

Parental Influences on Language Development in Young Children with and without Hearing Loss: A Longitudinal Investigation

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Start Date: May 27th, 2013 for 10-weeks

Description of the Project

The two summer SOAR research projects relate to ecological (family and child) factors that influence child development, particularly for young children with hearing loss (HL). With the advent of the Newborn Hearing Screening, we are now able to identify children with HL at birth. This new generation of children has the potential to receive early intervention at much younger ages, with the ultimate goal to achieve age-appropriate skills. These skills may impact their inclusion into preschool and kindergarten programs for typically-developing hearing children. The results of these investigations could have dramatic implications for how Moravian College's Early Childhood Teacher Candidates work with families and their young children.

Data set. This is a large multi-site (House Research Institute, Los Angeles, CA; San Diego State University, and Indiana University) longitudinal data set investigating parent, child, and school (e.g., early intervention, preschool) factors that impact child language and social-emotional skills. A culturally-diverse sample of parents and their young children with HL and parents of children with normal hearing (NH) (N = 104) were assessed on a variety of parental (e.g., parental stress, self-efficacy) and child (e.g., language, social-emotional, cognition) measures. Parents and children were also videotaped during a five-minute storybook interaction. The videotapes will be transcribed and parents' and children's joint book reading behaviors will be coded using the *Responsive-Adult Child Experience with Reading Scale* (DesJardin, 2011). I am a consultant on this collaborative project funded by the National Institutes of Health – National Institute on Deafness and other Communication Disorders. I have full access to this data set. This summer, we will be examining factors at the first and second data time point (Time Point 1 and Time Point 2) of a four year longitudinal investigation.

This data set is rich for analyses which examine parental influences on early skills for young children with and without HL. There are many factors in which the SOAR students can develop their own research questions, conduct analyses, and present their own findings. However, working together as a team, is extremely beneficial. The students will be able to further understand (1) inter-rater reliability (two independent coders for videotape analyses), (2) how separate parental factors interplay and influence child development, and (3) how family factors relate to the large ecological model. This provides the students with a much broader understanding of child development.

Faculty and Students Collaborative Roles

Two students have been identified for the SOAR summer program. The SOAR students, Megan Davis and Lindsay Galasso, and I will work collaboratively on all aspects of the proposed projects. Having the girls in *five* early childhood education classes over the past two years, I feel that they are well-prepared to work on library research, project development, data analysis, and manuscript/conference preparation. Both students demonstrate excitement for the project, initiative to seek out resources and literature, and are willing to learn new coding schemes and transcription processes. They are very eager to learn the process of presentation at a national conference this fall in the field of Early Childhood Development. They would also like to share their findings with community early childhood programs in the area.

The students and I will meet 3 times weekly to (1) review weekly project goals and objectives, (2) oversee project and mentor as needed, (3) train on new coding scheme and statistical analyses, and (4) establish new weekly goals and specific objectives (see Table 1 for specific student-faculty tasks). As shown in Table 1, the students will be engaged in the process of cutting-edge early childhood research; from literature review, transcription and coding analyses, data cleaning, statistical analyses, research hypotheses and questions – to final presentation(s). Together, we will work on a manuscript from this summer project. This manuscript titled, *A longitudinal analyses of parental aspects for language development in young children with hearing loss*, will be submitted into a high impact peer-reviewed journal in the field of Early Child Development (e.g., *Child Development*, *Journal of Early Intervention*). We will need to do a complete literature review, formulate research questions, conduct the analysis plan, and create full Results and Discussion sections. I would hope to have at least a full draft of this manuscript by October 1st, 2013. We will also prepare a presentation for the *Division of Early Childhood Intervention* (DEC) Conference in CA on October 13-17th, 2013. The proposal for this conference was submitted on January 15, 2013.

Summary of Benefits to the Students

The benefits of participation in these projects for the students are numerous. This opportunity provides Megan and Lindsay with very clear, specific, scholarly activities which align directly with the field of early childhood education. The dataset has many family and child factors to explore which directly relate to early childhood programs, methods, and specific teaching strategies when working with young children (12-months – 4-years of age) and their families. Megan and Lindsay will have the opportunity to learn theory and background knowledge of the field, current ways to capture parent-child data via videotape analyses, current child measures used in the field, and how to use the data for research-to-practice dissemination. Additionally, Megan and Lindsay will work on writing her own original research questions/hypotheses and conduct all research procedures to presentation. The students will have the opportunity to share their work with the Moravian community on Scholar's Day next spring, 2014, share results in a presentation form to an early childhood center in the Bethlehem area, and present with me at a national conference – the Division of Early Childhood – in San Francisco, CA (October, 2013). It is crucial that students not only participate and collaborate with a faculty member on research to

gather their own knowledge of the field, but to also learn ways to disseminate this valuable information to a larger audience that work directly with young children and their families. The students and I will, together, present the findings of this research to the teachers of young children and their families at a local Head Start, and/or an early childhood center for at-risk young children through contacts I have made in the Bethlehem area.

Budget

Megan and Lindsay will work 40 hours per week for 10 weeks; \$300 per week x 10 weeks = **\$3,000 for each student (\$6,000 total)**. Both girls are requesting on-campus housing for the 10-week period from the official summer start date.

Related Pertinent Information

Last summer (2012) was my first opportunity with the SOAR program. Ms. Emily Baer worked closely with me on this longitudinal NIH investigation. She completed all goals with the highest quality. Emily worked diligently on all aspects of the research process – from literature review to presentation/publication. Together, Emily and I presented our work at the *Division of Early Childhood Conference* in Minneapolis, MN this past October. Emily will be presenting at NICU in WI, and present at Moravian College's Scholarship Days in April, 2013. The SOAR program would be a wonderful opportunity for me as a new faculty member to continue collaborating with students, instilling the love of continued learning and scholarship through this faculty-student relationship.

DesJardin SOAR Proposal – Summer 2013

Table 1. Proposed Timetable and Project Milestones (start date: May 27th, 2013):

Dates	Students Project(s) and Purpose	Faculty Role Descriptions
May, 2013	<u>Literature Review</u> – In order for Megan and Lindsay to establish a strong foundation for the subsequent project, it will be valuable for each of them to read current literature in the field of audiology, speech-language pathology, and parental contributions in early childhood development to obtain background theory, knowledge, and current perspectives regarding parental involvement, parent-child interactions, and language development for young children and their families. <u>Each</u> will write their own brief, yet thorough, literature review.	Familiarize Megan and Lindsay with the literature to support the NIH-DCDD multi-site grant in order for each to write a complete and thorough literature review; (1) familiarize each with all specific parental and child measures within the study – many of which she will also read about in the literature review; (2) demonstrate videotape transcription/coding analyses in order to apply it to their readings, and (3) share any background knowledge in order for each student to write their own brief, yet thorough literature review.
June, 2013	<u>Literature Review and Transcription/Coding Training</u> Megan and Lindsay will be trained with two established transcription and coding systems for videotape analyses – these are current procedures used in the field of early childhood education. Each will transcribe and code five videotapes for hands-on practice and instruction in inter-rater reliability.	Familiarize Megan and Lindsay with the specific transcription analyses (CLAN program and CHAT format from Carnegie Mellon); train each on transcription analyses in viewing parent-child storybook interaction videotapes; train each on the specific adapted coding scheme for parent-child reading behaviors (DesJardin, 2011).
July, 2013	<u>Development of Hypotheses/Research Questions and Analyses Plan</u> Megan and Lindsay will develop <i>their own original</i> research questions and learn how to use SPSS-19 statistical analyses (correlational, t-tests, and stepwise regression). There are several parent and child factors that may impact children’s oral language and social-emotional skills. Each will choose an area of interest (parent or child) to further explore data from Time Point 1 to Time Point 2 (child ages 1 year – 2 years).	The NIH dataset is a manageable data set that Megan and Lindsay could easily grasp and conduct analyses. For <u>individual projects</u> , there are a number of interesting questions that each could investigate, such as “ <i>What are the predictive variables between parental responsiveness during joint book reading (Time Point 1) and child language skills at 24-months of age</i> ” (Time Point 2) and “ <i>How do parents of children with and without HL differ in terms of parent self-efficacy and linguistic input during parent-child interactions</i> ”.
August, 2013	Begin collaborative presentations for the Division of Early Childhood conference presentation in San Francisco, CA for October, 2013 – (either oral or student poster presentation); Faculty and student submits a 1-2 page report to the SOAR director assessing the project.	Train Megan and Lindsay on data cleaning techniques and be able to use the analytical tools to apply the appropriate analyses to answer specific questions of interest; Results interpretation—Megan and Lindsay will become well versed in interpreting data analyses and writing up results according to APA style. This will be linked to a Discussion

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		section for the presentation that will explore why the results obtained were what they were (or what they were not).
October, 2013	If funding is available, students will participate with me at the DEC conference in San Francisco, CA.	
April, 2014	Students participate in the Moravian College Scholar's Day.	Faculty and ECE students participate in Moravian College Scholar's Day with SOAR students.

Student: Lindsay Galasso, Sociology and Early Childhood Education, Class of 2015

Faculty: Jean L. DesJardin, PhD

On Campus housing is requested for ten-weeks during the summer research project.

I would like to start off by saying how honored I am to have been chosen to work with Dr. DesJardin and a fellow classmate for the SOAR research project this summer. It is a great opportunity to further my knowledge in the education field as I will soon become an Early Childhood teacher. I am confident that by working with Dr. DesJardin this summer, I will be learning new information that will definitely be beneficial to me and my future. To be more specific, I will be gaining more experience in the field by analyzing videotapes of parent-child interactions, interpreting data, and studying research -to-practice strategies. All of this research will help to better prepare me for the road ahead.

After taking several education classes here at Moravian College, the research that will be studied will give me the ability to expand on what I already have learned in previous classes. I will be able to make a connection between what I have learned in past education classes with the new information I will learn this summer. The research will provide practice that is not available in a regular classroom setting and I will be focusing on different understandings and concepts in the education field such as looking more in depth at parent-child interactions and analyzing data etc. From the SOAR project, I will test my knowledge through presentations and group discussion. Presentations will help me to understand and apply more aspects of the research into my classroom. As a future teacher, I will be proud to represent the background knowledge that I will learn this summer. This is an excellent opportunity to expand my knowledge, make a connection to understand how to use these concepts in the classroom, and will provide me with a better understanding of what should be known in my future career.

The outcome I expect to receive from this project will again be very valuable to my future. I truly believe that this project will help me to be a better teacher because it will open my eyes to new information and ways of teaching. From previous classes with Dr. DesJardin, I know that working with her will be very motivational due to all her background knowledge about Early Childhood Education. Through this project, and working with Dr. DesJardin I will begin to learn more about language development and social-emotional skills of young children through transcription, coding of parent-child interactions, and gathering data. As a teacher, I will be dealing with many of these factors. More and more students are coming into the schools with culturally diverse backgrounds, therefore language development is important. In order to become a better teacher I will need to collect data to improve my ways of teaching young students. This project is beneficial because it will help me to better understand what I have already learned at Moravian College. I am so excited to have this opportunity because I believe, in the long run, I will gain an enormous amount of useful information to teach and use in my classroom for future generations.

Parental Influences on Language Development in Young Children with and without Hearing Loss: A Longitudinal Investigation

Student: Megan Davis; Sociology Major; Early Childhood Education Certification; Class of 2015

Faculty: Jean L. Desjardin, PhD

On-campus housing is requested for 10 –weeks of the summer project

Rationale:

My rationale for participating in this summer experience is to better my understanding of the education of children, and to gain a broader perspective on the many aspects of it. As a future educator of our children, I believe it is crucial to have a deep understanding of all dimensions of teaching and learning. Through a summer SOAR project, alongside Dr. Desjardin, I believe I will be able to gain this understanding, as well as build on the educational knowledge that the Moravian College Education Program has given me. Not only will this expand on my current knowledge, but I will get the chance to research and work in a different setting other than the educational setting in my normal course line of study.

Specifically in this SOAR program, I will be able to delve into the lives of children with hearing loss, and how their educational path may differ as young children compared to typically developing children. I believe a significant benefit that I will get from this SOAR project, will be the experience. I am excited to be able to have the experience of researching hearing loss and how it affects children, and know that I have a better understanding for it. I am confident that this better understanding will give me an even more, well rounded, appreciation of children, and the way they learn. This is such an important aspect for an early childhood educator to have. This SOAR project is a way to widen my educational horizons and dive deeper into my previous knowledge, only to better what I already know.

Expected Outcomes:

I expect to gain so much from this SOAR project for both myself and my education. In working with Dr. Desjardin, I will be able to recognize past research conducted in the field of hearing loss and how to add to that current body of knowledge in terms of language and social – emotional development in young children. Through a transcription and coding process of the parent-child storybook and play interactions of

parents with their children, I will be able to gain a better understanding of how parents interact and support their children's development, first hand. I will be able to better determine how to work closely with families and better understand family dynamics. Additionally, I hope to learn how to analyze the data obtained in order to present the findings at the weekly SOAR lunch meetings, and also at a national level. If possible, I hope to share my findings with an early childhood program in the area and present at a conference with Dr. DesJardin. I believe this SOAR project will be extremely beneficial to me as I learn various ways to be a successful early childhood teacher.