



Research Plan

Research Team

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Instrument (LSP)*

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Participating Sites

- **Home Visitors Research Network – East**
 - Healthy Families Indiana MOM Program - Indianapolis IN
 - Healthy Families of Grant County - Marion IN
 - Child Health Investment Partnership - Roanoke VA
 - Enterprise Community Healthy Start - Augusta GA
- **Home Visitors Research Network – West**
 - Partnership for Strengthening Families - Bozeman MT

- Gallatin City -County Health Department - Bozeman MT
- Presbyterian Health Services - Albuquerque NM
- Early Head Start Monterey Office of Education - Salinas CA

The Network includes programs in several national home visitation models (National Healthy Start, Early Head Start, Parents as Teachers, Healthy Families America). Each of the Network sites uses the LSP to monitor their individual program effects on a wide range of family functioning. The Network sites will contribute their LSP data, stripped of identifying information, to the project for secondary aggregate and comparative analysis. This sharing of common data across program models and populations makes possible a robust study to measure effects of home visitation during pregnancy and early parenting on the FHL of mothers with low literacy skills. This project sets up a model for ongoing data collection and analysis with a national research network of home visitation programs.

Cohort Study Design

In these programs serving needy families, ethical considerations preclude intervention and non-intervention groups, or a delayed intervention group. So this project uses a quasi-experimental multi-group cohort study design with multiple waves of measurement. The cohort is approximately 5400 disadvantaged women aged 13 to 45 years and their children to age 3 who are served by a Network program during the study period. With Network programs representing several national home visitation models, and the large, diverse combined study population, the results of this study will be more generalizable than is usually be expected in a cohort study.

Study Population

4500 – 5000 mother-child dyads enrolled in a participating program during the study period.

The combined study population is large, racially/ethnically and geographically diverse, and socio-economically similar.

Table I - Anticipated Racial/Ethnic Distribution of the Study Sample

Race/Ethnicity	Number	Percent
Black	2666	49
White	2002	37
Hispanic	574	11
Other	160	3
Total	54502	100

Research Questions

These six questions shaped the research design:

1. Does home visitation promote mothers’ functional health literacy?

2. In other words: Do parents in a home visitation program show improved functioning in the healthcare system and/or in health contexts at home?
3. Are changes in the parents' functional health literacy related to social support provided by the HV, or to other social support?
4. Does home visitation reduce parents' risk of having low health literacy skill? In other words: Do visited parents identified at high risk for low literacy skill (< 6th grade reading score on the REALM) progress out of the high-risk group? Is there a dose effect? In other words: Does the rate or extent of improvement increase with intensity or duration of support?
5. Does the presence of a HV improve social support available from family and friends?
6. Can the LSP be used as a meaningful and useful measure of functional health literacy?

Operational Terms

Social Support: Assistance available to individuals and groups from within communities which can provide a buffer against adverse life events and living conditions, and can provide a positive resource for enhancing the quality of life.

Social support may include emotional support, information sharing and the provision of material resources and services (Lepore, Evans, & Schneider 1991). In this project, resources may include pregnancy health behavior and prenatal care information, parenting education, assistance negotiating the healthcare system, linking parents to community resources, modeling healthy behaviors and supporting parents in making healthful behavior changes.

Home Visitor/Visitation (HV): A public health nurse, social worker, case manager, or paraprofessional providing social services to pregnant women and families with children to age 3.

Intensity of Home Visiting: Number and frequency of home visits and other program activities

Duration of Home Visiting: Months of service

Health Literacy (HL) Skills: Literacy skills applied in a health or healthcare context. According to IOM, these literacy skills are required to use the US healthcare system: conceptual (background) knowledge, reading, writing, speaking, listening, and numeracy. In the current US literature, the term "health literacy" almost always refers solely to ability to read medically related words and documents.

Low Health Literacy Skill: Equal to or less than 6th grade reading ability in a health context as indicated by the ELF Health Literacy Screen

Functional Health Literacy (FHL): Capacity to function in the health arena, that is, in the healthcare system and in health contexts at home and in the community as indicated by the LSP outcomes and intervention-planning tool

Improved Functioning: Progress from baseline to a higher score on selected LSP scales

Extent of Improvement: The difference between LSP scores at intake and closure.

Data Collection

The LSP (Life Skills Progression) instrument, developed by Wollesen (consultant to this project) with support from ZERO TO THREE, is the primary data collection instrument for this project. LSP data routinely collected by the Network sites are transferred anonymously to UW for secondary analysis. The LSP along with its instruction manual and report-generating database program was published by Brookes Publishing Company, Baltimore, November 2005. Over 50 home visitation programs in eight states currently use the LSP, including national program sites and state systems (Comprehensive Health Involvement Project of Virginia, Adolescent Family Life Programs of California, Healthy Families Indiana).

The LSP is a utilization focused evaluation tool, which means it is useful clinically for planning interventions as well as for monitoring individual and family functioning and program effects. One of the main purposes of the LSP is to make sure that important aspects of individual and family functioning are discussed and progress is monitored routinely. Note that the LSP does not replace of standardized in-depth screening and assessment instruments that the programs use to determine clients' levels of functioning and need. Instead, the LSP organizes that information to provide a quick way to see where a family stands at a given time on a wide range of family functioning.

Health Literacy Scales

Items will be extracted from the LSP on the basis of face validity and combined into two new scales to show levels of functioning in the healthcare system (Healthcare Literacy Scale) and at home (Personal Health Literacy Scale). Scale scores are created by averaging (sum/valid values). This method relies on a long-understood reliability principle, which holds that a collection of many items measures more reliably than just one or two (Dooley 2001) provided the items work together to measure the same underlying concept, in this case FHL. The inter-item reliability of LSP items has been established (de la Rocha 2004) well above published expectations for acceptable levels of reliability (Portney and Walkins 1993; Nunnally 1978). These combined scales allow investigation of the interactions between FHL and related variables including language, mental illness, self-esteem, cognitive ability, Personal Social Support, and relationship with HV.

The LSP Healthcare Literacy Scale combines the following LSP items to summarize functioning in the healthcare system. Improved scores on this scale show overall progress toward higher level functioning in the healthcare system. Individual item analysis shows specifically where improvements occurred. Correlation with months of service and number of visits shows service dose required to achieve functioning in the target range. Five experts in health literacy, health services delivery and health education validated the face value of each item as an indicator of FHL in parents of young children.

LSP Healthcare Literacy Scale

<u>Item</u>	<u>Description</u>
10	Use of Info
17	Prenatal Care
18	Parent Sick Care
19	Family Planning
20	Child Preventive Care
21	Child Sick Care
22	Child Dental Care
23	Child Immunizations
33	Medical Health Insurance

The LSP Personal Health Literacy Scale combines the following LSP items to summarize functioning in health contexts at home. Improved scores on this scale show overall progress toward higher level functioning in health contexts outside the healthcare system. Individual item analysis shows specifically where improvements occurred. Correlation with months of service and number of visits shows service dose required to achieve functioning in the target range. Five experts in health literacy, health services delivery and health education validated the face value of each item as an indicator of FHL in parents of young children.

LSP Personal Health Literacy Scale

<u>Item</u>	<u>Description</u>
4	Attitudes toward Pregnancy
7	Support of Development
8	Safety
11	Use of Resources
24	Drug Use & Abuse
25	Tobacco
35	Child Care

Human Subjects Concerns

A potential risk to parents is that sensitive information could be linked to individuals by matching the number codes provided to investigators with the names retained by the sites. This is highly unlikely. Investigators have no contact with clients. The sites have offered assurances that they will remove names before sending the data for analysis, using only number codes. They will follow their established procedures for securing the original LSP forms at the sites and will not share the original forms with the research team. The Principle Investigator has assured the sites that she will under no circumstances or for any

reason request to see names or otherwise identify individual subjects. Informed consent to collect LSP data is performed by the sites according to their usual procedures and program standards. The sites have on file signed informed consents for each client. There is no risk to children.

This project has been reviewed & approved by the Institutional Review Boards of University of Washington, Virginia Tech and University of Indiana Purdue University Indiana.

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