ASSESSING CHILD CARE STANDARDS
AND RATES OF EXPULSION FOR PROBLEM BEHAVIORS
IN PRESCHOOL CHILDREN

A Thesis
Submitted to the Graduate Faculty
of the
North Dakota State University
of Agriculture and Applied Science

By

Monica Alma Nicklay
In Partial Fulfillment of the Requirements
for the Degree of

MASTER OF SCIENCE

Major Department:

Human Development and Family Science

April 2014
Fargo, North Dakota
Title
Assessing Child Care Standards and Rates of Expulsion for Problem Behaviors in Preschool Children

By
Monica Alma Nicklay

The Supervisory Committee certifies that this disquisition complies with North Dakota State University’s regulations and meets the accepted standards for the degree of

MASTER OF SCIENCE

SUPERVISORY COMMITTEE:

Joel Hektner
Chair
Rebecca Woods
Sean Brotherson
Justin Wageman

Approved:

4/4/14
Jim Deal
Department Chair
ABSTRACT

Quality in child care programs has been studied often and researchers search to find correlations between quality measures and positive child outcomes. Some studies also show that problem behaviors result in large numbers of child expulsions in preschool age programs. The question remains whether the quality of the program produces care that lends to a lower incidence of behavior problems leading to child expulsion. The current study investigated the correlations among quality standard levels, behavior problems, and expulsion rates in a variety of child care programs in one state. Results showed that programs that are documented as having achieved the high quality standard of NAEYC accreditation do not necessarily employ direct care staff with higher education and experience levels. Although higher quality programs in this study were not shown to experience a significantly lower occurrence of problem behaviors, higher quality programs did report lower child expulsion rates.
# TABLE OF CONTENTS

ABSTRACT ......................................................................................................................................................... iii

LIST OF TABLES .................................................................................................................................................. vi

LIST OF FIGURES ............................................................................................................................................. vii

LIST OF ABBREVIATIONS .............................................................................................................................. viii

INTRODUCTION ................................................................................................................................................ 1

  Child Care in the United States ....................................................................................................................... 2

  Quality of Care .............................................................................................................................................. 2

  Problem Behaviors ....................................................................................................................................... 7

  Preschool Expulsion .................................................................................................................................... 8

  Interventions ............................................................................................................................................... 9

METHOD ......................................................................................................................................................... 11

  Participants .................................................................................................................................................. 11

  Materials .................................................................................................................................................... 11

    Measure reliability ................................................................................................................................. 13

    Measure validity .................................................................................................................................... 13

  Procedure ................................................................................................................................................... 14

  Measures of Constructs .............................................................................................................................. 15

    Quality of program ............................................................................................................................... 15

    Behavior issues ....................................................................................................................................... 16

    Expulsion and intervention occurrence ............................................................................................... 16

    Referrals .................................................................................................................................................. 16
| Data Analysis                                                                 | ................................................................. | 17 |
| RESULTS                                                                 | .................................................................. | 19 |
| DISCUSSION                                                                | .................................................................. | 22 |
| Education                                                                | .................................................................. | 22 |
| Longevity/Experience                                                     | .................................................................. | 23 |
| Quality                                                                  | .................................................................. | 24 |
| Intervention                                                             | .................................................................. | 24 |
| Limitations and Further Research                                        | .................................................................. | 26 |
| REFERENCES                                                               | .................................................................. | 29 |
| APPENDIX A: INFORMATION LETTER                                           | .................................................................. | 34 |
| APPENDIX B: SURVEY                                                      | .................................................................. | 36 |
LIST OF TABLES

<table>
<thead>
<tr>
<th>Table</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Level Frequencies and Presence of Written Policy</td>
<td>12</td>
</tr>
<tr>
<td>2. Education, Experience &amp; Longevity in Relation to Program Standard Level</td>
<td>19</td>
</tr>
<tr>
<td>3. Behavior Plans, Expulsions and Referrals Implemented</td>
<td>20</td>
</tr>
<tr>
<td>4. Wage Comparison for Three Minnesota Early Education Fields</td>
<td>24</td>
</tr>
</tbody>
</table>
LIST OF FIGURES

<table>
<thead>
<tr>
<th>Figure</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Occurrences of behaviors across programs</td>
<td>21</td>
</tr>
</tbody>
</table>
LIST OF ABBREVIATIONS

AA .............................................Associate of Arts Degree
ANCOVA ......................................Analysis of covariance
BASC-2 ..........................................Behavioral Assessment System for Children – 2
CCEP ............................................Child Care Expulsion Prevention Program
CDA ................................................Child Development Associate Credential
CLASS ...........................................Classroom Assessment Scoring System
ECE ................................................Early Childhood Education
ECERS ...........................................Early Care Environment Rating Scale
FDCRS ...........................................Family Day Care Rating Scale
ITERS .............................................Infant/Toddler Environment Rating Scale
MN ..................................................DHS Minnesota Department Human Services
NAEYC ...........................................National Association for Education of Young Children
ND-CCRR .......................................North Dakota Child Care Resource & Referral
NICHD ...........................................National Institute of Child Health and Human Development
NRCHS ..........................................National Resource Center for Health and Safety in Child Care and Early Education
ORCE ............................................Observational Record of the Caregiving Environment
RTI ..................................................Response to Intervention
SES ...............................................Socio-economic Status
INTRODUCTION

In the last half of the 20th century there has been a noticeable increase in the use of non-parental child care. The type and amount of care varies with each family’s situation (Vandell, 2004). Quality in child care and how it affects child outcomes is an issue that is addressed often within child care studies (Burchinal & Cryer, 2003; de Schipper, Riksen-Walraven, & Geurts, 2007; de Schipper, Tavecchio, Van IJzendoorn, & Van Zeijl, 2004; Dowsett, Huston, Imes, & Gennetian, 2008; Gilliam & Marchesseault, 2005; Gilliam & Zigler, 2000; Gormley, 1999; Lamb, 2000; National Institute of Child Health and Human Development [NICHD], 2000; NICHD, 2006; Phillipsen, Burchinal, Howes, & Cryer, 1997). Researchers have also studied the frequency of child expulsion from preschool age programs (Buck & Ambrosino, 2004; Gilliam, 2005, North Dakota Child Care Resource & Referral [ND-CCRR], 2007).

Quality of care and occurrence of child expulsion do not appear to have been studied in relation to each other. The current study addressed quality in child care programs and the frequency of expulsions from programs. In addition, data were collected concerning the intervention and referral services offered by programs when problem behaviors with children are present. The following questions are addressed: First, do higher quality programs have direct care personnel with higher education levels, more child care experience, and greater longevity in the program? Second, do higher quality programs have a lower incidence of behaviors requiring intervention and a lower incidence of preschool expulsion? Third, are higher quality programs more likely to offer families referrals to more suitable programs when program interventions do not successfully reduce targeted behaviors?
Child Care in the United States

According to Smolensky and Gootman (2001), in 1999 there were approximately 22 million children aged 0-5 years in the United States; 55% of these children had mothers employed outside the home. These children spend an average of 39.1 hours/week in non-maternal care. Fifty two percent of the children nationally were cared for by non-relatives which included centers, family child care and others such as baby sitters and nannies. More recent data in the state of Minnesota, the current study’s examination area, show that 73% of children under age 6 live in households where both parents work. In 2012, 60% of Minnesota children ages 3-5 were enrolled in a preschool, nursery school or kindergarten (Children’s Defense Fund, 2013). Data collected by the US Department of Health and Human Services suggest that at any point in time there are 2.3 million paid and 2.4 million unpaid child care workers in the US.

Quality of Care

All 50 states currently have regulations for minimum standards for licensed child care homes and centers (Gromley, 1999). The extent of the standards varies between states in type of care regulated as well as the enforcement of the standards. In Minnesota, the examination area of the proposed study, the levels of regulation included excluded from licensure (unlicensed but legally operating) and licensed (inspected regularly and meeting certain minimal requirements (National Resource Center for Health and Safety in Child Care and Early Education [NRCHS]). Accreditation (meeting the higher standards of the National Association for the Education of Young Children [NAEYC]) is recognized in Minnesota also.

Gromley (1999) concluded that achieving the standard of licensure in most states is not necessarily a measure of quality in child care programs. The frequency of regulation (i.e.
inspections) has been shown to improve program quality; in other words, the more often a program is inspected the higher the quality of performance. Many states, however, have staffing shortages and may not adequately regulate the large number of programs within their regulatory area. When states utilize current personnel to regulate programs adequately, results may be longer work hours for state staff. These are issues that each state must contend with, and sometimes states choose to loosen standards on child care programs instead of increase regulation due to lack of funds.

What is meant when a program is said to offer high quality care? It is more than a certificate stating standards have been met. Vandell (2004) advised that high quality care must include encouraging connections with providers, positive play interactions among children, and an engaging environment. She offered the term process quality to “refer to the experiences that children have with caregivers, peers and materials” (p. 391). The children in such programs were engaged in more positive interactions with other children and the providers were more perceptive of their needs. It is widely known that the profession of child care often has high turnover in staffing, further inhibiting relationship building opportunities that could improve quality interactions between providers and the children in their care.

Quality in child care has been evaluated using different measures such as adult/child ratio, positive adult/child interactions, and stimulating environment. De Schipper et al (2007) studied multiple determinants of quality within child care programs to try to determine if provider education and experience and program quality were correlated with overall quality of care. They found that three factors contributed to the quality of care within their study: characteristics of the caregiver, characteristics of the group, and the caregiving context.
When examining these three characteristics, de Schipper et al (2007) found age of caregiver and children to be strong indicators of quality interactions with children. In natural interactions (i.e. meals, unstructured play), they discovered the older the caregiver the higher the quality of the interactions. However, when the activity was structured in nature (educational task, small group) the younger caregivers were found to have higher quality interactions with the children in their group. A similar finding was discovered with child age of group; the older the children the higher the quality of the caregiver interactions. Specifically their findings revealed that the more children under age 2 are present the lower the quality of interactions.

Physical workload responsibility was one factor discovered in this study that often predicted a lower quality of caregiving. They found that the caregiver’s perception of the physical demands of the job could predict the quality of the care she (all study participants were female) provided. The authors speculated that this could be related to health but found no direct evidence to support this conclusion (de Schipper et al., 2007).

The NICHD (2000) study presented data stating that positive provider/child interactions were more common in father or other in-home care when the children were 24 months or younger. This correlation decreased as the child got older, with center care ranking higher in positive interactions after age three. In regards to measures of quality showing reliability in minority cultures, Burchinal and Cryer (2003) found that when the environment was sensitive and stimulating for the children, ethnicity did not correlate with outcomes for the children. This further supports the data that quality in program can be an indicator of more positive child outcomes. When looking at the different conclusions found in these studies it leads us to
consider the quality of the care that children are receiving in different programs and how we can measure that quality.

The Early Care Environment Rating Scale (ECERS), Infant/Toddler Environment Rating Scale (ITERS), and the Family Day Care Rating Scale (FDCRS) have been used in studies that have shown a correlation between quality and developmental outcomes within children (Frank Porter Graham Child Development Institute [FPGCDI], 2000). Votruba-Drzal, Coley, and Chase-Lansdale (2004) published the Three City Study examining the effects of child care quality on child outcomes in low income families. They found that programs that emphasize safe and healthy practices, employ sensitive providers, and provide stimulating environments are extremely important to this population. The research of Burchinal and Cryer (2003) also supports these results. That is, when care is provided that is sensitive and stimulating children can benefit as shown through successful school related outcomes. These qualities are among the bases of the ECERS, ITERS and FDCRS rating scales. These measures look at various aspects of the child care program such as child/adult ratios, age appropriate activities, equipment availability, and personal care.

The Three City Study (Votruba-Drzal, et al, 2004) also used the Arnett Scale of Provider Sensitivity which measures the social relationship between children and providers. They found all of these measures to be well validated and used often in studies.

In 2000, the NICHD Early Child Care Research Network designed its own measurement tool, the Observational Record of the Caregiving Environment (ORCE). This instrument is designed to be used across all types of child care programs. It offers a consistent measure across the different types of child care so the data analysis can be more uniform. The standards set
forth by all of the above measures exceed the minimum standards necessary for licensure in many states. In practice many programs have turned to accreditation as their measure of quality instead of using the above measures. Early Childhood accreditation is a standard recognized and endorsed by the National Association for the Education of Young Children (NAEYC).

The NAEYC accreditation program is a four step process that evaluates the child care program in ten areas. It requires programs to verify criteria met in these areas and to document this verification as continuing over time. In the United States, there are currently fewer than 11,000 Early Childhood programs that have achieved accreditation (NAEYC, 2008). This number reflects less than 2% of the approximately 400,000 licensed/regulated child care programs thought to operate (Smolensky & Gootman, 2001). One of the principal guidelines of NAEYC accreditation is low child/adult ratios (NAEYC, 2008). Several studies have shown low child/adult ratios as the strongest predictor of positive interactions in a program (Gromley, 1998; NICHD, 2000; Phillipsen, et al, 1997). Given the documentation requirements and assessment of quality intrinsic to the accreditation process, it would be difficult for a program to achieve accreditation without being high quality. Thus, programs that have maintained accreditation for an extended period of time are considered to be highest quality programs.

Another factor that has been debated within the research is whether education and experience of early educators determines the quality of their care. Bogard et al (2008) examined the prior research on these criteria and what the criteria mean in terms of quality programming. Their examination did not provide any clear-cut conclusions on this relationship. They stated that there are many factors that can affect outcomes in children and quality experience. The education level of the teachers could be one such factor. Environment and prior social-emotional
development of the children were stated as other possible factors. The absence of consistent standards in teacher education from state to state was noted as a possible drawback in using education as the standard of quality measurement in prekindergarten programs as well as later schooling.

**Problem Behaviors**

When examining behaviors in children, observers must keep in mind that certain behaviors are developmentally appropriate for different ages of preschool children. What may be developmentally typical of the 3-year-old within a group setting, may well not be for a 5-year-old (de Schipper, et al., 2004). Developmentally Appropriate Practices (Bredekamp & Copple, 1997) gives guidelines for educators concerning the developmental stages that young children proceed through and to what extent behaviors can be expected at each developmental stage. It is when a child is unable to respond in socially acceptable ways for their age that the behaviors become a problem.

When working with children there are many issues that arise in the course of the day. Often they are handled as routine, but sometimes the behaviors can become problematic. Buck and Ambrosino (2004) stated that 17% of the response group containing 50% or more children of color reported over 20% of children had severe behavior problems. The Licensed Child Care Dismissal Study conducted by North Dakota Resource and Referral (2007) reported that 51.2% of children dismissed from childcare services were dismissed due to behavior problems exhibited by the child in care.

Behavior problems are often described as externalizing or internalizing. Externalizing behaviors include aggressiveness to others, hyperactivity, disruptiveness, and inattentiveness.
Internalizing behaviors are more related to panic, anxiety, and depression symptoms (Hagerkull & Hammarberg, 2004). The externalizing behaviors, or disruptive behaviors, are most often the ones that teachers focus on and label as behavior problems (Hutton as cited in Hagekull & Hammarberg, 2004). How a program is able to deal with behavior problems that arise often depends on established policies in their program and access to referral information. When behavior and referral policies are not clarified, the program may no longer be able to provide adequate care for the child with the problem behaviors. Removal of the child may be considered by the program (Gilliam, 2005).

**Preschool Expulsion**

Expulsion is defined by Gilliam (2005, p. 1) as “a complete cessation of educational services without the benefit of alternative services provided by or through the educational program that has expelled the child”. It occurs in various education programs at the prekindergarten and K-12 level. Research shows only a few studies that refer to this occurrence.

Gilliam (2005) conducted studies on the occurrence of early education expulsion. The results of Gilliam’s study in Massachusetts revealed an early education expulsion rate of 27.4 expulsions per 1000 children enrolled. A much larger study completed in 2005 expanded the population to all 50 states focusing on state funded prekindergarten programs (Gilliam). This study presented details of the prekindergarten expulsion rate in 40 states that identified themselves as having state funded prekindergarten programs. The results illustrated expulsion rates varied from a high of 21.1 per 1000 children to 0 expulsions within a state.

Another smaller study was conducted in Texas (Buck & Ambrosino, 2004). These researchers surveyed licensed, nonresidential day care centers. Using a 2% stratified random
sample of all Texas licensed, non-residential day care centers, they examined whether programs have utilized expulsion due to problem behaviors within the past 12 months and if referrals were given to the families upon exit. Though this study reported a low return rate for surveys (36%) the results showed that over 50% of the responding centers removed at least one child from their program due to behavior issues in the past 12 months. Half of the centers that reported using expulsion also reported that they provided no referrals for the family.

Similar results were reported by the Licensed Child Care Dismissal Study (2007) conducted by North Dakota Resource and Referral. This study reported mailing a survey to all licensed providers, residential and center, within the state with a return rate of 38%. Of these providers, 51% had expelled a child due to child behavior issues. Both studies state that the low return rate is a limiting factor in their data but both studies report very similar findings lending to some consistency.

Interventions

In the expulsion studies (Buck & Ambrosino, 2004; Gilliam, 2005; ND-CCRR, 2007) interventions were mentioned as consideration for programs in dealing with problem behaviors. Gilliam (2005) found that a program’s access to mental health consultations was strongly related to lower incidence of prekindergarten expulsion. When a program had intervention policies in place that included consultations with specialized personnel they reported fewer expulsions. North Dakota Resource and Referral (2007) reported in the Child Care Dismissal Study that the parent’s acknowledgment of behavior issues may result in retention of the child in care or intervention services for the child. Referrals to agencies or groups that assist families in dealing with their children can increase the stability of child care for those children, one of the strongest
indicators of positive child outcomes in some research (Love et al., 2003). Wraparound or other programs that are specifically designed to assist the family in coping with their child’s problem behaviors are another important option in the prevention of more serious behavior issues in later school years (Eber, 2002).

The above interventions were all found to be effective tools that prekindergarten teachers can use to decrease the likelihood that expulsion of a child with problem behaviors will be considered.

The results of these studies show that the expulsion of young children occurs enough to warrant further research. One area that was not researched in these studies is the standards of quality the surveyed programs have met and if these measures are associated with greater use of intervention services and lower expulsion rates. The proposed study shall consider these issues as they relate to each other. The questions for this study that will be addressed are first, do higher quality programs have direct care personnel with higher education levels, more experience and greater longevity in that program? Second, do higher quality programs have a lower incidence of behaviors requiring intervention? Thirdly, do higher quality programs have a lower incidence of preschool expulsion due to behaviors? Lastly, are higher quality programs more likely to refer families to more suitable programs when program interventions do not successfully reduce targeted behaviors?
METHOD

Participants

The participants in this study were childcare centers operating within the state of Minnesota. All persons or companies, operating as child care center providers, in Minnesota were invited to participate. The Minnesota Department Human Services (MN DHS) website was consulted for information on Minnesota licensed childcare providers operating as centers in the state. Programs were sent emails or postcards asking for their participation in this study. Emails were obtained by searching through websites on individual programs for email address information. Programs without websites or without email addresses available on their website were sent a mailed postcard with study and link information inviting their participation.

In the state of Minnesota there are 1584 programs that are licensed by the Department of Human Services to operate as a Child Care Center (MN DHS, 2013). The capacity of children that they could serve is 105,880. All programs were invited to participate in the study. Emails were sent to 1184 licensed child care centers, and 462 were sent postcards inviting their participation in this study. Of these programs, 81 responded to the survey when invited. This amounts to a 5% return rate.

The demographics of the respondents showed us that 73% were operating as a licensed only program and 27% had received the accreditation (or equivalent) status (Table 1).

Materials

For this study a survey, accessed online, was designed to address various aspects of the child care program. It was distributed through an email and regular mail with a link provided to all programs within Minnesota that were identified as meeting the state’s standard levels. The
survey contained three sections: demographics of the program, incidence of behavior problems and expulsion information for their program including intervention procedures. The demographic questions included ages of children served, overall and in the age ranges of 0-12 months, 12-24 months, and 24 months-kindergarten entrance, as well as socio-economic range of families served. To help determine staff characteristics, the level of education and years of experience of all current staff members were requested as well as their years of experience within that program. Information was gathered concerning whether the current education/experience levels and staff turnover are typical of this program’s history. Questions addressed the years of operation and program size. The respondents were asked to indicate the standard level of their program (registered, licensed, accredited), as well as how many years the program has met that standard. Programs that were identified as not having been in operation for the past 24 months or without standards information supplied were not included in the study.

Table 1

<table>
<thead>
<tr>
<th>Standard Level</th>
<th>Frequency</th>
<th>Percentage</th>
<th>Frequency of no written policy</th>
<th>% total with no written policy noted</th>
</tr>
</thead>
<tbody>
<tr>
<td>Licensed</td>
<td>59</td>
<td>72.8</td>
<td>12</td>
<td>20.3</td>
</tr>
<tr>
<td>Accredited</td>
<td>22</td>
<td>27.2</td>
<td>4</td>
<td>18.2</td>
</tr>
<tr>
<td>Overall</td>
<td>81</td>
<td></td>
<td>16</td>
<td>19.8</td>
</tr>
</tbody>
</table>

The next section of the survey pertained to children’s problem behaviors that teachers reported as observed within the program in the past 24 months. They chose from a list of externalizing and internalizing behaviors with an “other” option for any behaviors exhibited but not listed. This list was developed from personal experience of the researcher as well as items
adapted from the Behavioral Assessment System for Children – 2 (BASC-2; Reynolds & Kamphaus, 2004). Next to each behavior they were asked to identify how many children have had difficulty with this issue and the ages of the children. This information helped determine their rating of behaviors that were not age appropriate. They were also asked to paste into the comments section, a copy of any written procedures in their policy/parent manuals concerning intervention and referral services offered. They were asked an open ended question regarding other interventions used by the staff or director to assist with behaviors in children.

The final section was concerned with how many children have been expelled from their program in the past 24 months due to behavior issues along with the specific behaviors that were exhibited by these children. The program also specified whether any referrals to alternative or intervention programs were made for the family of the expelled children.

An incentive to complete the survey was offered by including a link at the end of the survey for materials on specialized educational materials for use in their childcare program.

**Measurement reliability.** Prior to using the survey with the study sample group, the researcher submitted the measure to one local program. This program was requested to complete the survey for their center. The request included instructions for the director and one employee in the preschool aged program to each complete a paper copy of the survey independently. Agreement between raters was noted as 71% and used as a test of this tool for measurement reliability.

**Measurement validity.** The measure was examined by three university child development/education researchers to determine face validity. Revisions to the survey were made by the researcher prior to use that reflects the recommendations of those researchers. In
addition, the survey provided a detailed definition for intervention and expulsion. These definitions were designed to ensure agreement among participants completing the survey on what an intervention is for the purpose of this study as well as how to define expulsion.

Procedure

All programs within the state of study were emailed or mailed through regular mail if email was not available, with information about the proposed study. The director or owner of the program was the contact person of choice. The invitation included information on how to access the survey as well as their rights as a participant. They had the option to complete parts of the survey or save it to finish later as necessary. This data collection took place over a three-year time period with programs from different sets of counties being invited access to the online survey at different times. The survey remained open to all participants for this entire time. The last wave of participants was those unavailable through email. This group received regular mail postcards inviting them to participate. As the collection time neared its completion, one final email reminder was sent to all participants, except the last wave, that the survey would close on a certain date.

After data collection ended, the surveys were divided into categories according to standard level. The sample was divided into groups according to the following standards levels: accredited and licensed. The standard level of ‘registered’ was eliminated as programs operating as a center in the State of Minnesota must be at least licensed to be legal. One program identified as ‘Other’ standard. This program was placed in the ‘accredited’ level as the standard was identified as Head Start Performance Standards which are comparable to accreditation standards.

14
Measures of Constructs

Quality of program. To address the first research question, quality of program was determined by the standard level of operation (licensed or accredited) for the program as well as level of education and experience of staff (Appendix B).

The sum of the three quality factors (education, experience/longevity, quality standard) determined the final total quality score for each program. To create the composite quality score each level of education and each level of experience/longevity was given a score on a scale of one to six, with one being the lowest possible score in that category and 6 being the highest. In the category of operation, the scores were weighted to reflect a higher standard for accreditation, due to the higher criteria that accredited programs must meet to become accredited. Thus, accredited programs scored six for quality and licensed programs scored three.

For levels of education and longevity/experience, the scores were on a continuous scale from one to six with one being the lowest and six being the highest for both education levels and longevity/experience. The total score for level of education for each program was determined by computing an average of the education levels of the staff within each level. The same procedure was followed to obtain an experience/longevity score for each program weighted by the number of staff within that level of education.

The final composite score for each program was classified as high quality, moderate quality or low quality. Programs could have a minimum score of five and a maximum score of 18. High quality programs were those that obtained a composite score of 13-18. Moderate quality programs were those that obtained a composite score of 9-12.99 and low quality programs were those that obtained a composite score below 9. These levels were determined by
examining current quality standards as determined by NAEYC for programs and state licensing practices in Minnesota.

**Behavior issues.** Occurrences of the behaviors overall across programs were tallied on a master list ranking the behaviors from largest to smallest number of occurrences. This list allowed the researcher to identify which behaviors were more prevalent in childcare centers overall. The number of children with behavior problems requiring intervention was divided by the total number of children within the program to get a percentage of behavior problems for the program. This determined the prevalence of behavior problems within individual programs.

**Expulsion and intervention occurrence.** Information was gathered on the number of programs that have expelled a child within the past 24 months due to behavior issues and what interventions were attempted before the child was expelled. An intervention was defined as a plan that includes persons or materials outside of the regular classroom direct care staff and/or supplementary meetings with the parents and other professionals. The total number of expulsions within a program was recorded from 0 to 4+. Along with this variable, a dichotomous variable was created that indicates whether a program had any written policy concerning intervention/referral procedures for behavior issues.

**Referrals.** The measure of referrals was a dichotomous variable as to whether the program made referrals to a more suitable program when intervention policies did not reduce the targeted behaviors and an expulsion resulted. Referrals were defined as suggestions, oral or written, to family for programs specifically dealing with targeted behaviors, special education classrooms or other specialized programs, regardless of whether the family follows up on the
suggestion. A screening completed by specialized professionals, at the request of the program, in the area of the targeted behaviors was also included as a referral.

**Data Analysis**

The researcher conducted the following statistical tests to analyze the data in relation to the research questions presented.

The first research question, *do higher quality programs employ direct care personnel with higher education levels, more child care experience, and greater longevity in the program* was checked using an independent samples t-test. The independent variable was the standard the program has achieved. Dependent variables were education levels and the experience combined with longevity in the program. Programs with a higher standard level were anticipated to have higher overall quality score as well as higher education and longevity/experience scores individually.

The second research question, *do higher quality programs have a lower incidence of behaviors requiring intervention* was tested while controlling for socio-economic status and number of children with diagnosed disability. We addressed this question using an analysis of covariance (ANCOVA). The independent variable was program quality. The dependent variable was incidence of behaviors requiring intervention. Socio-economic Status (SES) and diagnosed disability were included as control variables. Socio-economic status was measured by creating a variable from the data received from centers as to the percentage of children within their center who qualify for the free meal, food program reimbursement rate. The percentage of children with diagnosed disability was also taken from the survey data. The incidence of
behaviors requiring intervention, after controlling for SES and disability, was expected to be lower in the programs with higher quality scores.

The third research question, *do higher quality programs have a lower incidence of preschool expulsion due to behaviors*, was examined using ANCOVA. Quality level was the independent variable and number of expulsions was the dependent variable with control factors of SES and diagnosed disability. The incidence of preschool expulsion due to behaviors was expected to show a negative correlation with quality score.

The last research question, *are higher quality programs more likely to offer families referrals to more suitable programs when program interventions do not successfully reduce targeted behaviors*, was addressed through a chi-square analysis. All programs reported either the use of a referral for expelled children or not using a referral so a dichotomous variable was created for referral present or not and examined in relation to the quality level. A positive association between prevalence of referral to more suitable programs and quality score was expected.
RESULTS

The first research question was whether programs meeting the higher standard level of accreditation regularly employ direct care staff with higher education levels and maintain staff with greater longevity in their program as well as other child care experience. The t-tests showed that accredited programs did not necessarily have staff with higher education levels combined with higher experience/longevity in program levels. Analysis results for this question are shown in Table 2. The results showed that while higher program standard centers do have staff that is more educated, that difference was only slight. In looking at the staffing patterns of all centers, higher standard achievement did not predict that staff would have more experience or greater longevity within that center.

Table 2

<table>
<thead>
<tr>
<th>Education, Experience &amp; Longevity in Relation to Program Standard Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard Level</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Licensed</td>
</tr>
<tr>
<td>Accredited</td>
</tr>
<tr>
<td>p-values</td>
</tr>
</tbody>
</table>

Note: p-values shown are the result of independent samples t-tests.

For the second research question, do higher quality programs have a lower incidence of behaviors requiring intervention when we control for socio-economic status and diagnosed disability between different quality levels of groups, results are presented in Table 3. It was found that there was no notable difference among the three quality levels in behavior occurrences requiring behavior plan implementation. This table also shows that behavior plans were used
consistently across all types of programs, and with low frequency, (3.4-4.5 %), regardless of quality indicators.

Table 3

<table>
<thead>
<tr>
<th>Quality Level</th>
<th>n</th>
<th>% with Behavior Plan implemented</th>
<th>% of Expulsions Occurrence</th>
<th>% offering Referrals after Expulsion</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>SD</td>
<td>Mean</td>
<td>SD</td>
</tr>
<tr>
<td>Low</td>
<td>12</td>
<td>3.44</td>
<td>2.00</td>
<td>1.7</td>
</tr>
<tr>
<td>Moderate</td>
<td>36</td>
<td>4.46</td>
<td>5.00</td>
<td>0.46</td>
</tr>
<tr>
<td>High</td>
<td>33</td>
<td>4.21</td>
<td>5.00</td>
<td>0.37</td>
</tr>
<tr>
<td>Total</td>
<td>81</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

p-value .838 .002 .305

Note: p-values shown are the result of ANCOVA.

Due to the low numbers reported this test may not be valid.

Survey results also show that most programs have a written policy on how the program deals with behavior issues (Table 1). Less than 19% of programs overall reported having no written policy on management of behavior. This percentage included programs that did not complete this question. Of the 7 programs (8.6%) that left this question blank on the survey, four were accredited programs and three licensed. No accredited programs reported a lack of written policy regarding behaviors, whereas 9 licensed programs reported lacking a policy.

We next examined whether higher quality programs have a lower incidence of preschool expulsion due to behaviors. The ANCOVA results showed that programs in the high and moderate quality levels had significantly fewer expulsions than programs at the low quality level (Table 3). This was the predicted outcome.

When examining are higher quality programs more likely to offer families referrals to more suitable programs when program interventions do not successfully reduce targeted behaviors, the results show close consistency across all quality levels of programs. Twenty five
programs reported utilizing expulsion in the past 24 months. All of these programs except four reported providing a referral to at least one alternate program to the families. One program, from the moderate quality level, reported expelling a child but then re-admitting this child after one week. The other three expulsions without referral occurred in programs rated in the low quality range. Though these expulsions without referral all occurred in the low quality level, these numbers as a whole were very low for expulsions. Due to this low number, the results from the chi-square analysis may not be accurate.

Behavior occurrences were tallied on a master list by frequency across programs. The behavior that was reported as being exhibited most often was aggressive behaviors including hitting, biting & additional hurting of others (See Figure 1). There were five behaviors that were reported as occurring in over 100 incidences, after which a strong drop off (67 occurrences) is noted. These five behaviors would be considered in the externalizing group which is consistent with other research findings (Hagerkull & Hammarberg, 2004). The two least frequent behaviors reported were those that are directed to the child’s own self.

Figure 1. Frequency of behaviors across programs.
DISCUSSION

The relationship among the factors of quality, problem behaviors, and expulsion had not been examined prior to this study. Quality within childcare centers was expected to be related to lower levels of behavior problems, higher education and experience/longevity of staff, lower expulsion rates and higher incidence of referrals for families facing expulsion. Results from the statewide survey were not all consistent with these expectations. When education of staff was combined with experience and longevity in program, higher quality rated programs did not necessarily employ staff meeting this criteria. There was a slight difference in frequency of expulsion as well as providing a referral to families for their child at different quality levels. The quality indicators for the purpose of this study were examined in more depth below utilizing current research.

Education

We can speculate as to why programs that have the higher program level (accreditation) do not consistently employ direct care staff with higher education levels. One possibility is that programs overall employ staff with similar education levels. The researcher examined the education requirements for staff within programs that are accredited under the NAEYC. Their Teachers-Program Standard states “The program employs and supports a teaching staff that has the educational qualifications, knowledge, and professional commitment necessary to promote children’s learning and development and to support families’ diverse needs and interests” (p. 2, NAEYC, 2005). This literature states that 75% of teachers must meet one of the following staff qualifications:

- CDA or 12 ECE or related credits
• Working on an AA or higher in ECE or related field
• Have an AA or higher in ECE or related field
• Unrelated degree + 3 years experience in an accredited program
• Unrelated degree + 3 years experiences in a non-accredited program + 30 hours of training

When examining the education requirements specified for the purposes of this study, we note that many responding programs in this study do have staffing patterns that meet this criteria. In fact, when considering these levels of education, this study considered the above criteria to be at a score of 3 (See Appendix B), which is in the bottom half of the education scoring criteria. So when comparing accreditation requirements to criteria met within this study’s population, overall they do meet the required education levels for accreditation.

Longevity/Experience

Another possibility is that due to the lower average wages of child care workers in Minnesota compared to other education programs, many programs may have difficulty hiring and retaining qualified staff with higher education degrees (see Table 4). High turnover of staff is a problem within early education programs and when Early Educators gain experience they may leave programs for higher paying positions.
Table 4
Wage Comparison for Three Minnesota Early Education Fields

<table>
<thead>
<tr>
<th>Occupation title</th>
<th>Mean hourly wage</th>
<th>Annual Mean Wage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Childcare workers</td>
<td>$10.44</td>
<td>$21,710</td>
</tr>
<tr>
<td>Preschool teachers, except Special Education</td>
<td>$15.19</td>
<td>$31,590</td>
</tr>
<tr>
<td>Kindergarten Teachers, Except Special Education</td>
<td>(not reported since most do not work full year and are paid on annual salary)</td>
<td>$53,730</td>
</tr>
</tbody>
</table>


Quality

When examining the quality of programs within this study, the researcher considered education and experience levels of direct care staff, as well as longevity within the program as indicators. More recent literature has used other indicators of quality measures. Some of these new indicators have been identified as resulting in more consistent findings of quality within child care programs.

For example, the Classroom Assessment Scoring System (CLASS) is a tool that measures the teacher-child interactions that take place within classrooms (Hamre et al, 2012). This tool has been reported, when used in conjunction with coursework, to be a valuable technique to increase the quality of early education programs.

Intervention

The Response to Intervention (RTI) is a new approach to early intervention in early education designed to identify and implement intervention earlier in children with disabilities and behavior issues (Greenwood et al, 2011). Greenwood noted that one problem with implementing a widespread model for intervention and improving quality within early education
programs is the large variation in experience and training that direct care staff bring to their classrooms. This issue seems to lend understanding to the results found in this study regarding quality measures and occurrence of behavior issues as well as expulsions from programs.

Another indicator that recent literature has focused on is the availability of Mental Health Consultants within programs. Numerous recent articles have focused on this use for the reduction of behavior issues in early education and in the reduction of expulsions of challenging children from programs (Carlson et al, 2012; Hoover et al, 2012; Perry et al, 2008; Williford & Shelton, 2008). In addition, the presence of Mental Health Consultants within a program has shown that staff has increased levels of understanding concerning best practices for children’s social emotional development in early education as well as reduction of their own stress levels. Improvement of these two factors could lead to effectively reducing disruptive behavior in their students.

Topics that these researchers discuss are how mental health consultation can allow teachers to improve overall social emotional instruction within their classroom when used consistently, the effects that early education has on children especially when lower income or at risk for behavior concerns and the how behaviors may be reduced when individual consultation focuses on childcare effects in conjunction with family dialogue.

The state of Michigan has been implementing one such program called the Child Care Expulsion Prevention Program (CCEP; Carlson et al, 2012) where the mental health consultants are “family-centered” and take on the role of advocating for the child. Their program included ongoing family and provider consultation as well as referrals to outside services. This is an aspect of the program that relates closely with the results of the current study. Higher quality
programs often have written policies that may lead to fewer expulsions as well as more referrals to more appropriate programs if an expulsion occurs within the present study.

We did find that higher quality programs had a lower incidence of preschool expulsions due to behavior problems (Table 3). One explanation could be that programs that meet more of the higher quality indicators may recognize the importance of intervention for helping the child rather than just improvement of their child care. In addition, this study reported that all accredited programs considering expulsion of a child offered families referrals to a more suitable program when an expulsion was occurring. This could be an indicator that the needs of the challenging child as well as the needs of the program overall were considered in the expulsion process.

**Limitations and Future Research**

This study has some serious limitations. Small sample size, self report, and time factors were three limitations. Reliability testing was at 71%, which is low, and only face validity was tested. Two staff, a preschool teacher and a director from the same program, were asked to complete the survey on their program to test the tool for reliability. Results from this test showed discrepancies in staff numbers, education, experience, and longevity level of staff, occurrence of behavior problems as well as interventions used in the past 24 months. This suggests the possibility that the teachers and director may have different information available to them concerning their program.

The small sample size of this study relative to the overall population size could suggest the possibility that overall quality in relation to preschool behaviors and expulsions could be vastly different in the population than was reported in this study. Due to the small sample size,
using inferential statistics to generalize may not be appropriate. There is also the possibility that programs that participated were able to find the time to participate due to having fewer behavior issues to cope with than other programs.

The self-reported data in this study could have been influenced by social desirability effects. Though many behaviors were reported as having occurred within the various programs, expulsion of a preschool child may be seen as a program failure and may be reported as happening less frequently than actual occurrence.

The limitation of incentive was more difficult to overcome. Funding for this study was not available to provide a more tangible incentive for all participating programs and the possibility of a drawing was eliminated due to the confidentiality of completing the survey.

The CCEP program in the state of Michigan was shown to have greatly improved child outcomes in disruptive behaviors (Carlson et al, 2012). This program had a strong family component that may lead us to explore this connection in future research. In the current study, comments made by programs that used expulsion as a last resort when other interventions failed, repeatedly indicated that the family’s failure to take action or acknowledge the program’s concerns ultimately led to the child’s expulsion. The Michigan program example could effectively reduce this indicator and consequently reduce expulsions.

The current study examined some new aspects concerning the prevalence of expulsion of children from child care centers due to disruptive behaviors. Quality measures used within this study may need to be reevaluated as well as the probability that disruptive behaviors occur fairly regularly within early childhood programs. Behaviors that were reported as most prevalent were the behaviors that most often occurred between or to other children (aggressiveness, annoying,
disruptive and lose temper). These behaviors are all external in nature and may tend to be noticed more by teachers (Hagerkull & Hammarberg, 2004). The lowest behaviors reported were those that were self-directed (hurting self and threatening self). These behaviors can be equally as devastating to the social emotional development of children and may get overlooked when external behaviors exist.

In the research it was also noticed that education level, age of provider and age of children can have an effect on quality interactions within programs. This would be a topic to examine further. Do guidance techniques differ between providers with more education or of different generations, especially in relation to different age groups? and possibly affect the prevalence of behavior problems within programs.

Mental health consultation has been shown in other research to offer the possibility of improvement in these issues; however, the feasibility of mental health consultation on a widespread basis within the early education field is questionable. This field consists of a large variety of types of programs, both for profit and non-profit, within the early childhood program scope. Funding is sometimes sited as a restriction that many states and/or programs must consider when looking at these issues. The issues of behavior management, improvement of quality programs, as well as occurrence of expulsion in programs warrant further exploration in the future.
REFERENCES


Minnesota Department of Human Services (2013). MN DHS facility list by county report, retrieved from http://licensinglookup.dhs.state.mn.us


Assessing Child Care Standards and Rates of Expulsion for Problem Behaviors in Preschool Children

Dear Child care provider:

My name is Monica Nicklay. I am a graduate student in the Human Development and Family Science Department at North Dakota State University, and I am conducting a research project to examine quality standards in child care programs and the prevalence of problem behaviors and preschool expulsion within child care programs. It is our hope, that with this research, we will learn more about how quality standards in preschool child care affect children’s behavior and what is currently being done to help children with problem behaviors.

Because you are a current Minnesota child care provider you are invited to take part in this research project. Your participation is entirely your choice, and you may change your mind or quit participating at any time, with no penalty to you.

It is not possible to identify all potential risks in research procedures, but the researcher(s) have taken reasonable safeguards to minimize any known risks. These known risks include: loss of confidentiality, and emotional or psychological stress.

By taking part in this research, you may benefit by self analysis of your child care program and the prevalence of problem behaviors within your program and possible future rise in standard levels for programs to include intervention assistance. Benefits to others could include an increase in awareness of quality standards in child care, the problem behaviors that child care providers encounter and possible future rise in standard levels for programs to include intervention assistance.

It should take less than 30 minutes to complete the questions about staffing,
program standards, prevalent problem behaviors within your program and results from those problem behaviors. At the end of this letter is the website to access the online survey and time that it is available. Upon submission of your completed survey your program will be routed to a website called Bright Beginnings with educational activities for preschool children and families. This information is our thank you for participating in our research study.

We will keep private all research records that identify you, to the extent allowed by law. Your information will be combined with information from other people taking part in the study and we will write about the combined information that we have gathered. You will not be identified in these written materials. We will publish the results of the study; however, we will keep your name and other identifying information private.

If you have any questions about this project, please email me at monica.nicklay@ndsu.edu or call/email my advisor Joel Hektner, 701-231-8269, joel.hektner@ndsu.edu.

Thank you for your taking part in this research. If you wish to receive a copy of the results, please email the researcher, monica.nicklay@ndsu.edu.
APPENDIX B: SURVEY

Minnesota Child Care Study of Preschool Age Expulsions

Section A: Program Demographics

1. What is the highest program standard your program is currently receiving?
   ____registered  ____licensed  ____accredited

2. How long has your program maintained this standard?
   ____ less than 2 years  ____2-5 years  ____5-10 years  ____10+ years

3. Has your program received any awards or accommodations within the past 24 months?
   ____no  ____yes, specify______________________________

4. How many staff do you employ in direct care with children?
   ____

5. Of the number you listed in #4, please list how many you employ with each of the following education levels.
   ____4 year or higher degree in Early Education/Child Development
   ____4 year or higher degree in other Education discipline
   ____4 year or higher degree in discipline not Education
   ____2 year degree, partial college or other credentials such as CDA
   ____high school diploma or GED, with no higher education
   ____no high school diploma

6. Of the number you listed in #4, please list how many employ with the following experience levels.
   ____10 years + in this program and 3+ years prior experience in early education
7. Is this staffing pattern typical of your program for the past 5 years? If no, please state how it differs.

____yes ______no, How?____________________________________

8. How many children are currently enrolled in your child care program?

____

9. What is the maximum number of children you can enroll?

____

10. What are the numbers of children you have enrolled in each of the following age levels:

____newborn/infant (birth – 12 months)

____toddler (12 months – 24 months)

____preschooler (24 months – kindergarten eligible)

11. In the space below, please state how the grouping pattern that best describes how you group children in your program?
12. Please give the number of enrolled children for whom your program receives the following food program reimbursement rates.

- free rates
- reduced rates
- lowest rates

Section B: Child Behaviors of Concern and intervention

1. How many times in the past 24 months have you had to implement intervention plans with parents and/or other professionals for children’s behaviors.

   - 0
   - 1
   - 2
   - 3
   - 4
   - 5
   - 6
   - 7
   - 8+

2. Please mark the number of children who have exhibited the following behaviors in your program that have prompted your program to seek intervention. In addition mark the age of each child referenced.

   - annoys others on purpose through touch, words, etc; ages________________
   - argues with adults when denied own way; ages________________
   - breaks others’ things; ages________________
   - disrupts the play of other children; ages________________
   - loses temper easily; ages________________
   - hits, bites or is otherwise aggressive to others; ages________________
   - uncontrollable crying; ages________________
   - intentionally hurts self; ages________________
   - is fearful, nervous, or overly upset when makes a mistake; ages________________
   - excessive distress when changes occur or activity challenging; ages________________
   - verbally expresses wish to hurt self; ages________________
   - withdraws from group or conversation; ages________________
 ___ runs away from group or caregiver, causing safety issues; ages__________

 ___ complains of physical ailments in excess when stressed (stomach aches, headaches, etc);

 ages__________________

 other behaviors that cause issues in room

 behavior________________ ages___________

 behavior________________ ages___________

 behavior________________ ages___________

 3. Does your program have a written procedure for dealing with disruptive behaviors?

    ___ no                    ___ yes (please cut and paste the contents of this policy at end of survey in comments section, reference section B, 2)

 4. Of these interventions, how many were successful in providing plans that helped improve behavior?

    none all some, #_____  

 5. Of these interventions, how many children were diagnosed or are being professionally assessed for a disability.

    none all some, #_____  

 6. Were any other interventions (than written interventions mentioned above) used by direct care or other staff to help improve behaviors?

   Intervention________________; times used_______; ages of children________

   Intervention________________; times used_______; ages of children________

   Intervention________________; times used_______; ages of children________
Section C: Child Expulsion Occurrences

1. In the past 24 months, has your program required any children’s care be discontinued due to child behaviors.
   
   ____no (proceed to comments section)
   
   ____yes, how many________

2. Please give the ages of the children with whom you have discontinued care and the behavior(s) leading to the dismissal.

   ages_________; behaviors________________________________
   
   ages_________; behaviors________________________________
   
   ages_________; behaviors________________________________
   
   ages_________; behaviors________________________________
   
   ages_________; behaviors________________________________
   
   ages_________; behaviors________________________________

3. Did you provide referral options to any of the family(s) for alternative care that specializes in targeted behaviors?

   ____no
   
   ____yes, _______________________

Comments:
Thank you for your time in completing this survey. Upon submission of your completed survey your program will be routed to a website called Bright Beginnings with educational activities for preschool children and families. This information is our thank you for participating in our research study. If you wish to have a report of the results upon completion of this project, please email the researcher at monica.nicklay@ndsu.edu, noting: *project results* in subject heading.