had education levels at or below earning a high school diploma, thus suggesting a correlation between compliance and education.

In this study, the highest percentage of under-immunized children were African American, however, due to the low number of participants, this data is statistically insignificant. And it could only become significant with further studies and larger sample groups.

Implications for Nursing

While more research with a larger sample group is necessary to determine

statistically significant findings, results from this study suggest that demographic facts as a whole may not be accurate predictors for parental compliance. Rather, education seems to be the most influential determinant of parental compliance. This suggests a need for nurses and other healthcare staff to begin educating parents as early as possible about the importance of immunizations in protecting the health of their children. Information about resources for covering costs of immunizations and where to take children for immunizations is also a key factor for improving compliance rates. Though not strongly suggested through data from this study, the availability of times outside of normal business hours may help to increase the compliance for parents who are unable to bring the child for immunizations at other times.

Limitations of this Study

Because the researchers did not get the large sample expected originally, the data collected was not enough to validate results from any other study. A larger sample group may have yielded results that were more accurately reflective of the population as a whole.

On reviewing the survey data for analysis, researchers realized that the survey did not have a place for the participant to mark if the child was current on immunizations. The parents had to write this in at the bottom of the survey, which may have been confusing to some participants.

Because of limited availability, researchers chose to use only local health departments as sites for data collection, thus limiting the generalizability of the results. Parents who are at the health department for immunizations or other appointments are likely more compliant with their children's immunization schedules than parents in general. Thus, the results are skewed to be reflective of the population that uses the resources of the local health departments, rather than the population as a whole.

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