THE ENVIRONMENTAL SCREENING QUESTIONNARE:

VALIDITY AND UTILITY STUDY

by

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A DISSERTATION

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DISSERTATION ABSTRACT

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Title: The Environmental Screening Questionnaire: Validity and Utility Study

Accumulative family risk factors can have a detrimental impact on young children's social emotional development and future school readiness. Identifying family risk and resilience factors can be a first step in linking families to needed services. Programs that serve families and children need a brief and valid screening tool that can quickly assess family strengths and needs. This study examined the validity and utility of the Environmental Screening Questionnaire (ESQ), a brief caregiver report of the family's situation.

Participants included 324 parent/child (ages 3-60 months) dyads from a sample of programs that serve at-risk families ($n = 72$) and an online sample of caregivers ($n = 252$). Results from data analyses evaluating the validity and utility were promising. Validity was investigated by examining convergent validity using the Parenting Stress Index-Short Form. Caregivers from the online sample who had more family risk factors, as identified in the ESQ, were more likely to have elevated levels of stress ($r = .23$). Moreover, children from families with increased risk factors tended to have higher scores on the Ages and Stages Questionnaire: Social Emotional (ASQ:SE) for two age intervals, 6 and 48 months, for the online sample.

Utility data were gathered from caregivers and program staff. Results suggest the ESQ is an effective and useful screening measure that can help professionals identify areas of resource need, organize referral information, and monitor family outcomes. Caregivers found the ESQ to be helpful in understanding personal areas of risk and how risk and resilience factors can affect children's social emotional development.

This study assisted in developing preliminary "red flag" risk factors that may be useful to programs serving families and children. Testing of the "red flags" is discussed for future research.

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CHAPTER I

INTRODUCTION

Family assessment measures play an important role in defining family needs and strengths, and matching with available resources with the aim of improved child and family outcomes. Research has shown that family functioning is associated with young children's overall development and is especially influential in social emotional development (Brooks-Gunn, Berlin, & Fuligni, 2000; Raver, C., 2004; Shonkoff & Levitt, 2010; Shonkoff & Phillips, 2000; Squires & Bricker, 2007; Vick-Whittaker, Harden, See, Meisch & Westbrook, 2010; Yeung, Linver, Brooks-Gunn, 2002). Moreover, accumulative family risk factors often impact young children's school readiness, future school success, and life span outcomes (Fantuzzo, Perlman, & Dobbins, 2011; Powell, Dunlap, & Fox, 2006; Raver, et al., 2009).

Child Development and Environment

Past and current research indicates the family as playing a primary role in supporting the early learning environment of the developing child (Bronfenbrenner, 1979; Sameroff & Fiese, 2000). More recent discoveries in neuroscience have helped us understand the complex intersection of brain architecture, genetics, and how early experiences impact child development. The biodevelopmental theory posits that extreme levels of stress, referred to as "toxic stress" (Shonkoff, 2010, p.360) in the developing child, can have life long implications for learning, health, and behavior (Shonkoff & Levitt, 2010). Toxic stress in the form of child maltreatment may cause children to develop "alternative developmental pathways" leading to maladaptive behavior and impaired cognitions resulting in problems throughout the life span (Ayoub, et al., 2006, p.

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683; Fantuzzo et al., 2011). Alternatively, warm and sensitive caregiving can mediate the effects of stress on infants and young children, helping them develop emotion regulation and optimal responses to future stressors (Keenan, Gunthrope, & Grace, 2007; Rifkin-Graboi, Borelli, & Enlow, 2009). Ultimately, environmental influences such as risk, resilience, and stress can positively or negatively impact children's development and outcomes throughout the life. Children's social emotional development in the areas of emotion regulation, building social relationships, and compliance are also associated with future school readiness which is related to future employment and financial outcomes for individuals and families (Bierman et al., 2008).

Social Emotional Developmental Risks

Problem behavior is one of the most salient variables affecting children's success in school, with reports of 10-20% of children entering kindergarten having disruptive behavior and up to 40% with social emotional deficiencies that affect relationship building with peers and adults, behavioral inhibition, and compliance with rules (Bierman et al., 2008; Powell et al., 2006). Many children who enter school and are not ready to learn come from multi-stressed households (Beirman et al., 2008; Shonkoff & Phillips, 2000). Moreover, children who experience toxic stress in the form of child maltreatment may have increased risk of poor school achievement in reading, mathematics, and language and are also at risk of social and behavioral problems, ultimately leading to school failure due to suspension and truancy (Fantuzzo et al., 2011; Squires & Bricker, 2007).

School expulsion or failure due to behavioral problems as a result of family dysfunction due to risk and stress is unacceptable as our nation faces a crisis in today's

competitive world markets. As a nation we must address and respond to the needs of families who are experiencing multiple stressors to improve developmental outcomes for young children. Although most early childhood programs are not equipped to directly address these environmental stressors, they may be situated to assist families in accessing needed resources and supports (Shonkoff, 2010).

Statement of Problem

Early childhood teachers may be able to assist caregivers in identifying and accessing needed community resources, such as housing, mental health services, and education options. However, there is a need for a time-efficient, low cost and effective tool that will identify family risks, strengths, and needs to better assist teachers and caregivers in accessing available resources within the community (Johnson, Booth, & Barnard, 2006). At present there is no brief measurement tool for use by early childhood professionals that identifies caregivers' perceptions of their risks, strengths, and needs (Brannan, Holden, & Helflinger, 2006). Currently, family strengths and stressors are most often identified through lengthy observational tools used in the home setting, or risk assessments used to assess family competencies in providing a safe home environment most often used by child welfare (Kirk, Kim & Griffith, 2005).

In summary, family stressors and strengths need to be identified by professionals working with families and young children to effectively provide the occasion for families to access needed services, build on family strengths that will support their children's development, improve school readiness, and support improved life time outcomes. Risk and resilience factors that play a role in children's development include poverty, parental mental health, health care, family structure, education level, social supports,

neighborhood and family violence, housing and others. The conceptual model in Figure

1.1 indicates the relationship between child and family risk factors, the role

environmental screening plays in linking caregivers with needed services, and resulting

improvements on child and family outcomes. The following chapter identifies the

theoretical models that support child development from the perspective of risk and

resilience, and additionally reviews the literature on the effects of risk and resilience

factors on the development of children.
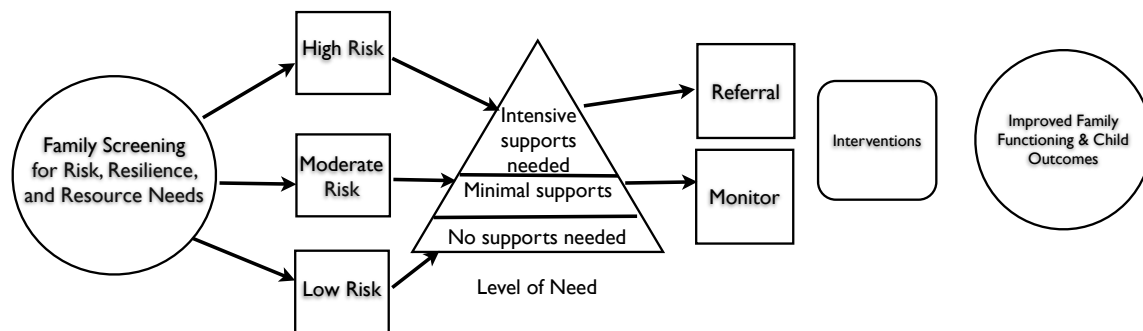
Figure 1.1. A conceptual model of multiple family risk pathways. Family screening of

risk, resilience, and resource needs can help triage families into high, moderate, or low

risk categories and define level of support needed. Next steps include referrals to services

for families in need of intensive supports or monitoring families who may be in need of

minimal supports. Family interventions may lead to improved family functioning,

affecting child outcomes.

CHAPTER II

REVIEW OF THE LITERATURE

Theoretical Perspectives

The theoretical perspectives that influence early social emotional development, cognitive development, and school readiness for children in relation to family functioning are discussed below. Three frameworks will guide the literature review: (1) dynamic skill theory, (2) ecological model, and (3) bio-developmental theory.

Dynamic Skill Theory

Children's development is fluid and transactional—the environment influences the child just as the child is influential on the environment. Children create their world-view by experiencing relationships around them and ultimately develop a working model of how to interact with others from the experiences and perceptions of those early relationships (Ayoub, Fischer, & O'Connor, 2003). Future close relationships are affected by these working models and can have a negative or positive impact on social emotional outcomes dependent upon early childhood experiences (Bowlby, 1969; Sameroff & Chandler, 1975; Squires & Bricker, 2007). Early attachment and emotion regulation leads to children's understanding of more complex and reciprocal relationships as they grow and develop. If this process is arrested by trauma, abuse, neglect, and other negative experiences, children may learn maladaptive coping and relationship skills (Ayoub et al, 2003.). Fischer, Knight, and Van Parys (1993) describe this process of learning and experiencing the world as a developmental web, where children move forward or backwards across developmental domains with emotions affecting every aspect of development. The dynamic skill theory assists in understanding how adverse

circumstances can produce negative cognitive schemas that lead to future social emotional and relationship problems throughout the lifespan (Ayoub et al., 2006).

Ecological Model

The ecological model is a second theoretical framework that provides an understanding of child development within the context of interrelated systems (Bronfenbrenner, 1979). An ecological approach includes incorporating all aspects of the interrelated systems, from proximal to distal, to provide a comprehensive view of multiple influences that impact family functioning and child development. For example, at the individual level, a child's disability or ethnicity may positively or negatively impact child and family outcomes. The micro system refers to the direct contact or relationships the child has with individuals, such as parents, grandparents, and teachers and at the meso level, the interconnections between micro systems (e.g., between teacher and parent). The exosystem is composed of policies and laws that affect the child and family, such as special education laws and the macro system refers to the culture and belief systems that affect the child and family, such as religious beliefs and indigenous cultural practices. The ecological model is especially relevant as a framework in understanding multiple family risk factors and stressors nested within multiple contexts that impact children's development.

Bio-Developmental Theory

The bio-developmental theory is used to explain how family risk and resilience factors interact to create levels of stress affecting cognition and health (Shonkoff, 2010). There are degrees of stress within normal functioning of family life that are acceptable, unavoidable, and expected, such as the birth of a sibling, or the death of a grandparent.

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However, when stress becomes pervasive, long lasting, and extreme, it can have deleterious effects on family functioning and child development, even changing the structure of the developing brain (Blair, 2010; Shonkoff, 2010; Shonkoff & Levitt, 2010). The bio-developmental theory posits taxonomy of three stress levels: positive, tolerable, and negative (Shonkoff & Levitt, 2010). For children, positive stress is characterized as moderate and short-term stress, such as frustration over sharing a toy or separation anxiety (Shonkoff & Levitt, 2010). Positive stress can be seen as a learning opportunity for children in developing coping mechanisms and providing the occasion for relationship building and support from adults. Tolerable stress is defined as a time-limited state in which brain development could be impacted through increased cortisol levels that can damage developing neural connections (Shonkoff & Levitt, 2010). However, tolerable stress can be mediated by supportive relationships that promote adaptive coping strategies, thereby facilitating the return to a more balanced state (Shonkoff & Levitt, 2010). Toxic stress is characterized by "intense, frequent, and/or prolonged activation of the body's stress-response and autonomic systems in the absence of the buffering protection of adult support" (Shonkoff & Levitt, 2010, p. 690). Toxic stress is related to difficulties throughout the life span, including cognitive impairments and physical and mental illness (Shonkoff & Levitt, 2010).

In summary, the frameworks of dynamic skill theory, ecological model, and bio-developmental theory play a critical role in understanding how formative relationships, interrelated contexts, and stress affect child development and life-long outcomes. Early childhood research has shown the benefits of intervening early in children's lives, especially those most at-risk for poor developmental outcomes (Shonkoff & Phillips,

2000). The following review of literature examines the risk and resilience factors that most commonly affect the development of young children.

Family Risk and Protective Factors

Accumulative family risk factors can have a substantial impact on overall family functioning (Sameroff, Siefer, Baldwin & Baldwin, 1993). Similarly, resiliency factors, such as social supports, community resources, education, and information, can be important family supports that may improve family outcomes. Children who grow up in multi-stressed families may have reduced developmental outcomes including behavioral and relationship problems that can lead to less success in the educational system. Five areas of scholarly literature are reviewed: (1) poverty; (2) education and employment; (3) transportation and housing; (4) child and family health and behavior; and (5) family and community relationships.

Poverty

Poverty is one of the most studied and documented risk factors affecting child development, although unpacking the causal attributes of poverty and developmental risk is still under discussion (Collins, et al., 2010; Conger, Ge, Elder, Lorenz, & Simons, 1994; Conger, Wallace, Sun, Mcloyd, & Brody, 2002; Cutuli, Wilk, Herbers, Gunnar, & Masten, 2009; Duncan, Ziol-Guest, & Kalil, 2010; Evans, 2004; Gershoff, Aber, Raver, & Lennon, 2007; Shonkoff & Phillips, 2000). Poverty impacts children through multiple pathways, such as health, physical, emotional, and cognitive development of the growing child.

Poverty is described and measured in varying ways depending upon the agency. The US Census Bureau (2011) uses a statistical measure called *Ratio of Income to*

Poverty that measures the family income to poverty thresholds that vary by family size. For example, a family of four with two children has a poverty threshold of $22, 113. According to the US Census Bureau, approximately 14.3 percent of all people in the US were living in poverty in 2009. Thirty percent of single-women headed households in 2009 were living below the poverty level and 20.7 % of children in the US in 2008 were living at or below the poverty level. Among those children, black children (35%) and Hispanic children (33%) were disproportionately represented living at or below the poverty level (US Census, 2011).

Federal programs designed to address poverty include a combination of supports for the most vulnerable citizens in the US (i.e., single parents, children, the elderly, and people with disabilities). Some supports designed to reduce the effects of poverty include Social Security Income (SSI), Temporary Assistance for Needy Families (TANF), the Earned Income Tax Credit (ETIC), Child Tax Credit, and Medicaid. These federal programs, along with housing supports, food supplement programs, and unemployment insurance, constitute the bundle of programs that are designed to assist and lift poor families out of extreme poverty (Gennetian, Castells, & Morris, 2010). Although supports are in place to reduce the effects of poverty on our nation's poorest citizens, many individuals and families experience negative consequences related to poverty. It is difficult to determine the causal aspects of the effects of poverty or the effects of receipt of public assistance for individuals living in poverty; however, research has shown an association between parents who are receiving public assistance and lower feelings of self-efficacy, increased depression, and higher levels of stress (Heflin & Acevedo, 2010).

Caregiver stress related to poverty manifests in the parent/child relationship through negative interactions and inconsistent and harsh discipline strategies, such as increased physical punishment which can lead to incompetent social emotional behavior patterns in young children (Bradley, Corwyn, McAdoo, & Coll, 2001; Conger, et al., 2002; Gershoff, Aber, Raver, & Lennon, 2007; Raikes & Thompson, 2005; Yeung, et al., 2002). Low parental income is also associated with less parental sensitivity, affection, and responsiveness, affecting the parent/child bond (Raikes & Thompson, 2005). Moreover, relationships between adults in the home are affected by poverty, increasing the amount of partner or marital conflict and depression, which can have an effect on internalizing and externalizing behaviors of children (Conger et al, 2002; Evans, 2004; Gershoff et al., 2007; Rafferty, Griffin, & Robokos, 2010).

Families living in poverty also face material hardships of daily necessities such as food, clothing, and furniture (Evans, 2004). Material hardship for families with children is often associated with limited access to enriching environments, stimulating experiences, fewer educational materials and toys, and lack of quality childcare ultimately having an effect on children's early success in preschool and kindergarten (Duncan, Yeung, Brooks-Gunn, & Smith, 1998; Evans, 2004; Yeung et al., 2002).

Many families who fall just above the poverty level do not qualify for federal programs that aid poor families, such as Food Stamps and Temporary Assistance for Needy Families [TANF] (Gershoff et al., 2007). These families or those living below the poverty level often experience credit problems that can cause high levels of stress and anxiety that is associated with numerous negative outcomes including depression, marital discord, substance abuse, domestic violence, and child maltreatment (Gershoff, et al.,

2007; McCloud & Dwyer, 2011). Circumstances that often lead to financial problems for families are job loss, temporary lapses in employment, health problems and lack of health insurance (McCloud & Dwyer. 2011). When families are living paycheck to paycheck, even a small financial disruption can lead to credit problems including delinquent payments, accessing high-interest payday loans, and bankruptcy (Blair, 2005; McCloud & Dwyer, 2011; Skiba & Tobacman, 2008). Payday loans are described as short-term, high-interest loans many families use in emergencies. Families that rely on payday loans often are trapped in a repetitive cycle of dependence that can lead to further credit problems (Skiba & Tobacman, 2008).

Many low-income families and families living in poverty in the U.S. also have the additional stress of food insecurity and hunger (Nord, Coleman-Jensen, Andrews, & Carlson, 2010). The US Department of Agriculture (USDA, 2011) has four categories of food security, from "high food security" to "very low food security." Very low food security is characterized as having at least six conditions related to lack of food or hunger. For example, worrying that "food would run out before they got money to buy more" or not eating for a "whole day because there was not enough money for food" (USDA, 2011). Food insecurity is defined as, " …a household-level economic and social condition of limited or uncertain access to adequate food" and hunger is defined as, "individual-level physiological condition that may result from food insecurity"(USDA, 2011).

Approximately 48.8 million people (9.1% of total US population) in the US lived in households with low food security in 2010 and 5.4% lived in households with very low food security. Approximately 1.3 percent of US children lived in households with very

low food security in 2010, however the USDA (2011) reports that most children are protected from substantial reductions in food intake even in households with extremely low food security. Households that are disproportionately represented as food insecure are families living below the Federal poverty line (40.2%), families headed by a single woman (35.1%), families headed by a single man (25.4%), African-American households (25.1 %) and Hispanic households (26.2%) (USDA, 2011). Additionally, Hispanic families who speak limited English are more likely to experience hunger and food insecurity compared to English-speaking Hispanic households (Gorman, Zearley, & Favasuli, 2011). Another characteristic of people disproportionately represented as food insecure are people with obesity (USDA). According to Larson and Story (2011), a relationship exists between food insecurity and feeding practices of infants, with infants from food-insecure families more likely to be fed solid foods before the recommended schedule most pediatricians suggest, a practice that has been linked to obesity in adulthood.

As early as 1932 the Federal government has assisted poor families in obtaining food. Before that time it was the responsibility of local communities and charities to help supplement food for needy families. Several food assistance programs exist today including Food Stamps, renamed Supplemental Nutrition Assistance Program (SNAP), Special Supplemental Nutrition Program for Women, Infants, and Children (WIC), Farmers Market Nutrition Program (FMNP), The Emergency Food Assistance Program (TEFAP), Child and Adult Care Food Program (CACFP), National School Lunch Program (NSLP), National School Breakfast Program (NSBP), the Summer Food Service Program (SFSP), among others (Food and Nutrition Service, United States Department of

Agriculture, 2011; WHY, Finding Answers For Hunger and Poverty, 2011). The Healthy, Hunger-Free Kids Program of 2010 broadened, expanded, and improved Federal programs that serve children (Food Research and Action Committee [FRAC], 2011). Federal food programs that aim to supplement poor families' food expenditures have been shown to help meet the food needs of people living in poverty, including providing protection against hunger for low-income children through the school lunch and breakfast programs and WIC; however, they have not significantly reduced food insecurity especially for poor rural families (Swanson, Olson, Miller, & Lawrence, 2008). Hunger, food insecurity, credit problems, and material hardship issues are all related to poverty in the US. Poverty's effects are far reaching into the lives of families and play a significant role in the development of young children.

Education and Employment

Although poverty is a prominent risk factor for children, caregiver education is one of the most salient risk factors affecting children's mental health and a strong predictor of future school achievement (Baroody & Dobbs-Oates, 2011; Evans, 2004; Knitzer & Perry, 2009; Sameroff et al., 1993). Early language and vocabulary development is associated with caregiver level of education (Evans, 2004; Hart & Risley, 1996; Lung, Shu, Chiang, & Lin, 2008) which later affects successful school outcomes for elementary aged children (Knitzer & Perry, 2009). Parent's education is also related to children's exposure to literacy opportunities and parental attitudes regarding reading for enjoyment (Baroody & Dobbs-Oates, 2011). Children raised by parents with lower levels of educational attainment are more likely to spend time with deviant peers and learn aggressive behaviors (Evans, 2004). Educational attainment has also been related to

caregiver responsiveness, leading to a paucity of interactions and misunderstood infant cues affecting the attachment and bonding process between mother and child (Osofsky & Thompson, 2000).

The association between education and employment is well documented with over 31% of high school dropouts unemployed in 2009, compared to 24% of high school graduates; high school dropouts earn 36% less compared to college graduates (U.S. Census, 2008). Our nation can ill afford to under-educate our youth, with the national unemployment rate spiking from a low of approximately 5.5 % in 2008, to a current consistent high of approximately 9 %, with many under-educated Americans chronically under-employed.

Unemployment can affect families in multiple ways, by reducing family income and increasing the risk of poverty and material hardships, reducing or taking away health benefits and often resulting in increased stress impacting overall family functioning (Eamon & Wu, 2010; Millet, Lanier, & Drake, 2011). For single mother families, the consequences of unemployment can be even more pronounced. Single mothers may experience increased problems related to bill paying, health, food, and housing (Eamon & Wu, 2010). Moreover, unemployment was found to be a correlate in pregnant mothers who abuse alcohol leading to health and development problems for children (Havens, Simmons, Shannon, & Hansen, 2008). Additionally, Millet, Lanier, and Drake (2011) found a relationship between unemployment status and increases in child neglect for California families, suggesting a connection between stress of unemployment and parenting practices.

Unemployment can have a major impact on family functioning; however, underemployment can also have negative consequences. Underemployment refers to "working in a job that is below the employee's full working potential" (McKee-Ryan & Harvey, 2011, p. 963). Underemployment often means that a worker is not able to secure full-time employment, is over-qualified for the position, or the job has been reclassified in some manner that reduces the associated income. Although unemployment rates have remained fairly consistent on a national level since 2008, underemployment rates have steadily increased during the same time period (McKee-Ryan & Harvey, 2011). Maxwell (2010) makes the association between underemployment and non-English speaking workers, reporting over two-thirds of low-skilled jobs requiring an ability to read instructions, write simple sentences, and fill out forms, resulting in lower wages and increased risk of unemployment. Families experience effects similar to that of unemployment, including depression, somatic symptoms, marital conflict, and decreased overall life satisfaction (McKee-Ryan & Harvey, 2011). Poverty, lower educational attainment, and employment problems are all major stressors that impact family functioning. Related to these issues are the problems of transportation, housing, and neighborhood safety.

Transportation and Housing

The effects of poverty, lower educational attainment, and employment problems can lead to issues such as lack of transportation, homelessness, substandard housing, and living in unsafe neighborhoods. Lack of transportation can be a barrier to accessing much needed services for many low-income families. In numerous studies, lack of transportation was the most salient variable for attrition from services, such as early

intervention, health and dental care appointments, immunizations, and drug and alcohol treatment services (Giannoni & Kass, 2010; Harrison & Sidebottom, 2009; Weathers, Minkovitz, O'Campo, & Diener-West, 2004; Yang, Zarr, Kass-Hout, & Kourosh, 2006). For single mothers, teen parents, rural caregivers, and immigrant families, lack of transportation can affect accessing services, engaging in services, and completing services (Yang et al., 2006).

Families with limited financial resources are also more likely to live in communities with higher crime rates, increased inter-personal violence, higher levels of toxins (e.g., noise and air pollution), and limited access to health care (Evans, 2004; Knitzer & Perry, 2009; Leventhal & Newman, 2010). These increased stressors also affect the parent/child relationship and may cause additional limitations on children's exploration and peer relationships due to unsafe outdoor environments (Knitzer & Perry, 2009). Moreover, substandard housing can contribute to increased health problems due to environmental hazards (e.g., exposure to lead, asbestos, rodents, lack of heat) and over-crowded living conditions are related to increased stress and learning problems (Curtis, Corman, Noonan, & Reichman, 2010; Leventhal & Newman, 2010).

Although many families and children live in substandard housing, some are also homeless or living in transitional housing. Transitional housing includes staying with relatives or friends, living in vehicles, or residing in faith-based shelters. Of the approximately 1, 600,000 people seeking transitional or shelter housing in 2009, approximately 34.1% were families with children, and more than half (52.6%) of those children were under the age of six years (U.S. Department of Housing and Urban Development [HUD], 2010). Children with families living in transitional housing often

experience multiple problems including difficult or broken relationships with peers, teachers, and supportive relatives (Obradoic, et al., 2009). Additionally, children that move often have more developmental problems associated with effects related to stress, disruptions in school attendance, and behavioral problems (Evans, 2004; Schmitz, Wagner, & Menke, 1995). Curtis and colleagues (2010) found that low-income families who experience the birth of a child with a severe disability or health problem often become homeless or move in with relatives due to the staggering health costs and other stressors indicating the need for coordination between public housing assistance and healthcare. Many public housing programs (e.g., public housing subsidies, rental assistance, or housing choice vouchers) have been found to improve health and other outcomes for children and families. The Moving to Opportunity program, a randomized experiment that provided rental subsidy vouchers to move low-income families to higher income neighborhoods, was found to show significant improvements in overall child health (Curtis et al., 2010). Quality of housing can have a significant impact on child and family outcomes; however, neighborhood violence also affects family functioning and child development.

Neighborhood violence. Children growing up in low-income, predominately minority, and urban cities often experience neighborhood violence, with estimates in some cities as high as 90% of children witnessing an act of community violence before 5th grade (Malik, 2008; Schechet & Willheim, 2009; Spano, Rivera, & Bolland, 2006; Vanfossen, Brown, Sokoloff, & Doering, 2010). Community violence ranges from aggression and verbal assaults to stabbings, shootings, robbery, and gang related violence (Malik, 2008; Spano et al.m 2006; Vanfossen et al.m 2010). Community violence has

been linked to children's lower cognitive performance, poorer school outcomes, negative social interactions, increased perceptions of peer aggression, and is a strong predictor of violent behavior in adolescence (Gyamfi, 2004; Leventhal & Brooks-Gunn, 2004; Malik, 2008; Schechet & Willheim, 2009; Spano et al, 2009.; Vanfossen et al., 2010). Infants as young as 8-10 months may experience hyper-arousal in response to caregiver's reactions to community violence in much the same way they experience domestic violence (Schechet & Willheim, 2009). Additionally, infants exposed to community violence and traumatic events may experience attachment problems, heightened stress response, and emotion regulation problems evident in attention, eating and sleeping patterns (Schechet & Willheim, 2009).

Unsafe and substandard housing, neighborhood violence, and families living in transitional housing are representative of the results of poverty, employment issues, and lower educational attainment. Childcare is another aspect of family functioning that is related to family stability, income, and employment.

Childcare. The availability and quality of childcare affects many families in the U.S. It is well documented that children's positive early experiences and high quality childcare can improve developmental outcomes for children (Shonkoff & Phillips, 2000). Yet, many families struggle to provide high-quality childcare for their children even with federal tax credits and subsidies. Many families who fall between poverty and middle class are not eligible for programs designed for poor families, such as Head Start, yet are unable to afford quality childcare for their children (Shonkoff & Phillips, 2000). With the average annual cost of full time childcare for infants ranging from approximately $5,000 to $18, 000 in center-based care and $4,000 to $12,000 in family-based childcare many

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families struggle to provide safe and quality care for their children (Child Care in America, 2011). Likewise, families also face staggering costs for preschool childcare, ranging from $4,000 to $14,000 for center-based care to $4,000 to $11,000 for family childcare (Child Care in America, 2011). Finding high quality and affordable childcare can be a source of stress and concern for many families resulting in less than optimal childcare solutions for many families (Child Care in America, 2011).

It is estimated that over 70% of low-income working parents have irregular work hours, work multiple shifts, or work evening and weekend hours during times that center-based childcare is closed (Campbell, Perry, & Milbourne, 2008; U.S. Department of Health and Human Services-Administration for Children and Families [USDHHS-ACF], 2007). Therefore, more than 50% of low-income families choose relatives or friends for their primary childcare resource (USDHHS-ACF, 2007). Family home childcare is often unregulated and associated with lower childcare quality evident in less years of caregiver experience, sensitivity, and education, poor safety and monitoring, and less stimulating environments and learning materials (Perez et al., 2011; Shriner, Schlee, Mullis, Cornille, & Mullis, 2008; Watamura, Phillips, Morrisey, McCartney, & Bub, 2011). Studies on children's development and childcare quality have shown that children from low-income multi-stressed families who attended poor quality childcare environments were more likely to have problem behavior and be less ready for school than children from similar families who attended higher quality childcare (Campbell, et al., 2008; Watamura et al, 2011). Yet there seems to be a disparity in the availability of quality childcare for low-income families. Campbell and colleagues (2008) found the overall quality of childcare was less for low-income families compared to families of higher socio-economic status,

regardless if they chose center-based care or family childcare with over half of center-based programs studied scored as inadequate using the Early Childhood Environment Rating Scale [ECRS] (Harms, Clifford, & Cryer, 1998) or the Infant Toddler Environment Rating Scale [ITERS] (Harms, Cryer, & Clifford, 2006). High quality early childcare and preschools for children are needed and well documented as benefitting children and families as well as society in general, as evidenced by numerous studies as described below.

High-quality early learning programs were developed in an effort to address disparities in early childhood beginning in 1962, with the Early Training Project, and later with the Chicago Child-Parent Center program, the Infant Health and Development Program, the High-Scope Perry Preschool Program, and the Abecedarian Project (Campbell, Wasik et al., 2008). Overall, these programs have shown participant gains in cognitive development, educational attainment, reduced incarceration, and improved employment outcomes (Campbell, Wasik et al., 2008), providing a total return to society of $10.83 for every dollar invested in specific programs (Reynolds, Temple, White, Ou, & Robertson, 2011).

The prominent early childhood national program, Head Start, began as a summer program for low-income children with President Johnson's "War on Poverty" initiatives in the 1960's. Surviving numerous administrations, Head Start has expanded to a budget of over $7.56 billion, serving approximately one million children in the US, but only 40% of eligible children. With the reauthorization of Head Start in 1994, Early Head Start was funded to provide services to low-income pregnant mothers, infants, and toddlers and serves only 5% of eligible infants and toddlers. Although evaluation projects of Head

Start and Early Head Start have mixed results, short-term impacts include increased school readiness and social competence and long-term impacts include reductions in criminal behavior and an increase in high school graduation rates (Mervis, 2011).

Poverty and its related effects on families are major risk factors impacting the well-being of children. Additional stressors that impact family functioning include coping with health, mental health, or behavior problems of a family member.

Child and Family Health and Behavior

Access to affordable and adequate health care can be a considerable stressor for many families, and especially for low-income families. Although our nation is attempting to address the disparities in access to health care for its citizens, we continue to struggle with solutions. Meanwhile, according to the 2005 US Census, 45.8 million (15.7%) of all Americans are uninsured. Of those who are uninsured, approximately half (53%) are at or below the poverty level, with the highest percentage age group without health insurance below 18 years of age (21%). Although the lifetime benefits of preventative care and optimal health in early childhood are well known, our nation's poorest children often go without health care (Russ, Garro, & Halfon, 2010; Stevens, 2006). Shockingly, the US continues to lag behind other developed countries in infant mortality rates, an indicator of a country's overall health, with a 6.06 rate per 1,000 live births as compared to Sweeden (2.74), Japan (2.78) and Germany (3.54) (The World Fact Book, 2009).

Families with children who do not have health insurance often have multiple risk factors including increased obesity, poor dental health, poor general health, and more social emotional or mental health problems (Russ et al., 2010). The risk factors associated with poor childhood health also relate to negative school outcomes with children in poor

health less ready to learn, poorer concentration, and lower participation and school attendance (Stevens, 2006). Public health programs, such as Medicaid, were designed to improve health related outcomes for vulnerable individuals including children.

While Medicaid improves access to healthcare, families and children often experience poorer health outcomes and discontinuity of service than families with private health insurance. Disparities in health care for families on Medicaid include more frequent use of emergency room services, less involvement with a primary care physician, less developmental screenings and immunizations, and late or no prenatal care for pregnant mothers (Yang et al., 2006). Health related risks increase when children and families do not have adequate health care. When a family member has a significant health issue, family stress often increases and family functioning may be impacted.

Families with a member who has significant health issues may have increased risk factors related to family functioning than families who do not experience major health concerns (Duffy, 2011; Evans, Shipton, and Keenan, 2005; Evans, Keenan, & Shipton, 2007; Hien, Cohen, Caldeira, Flom, & Wasserman, 2010; Pakenham & Bursnall, 2006; Williams, Tommy, Jack, Fallon, & MacMillan, 2011). When a member of the family has significant health problems the family may be more vulnerable to the stress of financial problems, including credit problems and bankruptcy related to the high cost of out-of-pocket health care expenses such as prescriptions, co-pays, and medical equipment (McCloud & Dwyer, 2011).

When a parent or caregiver has significant and chronic health problems the children may have to assume adult responsibilities such as household chores and assisting in the care of younger siblings which may have an impact on the children's social and

educational outcomes (Pakenham & Bursnall, 2006). Caregivers with significant health problems may have more difficulty with parenting effectively due to chronic pain (Evans et al., 2005) and mothers in chronic pain are more likely to have substantiated cases of abuse and neglect than mothers who do not have significant health issues (Williams et al., 2011). Moreover, children of mothers with health problems experience more internalizing and externalizing behaviors, insecure attachment, social, and health problems than children of mothers who do not have health problems (Evans et al., 2007).

Similarly, families with a child that has major health problems are under increased stress and risk of poor outcomes. With the advent of medical advances in society, many children who at one time in history may have died are now living with chronic health problems (Duffy, 2010). An estimated 14% of all children in the US have specialized healthcare needs and of those, 42% have behavioral or emotional problems (Duffy, 2010). Family difficulties related to having a child with significant health issues include adjusting to developmental delays, giving children medications, frequent hospitalizations, and learning how to use specialized equipment in daily routines (Duffy, 2010; Miles, Holditch-Davis, Burchinal, & Nelson, 1999). These added stressors on daily family life can lead to parental anxiety and depression, which also affects the psychological functioning of the medically fragile child (Duffy, 2010; Miles, et al, 1999.; Wade, et al., 2011). Children's health problems can affect family functioning, but caregiver substance abuse problems and addiction can also create a cascade of family stressors.

Substance abuse is another substantial health-related concern for families, with one in 13 people over the age of 12 having a drinking problem or dependence issues

(Harvard Medical School, 2011). In the US it is estimated that one in four children are affected by alcohol abuse or dependence in the family (Center on Addiction and the Family, 2011). There are many family stressors, problems, and maladaptive behaviors related to substance abuse in the family, including inconsistent and harsh parenting, legal problems, financial problems, isolation, and marital or other relationship problems (Bijttebier, Goethals, & Ansoms, 2006; Boris, 2000; Boris,Wheeler, Heller, & Zenah, 2000; Center on Addiction and the Family). In a study examining parenting behaviors of mothers who abuse substances, Hein and colleagues (2010) found mothers to be more punitive, authoritarian, and controlling than non-substance abusing mothers. Furthermore, mothers who had co-morbid psychiatric disorders such as depression and other mental illnesses had an increased risk of child abuse and neglect (Hein, et al., 2010; Williams, et al., 2011).

More than 25% of pregnant women in the US have substance abuse problems-a robust predictor of future child abuse and neglect and constitutes a major public health concern (Boris et al., 2000; Harrison & Sidebottom, 2009; Havens, et al., 2008). Prenatal substance exposure can affect the developing fetus and create numerous stressors within the family, both during pregnancy and after the child is born (Frosch, Cox, & Goldman, 2001; Havens, et al., 2008; McConnell, et al, 2002; Velderman, Bakermans-Kraneburg, & Juffer, 2006). Prenatal exposure to drugs or alcohol can involve degrees of severity due to type of substance the mother used, poly drug use, dosage, and pregnancy trimester (Boris et al, 2000; Havens, et al., 2008). Moreover, many pregnant mothers who abuse substances also have limited prenatal health care, poor maternal nutrition, and deliver prematurely, which can have an accumulative affect on child development (McConnell,

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et al., 2002). Substance exposed infants may have increased irritability and regulation problems, making attachment to the primary caregiver more difficult and may result in long term impacts on social emotional development (Frosch et al., 2001). Additionally, the affects of pre and post natal substance exposure can include attention deficit disorder and behavior problems; health issues such as, cleft palate and failure to thrive; motor delays; cognitive deficits that include, problem solving, decision making, and conflict resolution; and social emotional delays (Boris et al., 2000; Frosch et al, 2001; McConnell, et al, 2002; Sowell, et. al., 2010; Velderman et al, 2006).

Health and substance abuse problems are considerable stressors on the functioning of families; mental health issues are also a major risk factor. The National Institute of Mental Health [NIMH] (2011) reports that approximately 5% of Americans over the age of 18 have a serious mental illness (excluding substance abuse disorders) and approximately 9.5% of all American adults have some form of mood disorder that affects their ability to function fully in everyday activities (Cohen, Ferguson, Harms, Pooley, & Tomlinson, 2011; McLauglin, Campbell, Pungello, & Skinner, 2007; NIMH, 2011).

Parental and especially maternal depression is a well-documented risk factor affecting the overall development and mental health of children through numerous pathways (Augustine & Crosnoe, 2010; Bagner, Pettit, Lewinsohn, & Seely, 2010; Compas et al., 2011; Goodman & Brand, 2000; Malik et al, 2007; McLauglin et al., 2007; Rafferty et al., 2010). Children of parents who have a major depressive disorder are three to four times more likely to develop depression or other mental health disorders compared to children in the general population (Compas et al., 2011), and are more likely

to have problem behaviors such as aggression (Malik et al, 2007). Current estimates of mothers with depression who are parenting young children are upwards of 17%. Maternal depression has been related to attachment and emotional regulation in infants, and behavior problems and cognitive functioning in children brought on by harsh and inconsistent parenting and lack of a stimulating environment which can have long lasting effects into adolescence and adulthood (Augustine & Crosnoe, 2010; Bagner et al, 2010; Goodman & Brand, 2000; Rafferty et al., 2010). Families with inadequate social, financial, and healthcare resources have increased risk for mental health problems such as depression and anxiety and are also more likely to experience parenting stress and marital discord (Rafferty et al., 2010.).

Families who live with and support a person with mental illness often report numerous stressors that affect their well being (Cohen, et al., 2011). This manifests in daily living through dealing with the behavioral problems of the individual with mental illness, the social stigma related to mental illness leading to isolation, and increased responsibilities for the healthy family members (Cohen, et al., 2011). Moreover, families with a caregiver who has depression are more likely to have employment problems and loss of income adding to the accumulative effects on the family (Cohen, et al, 2011; McLauglin et al., 2007).

Mental illness of a caregiver, adolescent, or child increases the risk of poor outcomes for families. Likewise, families with children who have behavioral or emotional problems are also at increased risk. One of the most common non-medical complaints from parents to their pediatrician or family doctor is their child's behavior (Baillargeion, et al., 2007). Family environment, parental stress, and children's problem

behavior seem to be associated in a cyclical paradigm. When factors such as poverty, single parenting, low education, and exposure to violence are evident, families experience more stress. A stressful home environment increases the likelihood parents will respond to their children with harsh and inconsistent punishment and be less involved in their child's life which is linked to poor behavioral outcomes for children including regulatory problems, anxiety, maladaptive behaviors, and social competence in school (Briggs-Gowan, Carter, Bosson-Heenan, Guyer, & Horwitz, 2006; Crawford & Manassis, 2001; Ziv, & Sorongon, 2011). Additionally, children with problem behaviors often have difficulty with peer relationships, which can lead to stress within the home and school (Shonk & Cichetti, 2001).

Research has clearly shown that children who form positive peer relationships early in life have better school and mental health outcomes (Boivin, Hymel, & Bukowski, 1995; Buhs, Ladd, & Herald, 2006; Evans et al., 2007; Ladd & Ladd, 1998; Ramani, Brownell, & Campbell, 2010; Shonk & Cichetti, 2001). Beginning in toddlerhood, when children are first discovering how to play beside their peers, children are forming the skills that will enable them to establish future healthy relationships. A young child's ability to regulate emotions leads to social emotional competence that will later serve to form more complex and meaningful relationships, a skill that is related to health and well-being throughout the lifetime (National Institute of Child Health and Human Development [NICHD], 2008; Ramani et al., 2010). Conversely, social emotional and behavioral problems in childhood are associated with victimization by peers resulting in low self-esteem, depression, anxiety, loneliness, and school avoidance for the victimized child (Boivin et al., 1995; Buhs et al., 2007; Ladd & Ladd, 1998).

Families living with the health, mental health, or behavior problems of another family member often have more difficulties coping and increased levels of stress. Additionally, family functioning is related to family characteristics such as single parenting, couple relationships, and social supports.

Family and Community Relationships

Ecological factors such as the interrelated levels of family relationships, the larger supports of family and friends, and yet larger connections families have with their communities also play important roles in family functioning and child development. Risk factors that are known to affect the development of young children include (1) marital conflict and domestic violence, (2) family structure, and (3) supportive relationships and community supports.

Marital conflict and domestic violence. Marital conflict and strife have been shown to influence children's social emotional development and behavior. The more intense, frequent, and unresolved issues there are among couples, the more fear, anxiety, and self-blame children have (Godbout, Dutton, Lussier, & Sabourin, 2009; Lindahl & Malik, 2011). Marital conflict that is intense and unresolved can contribute to increased internalizing and externalizing behaviors in children and has been shown to be associated with child maladjustment as early as 9-18 months of age (Godbout et al, 2009; Rhoades et al., 2011).

Domestic violence and emotional abuse is defined as aggression against one person in a relationship against another and varies widely in severity and type (Margolin & Vickerman, 2011). A nationally representative sample of parents of young children revealed that approximately 30% of families had experienced some form of domestic

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violence (Margolin & Vickerman, 2011). Families that experience domestic violence may also have more problems with parenting than families who do not experience domestic violence. For example, Lvendosky, Bogat and Huth-Bocks (2011) found that pregnant mothers who experience domestic violence have less maternal representations and later bonding and attachment problems with their infant, a predictor of increased risk for child abuse and neglect. Moreover, the co-occurrence rate between domestic violence and child abuse is estimated at 40% (Margolin & Vickerman, 2011). Exposure to domestic violence is related to children's maladaptive social emotional functioning and poor school readiness, with children witnessing domestic violence exhibiting more externalizing and internalizing problem behaviors such as emotion regulation, attachment security, and aggression towards peers and adults (Bogat, DeJonge, Levendosky, Davidson, & von Eye, 2006; Levendosky et al, 2011; Martinez-Torteya, Bogat, von Eye, & Levendosky, 2009; McDonald, Jouriles, Briggs-Gowan, Rosenfield, & Carter, 2007; Thompson & Whimper, 2010).

Children who are exposed to marital conflict and domestic violence have numerous negative outcomes. Related to parental relationships is the family structure-the composition of the family such as couples, single parent, or blended families.

Single parenting. Growing up in a single-parent home is another risk factor for young children due to effects on income, stability, and absence of another adult nurturing relationship (Bradley et al., 2001). According to the 2007 U.S. Census (2011), over half (52.3%) of all live births in the US were to unmarried women, with 20-24 years the largest age group of unmarried women with children (80.6%). An additional stressor associated with single parenting is lower income levels, with single mother households

twice as likely to be below the poverty level (39.2%) than households with two parents (15.6%) (U.S. Census Bureau, 2011).

Single parents often have other stressors in addition to lower income or poverty. Single parents who form new relationships are at a higher risk of relationship problems and future separation due to the increased stress of blended families and may have more difficulty co-parenting with a former spouse or partner (Kamp-Dush, Kotila, & Schoppe-Sullivan, 2011). Children from single mother homes are at increased risk for behavior and social emotional problems; however, a positive co-parenting relationship with the non-residential parent and other extended family support has been shown to buffer the impact of single parenting for children (Sterrett, Jones, & Kincaid, 2009). Family structure has an impact on child development; however, social supports within the extended family, friends, or community can also have an effect on family functioning.

Community

Social supports may be an especially salient protective factor for at-risk families such as new parents, young mothers, and families with accumulative stressors (Green Furrer, & McAllister, 2011; Williams et al., 2011). Social support has been defined as assistance with concrete or tangible help, support through education, information or referrals; emotional support, comfort, or caring; and social integration through networks of friends or family (Manji, Maiter, & Palmer, 2005). Social support has been shown to positively affect parenting behaviors for parents experiencing high stress across income levels (Burchinal, Follmer, & Bryant, 1996) and can reduce stress related to financial strain for low-income families (Baxter & Kahn, 1996; McLoyd, 1990). With reductions in public assistance to low-income families, informal supports such as material goods,

practical help, information, and emotional support may help buffer the impact of financial stress for some families (Swanson et al., 2008). Moreover, many low-income families view the use of informal supports as both necessary and socially acceptable (Swanson et al., 2008). Urban families benefit from social support through community connections as well as with family and friends (Williams et al., 2011; Green et al., 2011). Similarly, rural families have benefited from social support by meeting unmet food needs through sharing meals with other family members, friends, or church related events (Swanson et al., 2008).

Social support is also related to relationships families have within their communities. A strong connection and investment in the community are recognized as protective factors for children and families (Lin, Thompson, & Kaslow, 2009; Shonkoff & Philips, 2000). Moreover, strong and cohesive communities help families establish social support among and between children and adults (Lin, et al., 2009). However, families from low-income households often have fewer social and community resources than families who are not poor (Coulton & Irwin, 2009).

Multiple factors contribute to the underlying issues of use and access to social and community resources for low-income families. Disadvantaged neighborhoods and high-poverty urban neighborhoods often have less social capacity and resources (Coulton & Irwin, 2009). Urban families may limit their children's access to after school programs and activities due to concerns regarding neighborhood safety (Coulton & Irwin, 2009). Families from rural communities may use more informal social and community supports such as church and friends while poor rural families may have reduced access to these supports due to transportation barriers (Swanson et al., 2008). For both rural and urban

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communities, and especially for single mothers, lack of childcare and time due to

irregular work schedules are barriers that prevent poor families from participating in

community activities such as afterschool programs, sporting events, political or social

action activities (Coulton & Irwin, 2009; McBride, Sherraden, & Pritzker, 2006).

Theoretical models guide our understanding of the complex connections between

biology and stress, working models of relationships from healthy to maladaptive, and

interrelated systems that provide a context for family functioning and child development.

These models are essential in comprehending the multiple stressors and strengths that

face families today. Promoting optimal child development and family functioning is a

primary goal of most early childhood programs in the US. To better understand family

risk and resiliency, we need effective measurement tools to guide our interventions, thus

improving child and family outcomes.

Risk and Resilience Measurements

The fields of child development, special education, child welfare, and mental

health have attempted to design assessment instruments that measure family risk and

protective factors to better serve the needs of high-risk parents and their children. Often,

these tools have been used as risk assessments to establish placement options for children

in child welfare, determine risk factors that affect parenting to define the need for

interventions, and for policy and research purposes to improve funding and services for

children and families. For example, family risk and resilience measures are used to

evaluate caregivers' involvement with available community resources and supports for

caregivers of children with special needs to assist in improving family outcomes related

to the stress of parenting a child with disabilities. Family risk and resilience measures are

also used to determine caregivers' ability to provide a safe and nurturing home for families involved in the child welfare system. In this section, four family assessment measures commonly used in the fields of research, child welfare, and intervention programs will be examined: (1) Family Resource Scale, (2) Strengths and Stressors Tracking Device, (3) Difficult Life Circumstances, and (4) the Home Observation for Measurement of the Environment (HOME) inventory (Table 2.1).

Table 2.1

Comparisons of Family Assessment Measures

Assessment and Purpose	Method	Items	Response Options	Limitations
Family Resource Scale (Dunst & Leet, 1987). Adequacy of resources for families that have a child with a disability.	Self Report	30	Likert-type 5 point scale.	1. Concepts related to families of children with disabilities. 2. Does not address some major risk factors.
Strengths and Stressors Tracking Device (Berry, Cash, Mathiesen, 2003). Caseworker permanency planning for parents involved with Child Welfare.	Observation	26	5 point numerical (-2 to +2)	1. Subjective questions 2. Used for assessing risk of future child abuse or neglect.
Difficult Life Circumstances (Barnard, Johnson, Booth, & Bee, 1989; Johnson, Booth & Barnard, 1989). Assesses level of family risk and stress.	Self report	28	Binary response option (yes/no)	1. Does not assess resilience factors.

Table 2.1 (continued)

Assessment and Purpose	Method	Items	Response Options	Limitations
HOME (Bradley & Caldwell, 1985). Measures quantity and quality of parent/child interactions and stimulation.	Observation/ interview	45	Binary response option (yes/no)	1. Requires special training by practitioner. 2. No standardized procedures for administration 3. Correlates with SES.

Family Resource Scale

The Family Resource Scale (FRS) is a tool commonly used in the fields of mental health, child welfare, and education. The FRS measures the adequacy of resources in households with young children and is used frequently to assess the resources available to families that have a child with a disability (Dunst & Leet, 1987). The theoretical framework of the FRS is oriented in ecological and family systems models that suggest inadequate resources are related to poor outcomes for families in the areas of mental health and parenting (Brannan, et al., 2006; Van Horn, Bellis, & Snyder, 2001).

The FRS is a parent-completed report that assesses perceptions of adequacy of resources to identify needs across a range of areas (Dunst & Leet, 1987). It is important to note that perception of need can be very different than actual need. Van Horn and colleagues (2001), suggest parents' perception of need is a better measure than objective approaches and may be more appropriate for high-risk families. Tools such as the FRS may be more useful in identifying family needs than direct measures such as education,

socio-economic status, household income, employment, and occupation (Brannan et al., 2006).

The FRS includes 30 items rated on a 5-point Likert-type response scale, ranging from (1) *not at all adequate*, to (5) *almost always adequate*. The items are loosely arranged in approximate hierarchical order based on a study using professional opinion, from most significant needs (i.e. food, money, housing) to less significant needs (i.e. money for entertainment, saving, and travel). A factor analysis completed by Dunst and Leet, (1987) resulted in an eight factor solution ranging from personal growth and financial support to health and necessities. The FRS has been tested for reliability and validity and found to be an adequate tool for use with diverse families of children with disabilities (Brannan et al., 2006; Dunst & Leet, 1987; Van Horn et al., 2001).

Limitations of the tool include concepts related specifically to the target population of families of children with disabilities, reducing the use with broader populations, and lack of clarification with terms such as *Public assistance* (Brannan et al., 2006). Moreover, the FRS does not address some risk factors associated with poorer outcomes for families and children (e.g., parental level of education, parental health and mental health, child problem behavior, and domestic and community violence), thus reducing its usefulness in identifying high-risk caregivers and potentially missing the opportunity to provide supports.

Strengths and Stressors Tracking Device

Another tool used to assess family functioning is the Strengths and Stressors Tracking Device (SSTD) (Berry, Cash, Mathiesen, 2003). The 26-item SSTD is a modified and condensed version of the North Carolina Family Assessment Form (FAF), a

lengthy assessment developed in the mid 1990's to assist child welfare caseworkers in case planning by assessing the home environment, treatment needs, and family functioning to quantify treatment progress and assist in making permanency decisions (Berry, et al., 2003; Kirk, et al., 2005). By comparison, the SSTD allows caseworkers to quickly assess families' strengths and stressors in an ecological approach, at multiple points in time, to address planning and permanency in child welfare decisions (Berry et al., 2003). The SSTD assesses four areas of family risk at two time periods (intake and closure). The four areas assessed include (1) the environment, (2) social support, (3) family/caregivers, and (4) child well-being. There are five response options that allow the rater to indicate the item as a strength or stressor. The SSTD was validated on a sample of 53 parents with open cases of child maltreatment and found to be accurate in assessing risk of physical abuse and neglect (Berry et al., 2003).

Although the SSTD was accurate in assessing risk of maltreatment, it is a subjective measure of the caseworker's perception of the parents' attitudes, strengths, and environmental situation rather than the parents' own perceptions of their situation. This difference could have implications for use as a measurement tool beyond child welfare case planning. For example, measurement tools that assess parental perceptions of risks, strengths, and need may be more appropriate in the education setting to establish cohesive working relationships with parents while attending to resource needs that may affect child development.

Difficult Life Circumstances

The Difficult Life Circumstances (DLC) was developed for use with a high-risk population of impoverished young mothers in a large urban city (Barnard, Johnson,

Booth, & Bee, 1989; Johnson, et al., 1989). The DLC was developed and based on the author's past research and clinical work with high-risk families and other models of stress and parenting risk factors (Barnard et al, 1989).

Parents are asked to respond to questions in a yes or no format, indicating if an item is a problem. The 28-item scale measures stressors or problems such as domestic violence, victimization of self or child, unemployment and credit problems, basic needs and housing problems, and a child with behavioral or learning problems. The DLC scale has good test-retest reliability (0.70) measured at two points in time over a year period and adequately correlates with maternal depression scales (0.59), with high DLC scores correlated with increased depression. Numerous studies have used the DLC to indicate problems with family functioning such as poor parent/infant interactions (Drummond, Letourneau, Neufeld, Stewart, & Weir, 2008) parental stress related to behavior problems in pre-school age children (Wakschlag et al., 2008), and has also been used to make an association between maternal stress and neonatal physiological responses (Jacob, Byrne, & Keenan, 2009) and the association of prenatal smoking and multiple life stressors (Weaver, Campbell, Mermelstein, & Wakschlag, 2008).

Although the DLC has been used in numerous studies to indicate levels of stress and risk for parents, the scale does not include resilience factors that may lessen the effects of stress for families. This important missing piece is vital in understanding what is working for families and what services families may still need.

Home Observation for Measurement of the Environment (H.O.M.E.)

The HOME inventory was developed during the 1960's to establish criteria for family risk factors that could impact child development beyond the standard demographic

characteristics commonly used (i.e. income and education). The HOME inventory is an observational and interview assessment given in the family's home when the child is present by a trained professional (Bradley & Caldwell, 1984). The purpose of the HOME inventory is to assess the quantity and quality of the support and stimulation in the home setting of young children.

The HOME inventory consists of 45 items with two response options (yes or no) with higher scores indicating more support and stimulation in the child's environment. The inventory is divided into six subscales: (1) Emotion and Verbal Responsivity of Mother; (2) Avoidance of Restriction and Punishment; (3) Organization of the Physical and Temporal Environment; (4) Provision of Appropriate Play Materials; (5) Maternal Involvement with Child; and (6) Opportunities for Variety and Daily Stimulation. The HOME assessment takes approximately one hour to complete and has robust psychometric properties with 90% inter-rater reliability, moderate test-retest reliability at 18 months, and internal consistency that ranges from .44 to .89 (Totsika & Sylva, 2004).

Although the HOME inventory is still being used today, there are several noteworthy limitations. The HOME inventory has been criticized for its lack of standardized administration procedures and need for special training by practitioners (Totsika & Sylva, 2004). Due to moderate correlations with socio-economic status (.3 to .5), the HOME may be penalizing families with reduced income (Totsika & Sylva, 2004). The HOME has also been found to have ethnic group biases, with European and Asian Americans receiving higher scores than African American or Latino American families (Bradley, et al., 2001).

Professionals working with children and families are using family risk and resilience measurement tools for multiple purposes. These tools can inform professionals of family resource needs, indicate risk factors that can impair the parent/child relationship, and alert professionals to the stressors of high-risk parents thus enabling professionals to monitor families over time. However, no single tool currently assesses all these areas. Moreover, gaining the caregivers' perspective of their situation can be more helpful in determining resource needs and defining strengths than subjective or observational tools. Additionally, observational tools can be quite lengthy and difficult to use for professionals with varying degrees of education and experience. Therefore, a tool is needed that addresses caregivers' perceptions of family risk and resilience factors and is also effective in quickly identifying resource needs as indicated by the family. With the ability to quickly assess family strengths, risks, and resource needs professionals can target areas of family functioning that may need added support. With additional support and professional monitoring family outcomes may improve leading to improved developmental outcomes for children as well.

Need for Environmental Screening Tool

The Family Resource Scale, the Strengths and Stressors Tracking Device, the Difficult Life Circumstances, and the HOME have varying degrees of use, validity and reliability in providing an accurate picture of families' environmental risk and resilience factors. However, no one tool accomplishes the task of quickly assessing parents' perceptions of their family ecological stressors and strengths while also opening the discussion of further referrals for needed services. Thus, there is a need for a brief assessment that measures parents' perceptions of family risk and resilience factors that

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can be used in multiple helping professions such as educational settings, social work case management, and working with families in the mental health field. The Environmental Screening Questionnaire (ESQ) is one such tool that can be used to assist professionals in gaining an understanding of a caregiver's environmental strengths, risks, and needs (Squires & Bricker, 2007).

The ESQ was developed as a tool to quickly identify environmental risk and protective factors that could affect parents' ability to support their child's development, especially in the area of social emotional development (Squires & Bricker, 2007). The intended users of the ESQ are providers in programs that serve young children and their families, which could include early childhood development programs, special education programs, federally funded early childhood programs (i.e. Early Head Start, Head Start), infant mental health programs, and others. Professionals may choose to complete the ESQ by interviewing caregivers, or alternatively, caregivers may complete the form individually with professional follow-up. The ESQ uses parent-friendly language, free of acronyms and technical jargon, to address multiple levels of literacy and cognitive functioning.

The ESQ assesses six major areas of environmental risk and resiliency commonly referred to in the literature: (1) education and employment, (2) housing, (3) child and family health, (4) economic and financial, (5) home and family, and (6) community. Parents' perceptions of their strengths and stressors are important in gaining a comprehensive picture of family functioning, additionally it is important to gain their perspectives on community services they feel are adequate or lacking for their particular situation. An additional component of the ESQ is a section with open-ended questions

used to make referral decisions. Although it is usually beyond the scope of programs serving young children to provide the services multi-stressed families may need, professionals can support families in accessing these services through collaboration with community resources.

Need for Testing

The ESQ holds promise as a useful assessment of family environmental risk, resilience, and resource need; however, the validity and utility of the tool have not been measured. Validity is one of the most fundamental considerations in constructing and evaluating assessment instruments (Salvia, Ysseldyke, & Bolt, 2010). Convergent validity is evaluated through establishing a relationship between the constructs of an experimental assessment and other validated measures of similar constructs (Salvia et al., 2010). For the purposes of this study, the ESQ and the Parenting Stress Index-Short Form (PSI-SF) (Abidin, 1995) a measure of caregivers' stressors regarding parenting a young child, will be given concurrently to examine the correlation between the two measures. Parents experiencing high levels of stressors would also be expected to have increased environmental risks and needs. Additionally, higher levels of family environmental risk and need are associated with increased social emotional problems for young children. Therefore, higher scores on the ESQ would be expected to predict higher scores on the Ages and Stages-Social Emotional (ASQ:SE) (Squires, Bricker, & Twombly, 2002) screening measure, indicative of increased social emotional problems for young children.

An additional consideration of assessments is usefulness of the tool within the limitations of time, cost, and appropriateness. Limitations for using the ESQ could

include the amount of professional time to complete the assessment, the sensitivity of the questions for parents, and the usefulness of the results in facilitating referrals to community resources. Therefore to justify the utility of the ESQ, parents and professionals will be surveyed to obtain evidence of the ESQ's usefulness.

Purpose of Study

The evidence is clear that family risk factors are related to overall family functioning, which in turn affects children's development. There is a need for a low-cost screening tool that measures environmental risk and resilience factors useful for professionals working with children and families with the aim of supporting social emotional development in young children. In establishing the validity and utility of such a tool, professionals will be better able to assist caregivers in identifying needed resources, thus potentially improving outcomes for multi-stressed families. The intent of this study is to examine the validity and utility of the ESQ. Therefore, two research questions were asked: (1) What is the convergent validity of the ESQ? (1a. What is the agreement between the ESQ and the Parenting Stress Index-Short Form [PSI-SF] and 1b. What is the relation between child problem score as measured by the Ages and Stages Questionnaire-Social Emotional [ASQ:SE]and parent ESQ score), and (2) What is the utility of the ESQ for professionals and caregivers?

CHAPTER III

METHOD OF STUDY

The psychometric properties of the Environmental Screening Questionnaire (ESQ), specifically the validity and utility, were investigated. Participants, settings, measures, recruitment procedures, experimental procedures, and data analysis are described.

Sampling Method, Participants, and Setting

Participants were selected by convenience sampling. G-power was used to calculate the sample size needed for the following parameters: alpha, power, and effect size (Faul, Erdfelder, Buchner, & Lang, 2009). With an alpha at .05, power at .95, and effect size at 0.2, the sample size was calculated at 314 participants. Three hundred twenty-four participants were included in the sample after removal of cases that did not have complete protocols. Three categories of participants were included: (1) parents/caregivers, (2) their children age three months to five ½ years, and (3) teachers and program staff who work with participant families.

Parent/Caregivers

The study sample consisted of 324 parent/ caregiver and child dyads. A parent/caregiver is defined as a mother, father, grandparent, or legal guardian, and referred to as *caregiver* from here on. Two methods of caregiver recruitment took place for this study. First, caregivers were recruited from agencies that serve at-risk families in a mid-sized suburban Northwest city ($n = 72$). Second, caregivers were recruited

nationally through social media and the Ages and Stages Questionnaire-Social Emotional

study site (http://asqoregon.com/) (*n*=252) and resulted in a diverse sample from 24

states, with the majority of participants from Oregon (63.5%), followed by Washington

(6.3%) and California (4.8%). Of the 324 participants, 85% completed all protocols (*n* =

277). Caregivers ranged in age, ethnicity, education level, and socio-economic status

(Table 3.1).

Table 3.1

Caregiver Demographics for Agency and Online Sample

Characteristic		Agency (*n*=72)	Online (*n*= 252)
Person completing forms			
	Mother	94.4%	94.0%
	Father	2.8%	2.8%
	Both parents	0%	.8%
	Grandparent(s)	2.8%	0%
	Other	0%	2.4%
Age			
	Mean	30.51	31.95
	SD	6.96	5.54
Gender			
	Female	97.2%	96.7%
	Male	2.8%	3.3%
Ethnicity			
	Caucasian	84.5%	84.8%
	Black/African American	1.4%	1.6%
	Asian	1.4%	2.9%
	Native American	1.4%	3.7%
	Hispanic/Latino	7.0%	1.6%
	Multiracial	4.2%	4.9%
Marital Status			
	Married	27.7%	86.4%
	Divorced/separated	34%	3.7%
	Single never married	6.4%	8.6%
	Widowed	29.8%	0%
	Other	2.1%	1.2%

Table 3.1 (Continued)

Characteristic		Agency (*n* = 72)	Online (*n*= 252)
Income level			
	$0-12,000	59.7%	9.5%
	$12,001-24,000	20.8%	12.3%
	$24,001-40,000	1.4%	16.7%
	Over $40,000	16.7%	59.9%
Mother's level of education			
	Elementary	1.4%	.8%
	Some high school	12.7%	2.4%
	High school/GED	29.6%	4.8%
	Some college	47.2%	23.0%
	Four year degree	1.4%	30.2%
	Graduate degree	7.0%	32.1%
Mother's age at birth of first child			
	Mean	22.10	27.36
	Minimum age	13	16
	Maximum age	39	41
Adults in household			
	One adult	47.9%	8.6%
	Two adults	49.3%	87.2%
	Three or more	2.8%	4.1%
Children in household			
	One child	40.8%	49.4%
	2 children	38%	35%
	3 children	11.3%	9.5%
	4 or more children	7%	5.7%

Children

Caregivers provided limited demographic information regarding their child, including date of birth, gender, and disability status. Gender was evenly dispersed between males (52%) and females (48%) for the combined sample. Children ranged between the ages of 2 to 60 months with the highest percent ASQ:SE age intervals at 6 (16.3 %) and 60 months (16.7%). One-third of caregivers choose not to answer the

question: *"Does your child have a disability or delay in development?" (*with response options of *"yes, no, not sure")*. Of the 100 caregivers who answered the question, 47% said no, their child did not have a disability or delay in development; 50% said yes; and 3% were not sure.

Teachers and Program Staff

Teachers and program staff are defined as professionals working in programs or agencies that serve young children and families and have established rapport with caregivers. Seventeen teachers or program staff were recruited from participating sites and ranged in years of experience working with children and families ($M = 8.38$, $SD = 7.01$). Teachers and staff used methods that best fit their role within the agency to recruit and collect information from caregivers with the most frequent methods of data collection home visits (41.2%) and via consultations (29.4%), followed by sending packets home with the family after explaining the purpose and scoring procedures (11.8%) and completing the packets at a center or clinic (11.8%).

Setting

Early childhood settings and agencies that serve families with young children in Lane County, Oregon were recruited for the study. Inclusion criteria for agencies included sites that serve families who have contact with at least one adult family caregiver who has a child between the ages of three months to five ½ years old. Agencies that agreed to participate served families at risk for environmental stressors, including mental health problems, families involved in child welfare, parents with disabilities, caregivers with drug and alcohol problems, and survivors of domestic violence (Table 3.2).

Table 3.2

Agencies Participating in the ESQ Study

Agency name	Type of agency	Families (*n*=72)
Willamette Family Treatment Services	Drug and alcohol treatment	27.8%
Womenspace	Domestic violence support services	23.6%
Education Options	Teen parent program in alternative high school	15.3%
Early Childhood CARES	Parents with children enrolled in special education and support services.	12.5%
Options Counseling	Parents involved in child welfare home visiting program	11.1%
Pearl Buck Center	Parents with developmental disabilities support and services	9.7%

Protection of Human Subjects

A protocol explaining all research procedures was submitted to the University of Oregon Institutional Review Board prior to recruitment of participants. Efforts were taken to insure the participant's privacy and confidentiality and to minimize any discomfort related to discussion of risk and protective factors. All data were coded to maintain confidentiality, stored in locked file cabinets, and will be destroyed after five years. The consent form described the purpose, activities, risks, and benefits of the study and allowed participants to decline involvement at any time without negative consequences to their services. Caregivers received a $20 gift certificate as an incentive for participation after completion of all assessment measures. Teachers or program staff

received a one-time $25 gift certificate (independent of parental cases) for classroom educational materials as an incentive for participation.

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Measures

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Six measures were used: (1) caregiver demographic form, (2) Environmental Screening Questionnaire (ESQ) (3) Parenting Stress Index-Short Form (PSI-SF), (4), Ages and Stages Questionnaire-Social Emotional (ASQ:SE), (5) ESQ Caregiver Utility Survey, and (6) ESQ Teacher/Staff Utility Survey. Each measure is described below.

Demographic Form

Participating caregivers were asked to complete a demographic form that included questions regarding caregiver age, gender, marital status, ethnicity, number of children residing in the home, age at birth of first child, education level, and family income level. Caregivers were also asked to complete information regarding their child, including date of birth and disability status. The demographic form can be found in Appendix C.

Environmental Screening Questionnaire

The Environmental Screening Questionnaire (ESQ) was designed to assist professionals in identifying family risk and protective factors and areas of family resource need, with the aim of assisting families in supporting their children's social emotional development (Squires & Bricker, 2007). Once family resource needs are identified, professionals may use the ESQ to organize referral information, link families with appropriate community services, and monitor family outcomes over time.

Professionals have multiple options for completion of the ESQ, although the suggested format is caregiver interview. The ESQ asks caregivers to respond in six areas of family risk or resilience: (1) education and employment, (2) housing, (3) child and

family health, (4) economic and financial, (5) home and family, and (6) community. Answers receive 10 or 0 points, depending upon if they reflect areas of need or competence. Additionally caregivers may check questions as areas of concern; a *v* indicates a caregiver concern and receives 5 additional points. The ESQ also has a comment box in each of the six areas, where caregivers can give more detailed information to open-ended questions. Scores are quantified by area and again on a summary sheet with higher scores indicating more risk factors that may affect caregivers' ability to meet their children's needs (i.e., need = 10 points; competence = 0 points). The summary sheet may also serve as a checklist for referral to community resources the family has indicated as a need. The ESQ can be found in Appendix C.

Parenting Stress Index-Short Form

The Parenting Stress Index-Short Form (PSI-SF) was created from the longer 120-item version (Parenting Stress Index) to satisfy the need for a brief screening measure of parenting stress (Abdin, 1995). The PSI-SF consists of 36 items divided equally into three subscales: Parental Distress, Parent-Child Dysfunctional Interaction, and Difficult Child. The items are rated from 1 (*strongly disagree*) to 5 (*strongly agree*). The subscale scores range from 12 to 60 and the total score ranges from 36-180, with higher scores indicating greater levels of parenting stress. Parents who score at or above the 90th percentile are considered to be experiencing clinically significant levels of stress and should be referred for further evaluation (Abidin, 1995).

Although the PSI-SF normative sample consisted of primarily Caucasian, married, and higher income parents, the measure has been used for alternate populations, including families in Head Start, African-American families, low-income caregivers,

adolescent parents, and parents of children with disabilities (Button, Pianta, & Marvin, 2001; Larson, 2004; Reitman, Currier, & Stickle, 2002; Smith, Oliver, & Innocenti, 2001; Spencer, Kalill, Larson, Spieker, & Gilchrist, 2002). The PSI-SF was positively correlated with number of family risk factors (Raikes & Thompson, 2005), scores were associated with economic stress and partner violence in a sample of teen parents (Larson), and showed evidence of relationships between, (1) parenting stress and social support, (2) parenting stress and caregiver income, an (3) children's health care needs and impairment for parents of children with disabilities (Button et al., 2001; Smith et al., 2001; and Waisbren, Rones, Read, Marsden, & Levy, 2004). The PSI test-retest reliability is reported at .84 with internal consistency at .91 for total stress in a sample of 800 caregivers (Ippen, Kuendig, & Mayorga, 2005). The PSI-SF can be found in Appendix C.

Ages and Stages Questionnaire: Social Emotional

The Ages and Stages Questionnaire: Social Emotional (ASQ:SE) is a screening tool used to quickly assess social emotional problems in young children. It consists of eight parent-completed intervals (i.e. 6, 12, 18, 24, 30, 36, 48, and 60 months) and ranges from 19 questions (6 month interval) to 33 questions (48-60 month intervals). Responses include *most of the time, sometimes*, or *never or rarely,* followed by an area to mark as a concern. Responses are scored 0, 5, or 10 with an additional 5 points for items marked as a concern. Problem behaviors receive 5 or 10 points. Scores are totaled for each area with scores above the cutoff indicating a need for further evaluation. The ASQ:SE is reported to have high validity for agreement of diagnostic classifications (93% overall), high sensitivity, (78%), specificity (95%), inter-rater reliability .92, and test-retest reliability

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.91 (Squires, Bricker, & Twombly, 2002). The ASQ:SE, 36-month interval can be found in Appendix C.

Utility Surveys

After completing the ESQ, professionals and caregivers were asked to complete a utility survey. Professionals responded to Likert-scale type prompts such as, *I plan to use the ESQ again,* with response options of: strongly agree, agree, disagree, and strongly disagree. The utility survey also asks open-ended questions such as, *What would you change on the ESQ to improve its usefulness?* The teacher/program staff utility survey can be found in Appendix C.

Caregivers were also asked to complete a similar survey that asked how they filled out the questionnaire, how long it took, and if the questions were easy to understand and useful. Open-ended questions were also asked to gain knowledge regarding any problem questions and suggestions for improvement. The caregiver utility survey can be found in Appendix C.

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Procedures

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This section describes the participant recruitment process, experimental procedures, and data collection methods. The recruitment processes were unique to the agency and online samples.

Recruitment of Subjects

Two methods of recruitment were used for this study. First, the researcher contacted agencies within Lane County Oregon that serve families and children, by phone or email. Gaining utility data from these sites was crucial in understanding the effectiveness of the ESQ. Therefore, the researcher sought to recruit both families and

program staff at these agencies. An effort was made to include agencies that serve diverse children and families, including families from low to high socioeconomic status and ethnically diverse families. However, most early childhood programs that served higher socio-economic status and families with fewer risk factors declined to participate ($N = 6$). Many of these agencies stated the study was not appropriate for the families they served. Fifty percent of the agencies contacted agreed to participate ($N = 6$). Recruitment of agencies spanned a total of three months. Depending on the type of agency (i.e. educational or social service), teachers or program staff recruited caregivers for the study using these procedures: (1) verbally informing caregivers, (2) giving caregivers the recruitment flyer, (3) explaining incentives, and (4) providing the consent form explaining the study, risks, benefits, confidentiality, and the participant's ability to decline participation at any time with no negative consequences.

Second, recruitment procedures for the online study included posting the study flyer in buildings on the University of Oregon campus, distributing by email, posting on social media sites (e.g., Facebook & Twitter), and parenting websites. Some of the agencies that declined to participate in the full study were willing to post the study flyer on parent bulletin boards in their centers for recruitment of on-line participants. Recruitment of online participants spanned a total of four months, with intense recruiting for the first two months.

Data Collection

Agency. The researcher delivered study packets and gift cards after initial contact with participating agencies. Agencies contacted the researcher when all packets were complete. Packets were given a code number to protect the confidentiality of participants.

Online. The study protocols and consent form were made available online through the ASQ Oregon website which went live on March 1, 2012 and went off-line on July 11, 2012. Of the 252 participants who started the study, 223 completed all research forms.

Experimental Procedures

Agency. Caregiver participant study packets included: (1) consent form, (2) caregiver information form, (3) ESQ, (4) PSI-SF, (5) ASQ:SE, (6) caregiver satisfaction form. A local resource guide was also included. Caregivers received a $20 gift card upon completion of all protocols. Teachers and program staff also received folders with a consent form, teacher satisfaction survey, and study procedures. Teachers or agency staff received a $25 gift card after facilitating the caregiver data collection process.

The researcher provided all agencies ASQ:SE or ESQ trainings at their request. Half of all agencies were already using the ASQ:SE to assess children's social emotional development and only needed ESQ trainings. The three agencies that were not using the ASQ:SE were given ASQ:SE trainings and technical support by the researcher as well as ESQ trainings.

Each agency decided the method of implementation of the study procedures that best fit their families. For example, the residential drug and alcohol treatment center and the domestic violence support agency used group time for parents to complete the forms. Other agencies used home or office visits to facilitate individual meetings with parents who agreed to participate. Length of time for each caregiver to complete the packets was dependent on the method the staff used to implement the study and averaged about 60

minutes. Agency staff also decided the most appropriate method of tracking and giving gift cards for the participating families and staff.

Online. Caregivers who agreed to participate in the study followed computer prompts to complete the same five protocols as the agency participants. The protocols included (1) consent form, (2) caregiver information form, (3) ESQ, (4) PSI-SF, (5) ASQ:SE, and (6) caregiver satisfaction form. Caregivers had the option to receive a $20 gift card if they emailed their child's date of birth, initials, and mailing address to the researcher. The child's date of birth and initials allowed the researcher to verify completion of the study. Participants were also given the option to contact the researcher by email if they had concerns about their child's ASQ:SE score or information regarding family risk, resilience, or resource needs. ASQ:SE scores that fell above the cutoff were electronically flagged, which enabled the researcher to respond to those cases. Information on child ASQ:SE scores and resources were sent by email to those families. The researcher responded to approximately 38 online participants regarding their child's ASQ:SE scores and concerns. No participants asked for information regarding risk, resilience or resource needs.

Data Analysis

The following section describes measures used to answer the research questions, the identification of the independent and dependent variables, and data analysis methods used to interpret the findings of the study. Data analysis methods were dependent on the research questions. Research questions, outcome measures, and data analysis procedures can be found in Table 3.3.

Table 3.3

Research Questions, Measures, and Data Analysis

Research Question	Outcome Measure	Data Analysis
1. What is the convergent validity of the ESQ?		
1.a What is the agreement between the ESQ and the PSI-SF?	ESQ and PSI-SF	Spearman's rho
1.b What is the relation between child problem score on ASQ:SE and parent ESQ score?	ESQ and ASQ:SE (6-60 months)	Spearman's rho and unstandardized coefficients
2. What is the utility of the ESQ?	Caregiver satisfaction survey and teacher/program staff survey	Frequencies (reported in percentages) and qualitative data analyzed using constant comparative method

According to Miller, McIntire and Lovler (2011), convergent validity is the degree to which a test correlates with a well-validated test of similar construct. Convergent validity for this study was examined by testing the correlation between the ESQ and the criterion measure, the Parenting Stress Index-Short Form (PSI-SF) for the agency and online samples.

Correlations were used to examine the relation between children's ASQ:SE scores and caregivers' level of risk as determined by the ESQ. Linear regression was used to examine the predictive ability of the ESQ to determine children's scores on the ASQ:SE.

The dependent variable was children's ASQ:SE scores and the independent variable was the caregiver's ESQ total scores.

According to Fitzpatrick, Sanders, and Worthen (2011) utility refers to "the extent to which the results serve the practical information needs of intended users" (p. 11). A further purpose of gathering utility data for this study was to assist in making needed revisions to the ESQ. Caregivers and program staff were asked to complete a brief survey on the utility of the ESQ. Utility survey data was analyzed using descriptive statistics and frequencies. Qualitative information was analyzed using Grounded Theory (Strauss & Corbin, 1998); the constant comparison method was used to code material and examine emerging themes.

CHAPTER IV

RESULTS

The Environmental Screening Questionnaire (ESQ) was developed to measure family risk, resilience, and resource needs with the aim of supporting parents and thereby improving the social emotional development of young children. The purpose of this study was to test the ESQ to determine if the tool is measuring the constructs it is designed to assess. This chapter reports the results from the analysis of the ESQ study in three sections: (1) demographic information, (2) validity analysis, and (3) utility results. The chapter begins with exclusion criteria for data analysis.

Exclusion Criteria

The Parenting Stress Index-Short Form categorizes scores in three subscales: (1) Parental Distress, (2) Parent-Child Dysfunctional Interaction, and (3) Difficult Child. A Defensive Responding (DR) score can also be obtained from the Parental Distress subscale. An extremely low DR subscale score indicates the parent is trying to present the "most favorable impression of himself or herself and to minimize indications of problems or stress…" (Abidin, 1995, p. 55). Investigation of independent sample t-tests for the sample revealed participants who scored 10 or below on the DR subscale were significantly different for total PSI-SF scores from those who scored 10 or higher on the DR subscale, as shown in Table 4.1. Effect size was calculated using *Cohen's d* and found to have a large effect size. Participants who scored 10 or below on the DR subscale score of the PSI-SF were sorted out of any analysis that included the PSI-SF. Of the total

sample (n = 324) 79 % of participants did not have low defensive responding scores and were kept for further analysis for research question 1. a (n =200 online, n = 57 agency).

Table 4.1

Comparison of DR Subscale and PSI-SF Scores for Total Sample

Condition	N	M	SD	t	df	d
				12.26**	93	1.66
DR = ≤ 10	48	48.79	11.69			
DR = ≥ 10	252	73.52	17.52			

Note. DR = defensive responding; *p* < .001

Participants who scored at or below 10 on the DR subscale of the PSI-SF (*M* = 42.56) did not have significantly different scores than those who scored above 10 (*M* = 49.61) for the ESQ total score. Likewise, participants who scored at or below 10 on the DR subscale (*M* = 34.54) did not have significantly different scores compared to those who scored above 10 on the DR subscale (*M* = 39.96) for the ASQ:SE total score. Therefore the total sample was included in analyses to answer research question 1.b (*n* = 324).

Demographic Information

Caregivers

Demographic information was collected on both agency and online caregiver participants. Investigation of independent sample *t*-tests for the agency and online samples revealed the agency and online samples were not significantly different for the ASQ:SE by interval and PSI total score. However the two samples were significantly different for four demographic characteristics and ESQ total score.

Table 4.2 shows the online sample was significantly different from the agency sample for mother's education level ($p < .001$). Investigation of the two group means indicated the average level of education for the agency sample was a high school degree as compared to the online sample of a two-year college degree. The average age of birth of first child for caregivers in the online sample was significantly older than the age of caregivers for the agency sample ($p < .001$). The agency sample was also significantly different from the online sample in marital status ($p < .001$), with the online sample more frequently married and the agency sample more frequently single or widowed. Moreover, the online sample had significantly higher income than the agency sample ($p < .001$). Further examination of group differences indicated the two groups were significantly different for ESQ total scores, with the agency sample having significantly higher scores than the online sample ($p < .001$) (Table 4.2). Effect size was calculated using *Cohen's d*; all had large effect sizes ranging from 0.9 (age at birth of first child) to 1.5 (income level). Data were analyzed separately for agency and online samples due to large effect sizes for differences between group means.

Table 4.2

Comparison of Online Participants and Agency Participants for Mother's Education Level, Age at Birth of First Child, Marital Status, Income, and ESQ Total Score.

Variable	*n*	Sample	*M*	*SD*	*t*	*df*	*d*
Mother's education level					9.92***	130	1.39
	71	Agency	3.65	1.23			
	252	Online	5.52	1.45			
Mother's age at birth of first child					6.99***	102	0.92
	70	Agency	22.10	6.09			
	242	Online	27.36	5.37			
Marital status					9.03***	52	1.17
	47	Agency	2.45	1.25			
	243	Online	1.26	.72			
Income					11.10***	106	1.46
	71	Agency	1.75	1.12			
	252	Online	3.33	1.03			
ESQ total score					11.62***	89	1.38
	72	Agency	89.31	46.84			
	223	Online	35.74	28.70			

*** $p < .001$, two-tailed.

High-risk group. Data were analyzed for a *high-risk* group of participants for purposes of gaining understanding of common demographic components (Table 4.3). Approximately 5% of caregivers (*n* =15) scored at or above 60 on the ESQ, above 85 on

the PSI-SF, and their child scored above the ASQ:SE cutoff, indicating the child should be referred for further evaluation. The high-risk group was analyzed for significant differences between agency and online samples and was found to be statistically equal. The high-risk group was comprised of more online caregivers ($n = 12$) than agency caregivers ($n = 3$), had high ESQ scores ($M = 84.33$), and high PSI-SF scores ($M = 105.10$). The mean age of caregivers in the high-risk group was 29.87 and mean age at birth of first child was 23.13.

Table 4.3

Caregiver Characteristics of High-Risk Group

Characteristic		n (%)
Income		
	0-12,000	6 (40)
	12,001-24,000	3 (20)
	24,001-40, 000	4 (27)
	Over 40,000	1 (7)
Marital status		
	Married/domestic partner	7 (50)
	Divorced/ separated	2 (14)
	Single, never married	5 (36)
Gender		
	Female	14 (93)
	Male	1 (7)

Table 4.3 (continued)

Characteristic		*n* (%)
Parent ethnicity		
	White	11 (73)
	Hispanic	2 (13)
	Mixed	2 (13)
Mother education		
	Elementary	1 (7)
	High school/GED	3 (20)
	Some college	8 (53)
	AA/2 year degree	1 (7)
	Four year degree	2 (13)

Children

Caregivers reported limited child demographic information on the Family Information form (Table 4.4). Child's date of birth, gender, and disability status were reported. Children ranged in age from 3 months to 60 months with the most frequent age group of ASQ:SE 60 months (16.7%) followed by 6 months (16.3%).

Table 4.4

Child Gender by Agency and Online Sample

Gender	*n*	Percentage
Male	9 (A)	52.9 (A)
	131 (O)	52.0% (O)
Female	8 (A)	11.1 % (A)
	121 (O)	48.0% (O)

Note. A = agency; O = online.

If caregivers responded, *yes,* to the question D*oes your child have a disability?"* they were asked to complete information regarding their child's type of disability and services. No analysis was completed for disability for the online sample since only 13% of caregivers answered the question, "*Does your child have a disability?"* However, 99% percent of caregivers from the agency sample answered this question: 65% had a child without a disability, 31% with a disability, and 4% not sure. The most frequent type of child disability was communication disorder (13%) followed by autism (11%) and other (11%). Physical disabilities and behavior/ mental health were the least frequent category of disability type (2%).

ASQ:SE cutoff scores represent a risk of behavioral problems and the child should be referred for further evaluation. ASQ:SE cutoff scores were examined by interval for agency and online samples (Table 4.5). A total of 54 (16%) children had ASQ:SE scores above the cutoff. This figure is consistent with national rates of challenging behavior in young children, reported at 10-40% (Fox & Smith, 2007). Findings also indicate the 60-month interval for both samples, followed by the 48-month

interval for the agency sample and 36-month interval for the online sample, had the highest percentages of children above the cutoff. Only one child in the agency sample was not receiving EI/ECSE services (6 months), whereas the online sample could not be analyzed for services due to missing data (89%).

Table 4.5

ASQ:SE Cutoff Scores by Interval

Interval	*n*	Above Cutoff Score
6 months	1 (A)	7.7% (A)
	1 (O)	2.8% (O)
12 months	3 (O)	11.5% (O)
18 months	5 (O)	16.7% (O)
24 months	6 (O)	25.0% (O)
30 months	2 (O)	7.4% (O)
36 months	3 (A)*	23.1% (A)
	7 (O)	29.2% (O)
48 months	4 (A)*	30.8% (A)
	7 (O)	19.4% (O)
60 months	7 (A)*	53.8% (A)
	8 (O)	32.0% (O)

Note. A = agency; O = online; * receiving EI/ECSE services

High-risk group. Child characteristics were also examined for the high-risk group (Table 4.6) and ASQ:SE scores (Table 4.7). More males than females were in the high-risk group and parents identified two types of disability: autism and communication. ASQ:SE scores were examined by interval for the high-risk group and found to be above the cutoff in six out of the seven age intervals. Sixty months was the interval with the

highest number of children ($n = 5$) above the cutoff. Of the 15 children in the high-risk group, seven were not receiving services and one parent reported having been in services previously, but not currently.

Table 4.6

Child Characteristics of High-Risk Group

Characteristic		*n* (%)
Males		9 (75)
Females		3 (25)
Premature		2 (17)
Disability		
	Yes	5 (33)
	No	1 (7)
	Missing data	9 (60)
Type of disability		
	Autism	2 (1.3)
	Communication	1 (1)
Child is in Services		
	Yes	8 (53)
	Missing	7 (47)

Table 4.7

ASQ:SE Cutoff Scores by Interval for High-Risk Group

ASQ:SE Interval (*n*)	Score
12 month (1)	50
18 month (3)	140*
	94
	65
24 month (3)	120*
	80*
	65
36 month (1)	186*
48 month (2)	150*
	75
60 month (5)	165*
	140*
	125*
	85
	80

Note. * Children not receiving services.

Teachers and Program Staff

Teachers or agency staff (*n* = 17) completed limited demographic information including education, years of experience in the current job, job description, and the type of agency they were working for. Data were analyzed using descriptive statistics and

frequencies (Table 4.8). Two types of agencies were represented in this sample: education or special education (35%) and social services (65%).

Table 4.8

Teacher and Program Staff Demographics

Characteristic	*n* (%)
Education	
High school degree	1 (6.3)
Partial college/AA degree	5 (31.3)
4 year college degree	5 (31.3)
Graduate degree	5 (31.3)
Job description	
Home visitor	6 (35.3)
EI/ECSE provider	4 (25.5)
Family advocate	4 (25.5)
Child care provider	2 (11.8)
Mental health specialist	1 (5.9)

Validity Analysis

When developing new measures for evaluating constructs in education or social sciences, it is important to test the validity of the newly developed tool. This section addresses the convergent validity of the ESQ.

Convergent Validity

Convergent validity refers to the relationship between the measurement tool being tested and an assessment measuring a similar construct (Salvia, et al., 2010). For this

study, the ESQ measured caregiver's environmental risk and resilience factors, whereas the PSI-SF measured stressors related to parenting a young child. The researcher hypothesized these two constructs were related; caregivers who had many risk factors may also experience increased levels of stress regarding parenting. Likewise, if caregivers had multiple risk factors, their young children may be having more social emotional difficulties (e.g, problem behavior). Therefore, the ESQ and ASQ:SE were examined for correlational relationships.

Research Question 1. a.

The Parenting Stress Index-Short Form (PSI-SF) was used to examine the first research question, "What is the agreement between the ESQ and the PSI-SF?" Analysis began with the overall relationships of the PSI-SF and ESQ total scores by agency and online samples. ESQ total score was skewed for the online sample (skewness = .93), which violated the assumption of normality. Thus, the Spearman rho statistic was calculated, $r(185) = .23$, $p = .002$. The direction of the correlation was positive, which means that parents who have higher ESQ scores tend to have slightly higher levels of stress related to parenting on the PSI-SF. The r^2 indicates approximately 5% of the variance in PSI-SF scores was predicted by ESQ scores.

ESQ area scores and PSI-SF scores were also compared (Table 4.9). The ESQ areas of significant correlation with the PSI for the agency sample were Child and Family and Economic and Financial. For the online sample, ESQ areas significantly correlated with the PSI-SF are Child and Family Health, Economic and Financial, and Community.

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Table 4.9

ESQ Area and PSI-SF Total Score Correlations

Sample	*N*	ESQ area	ESQ area title	*Spearman's rho*
Agency	53	C	Child and Family Health	.33*
	53	D	Economic and Financial	.30*
Online				
	196	C	Child and Family Health	.27**
	197	D	Economic and Financial	.15*
	196	F	Community	.22**

* $p < .05$.** $p < .01$.

Individual ESQ questions were also significantly correlated with the PSI-SF total score for the online and agency sample (Table 4.10). Area C correlated with the PSI-SF for three questions (3, 4, & 5).

Table 4.10

ESQ Question and PSI-SF Total Score Correlations

Sample	*n*	ESQ area	Question	*Spearman's rho*
Agency				
	52	C5	Do you have a child with a learning or behavior problem?	.48**
	53	D2	Does your income cover your monthly expenses?	.38**

Table 4.10 (continued)

Sample	*n*	ESQ area	Question	*Spearman's rho*
Online				
	199	A3	Do you have problems with reading or writing?	.15*
	197	C3	Does anyone in your home have alcohol or drug problems?	.15*
	199	C4	Does anyone in your home have problems with depression, anger, or anxiety?	.20**
	198	C5	Do you have a child with a learning or behavior problem?	.26**
	198	F2	Do you have people to talk to about your problems?	.17*
	199	F4	Do you have friends or family who can help when you need it?	.15*

p < .05. ** *p* < .01.

"Red flag" questions. The researcher examined ESQ questions that had high correlations with PSI-SF questions to determine the usefulness of using the questions as "red flags" (Appendix D). For example, a caregiver could have a low total ESQ score of 15, (10 = yes, 5 = concern) for question C4, *Does anyone in your home have problems with depression, anger, or anxiety?* Programs may consider this question to be weighted more heavily as a risk factor and want to follow up with the caregiver and refer for services. Red flags are also used in other assessments and fields, for example the autism screening tool, M-CHAT, uses "red flag" questions that quickly determine if a child should be referred for further evaluation (Robins, Fein, Barton, & Green, 2001).

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When examining data, two red flag criteria were used: (1) .50 correlations and higher for either agency or online sample, and (2) questions that correlated for both samples at .20 or higher. Table 4.11 indicates the preliminary red flag questions. Area C, question five had the strongest correlation for both samples.

Table 4.11

Preliminary ESQ Red Flag Questions

Number	Question	Spearman's rho (PSI-SF number)	
		Agency	Online
A3	Do you have problems reading or writing?		.70* (35)
A5	Are you currently employed at the level that you'd like to be?	.31* (11) .28* (10)	.23**(11)
B2	Do you need to live with friends or family because you can't afford housing?	.63* (35)	
C4	Does anyone in your home have problems with depression, anger, or anxiety?	.34**(12) .29* (5,10) .27* (9)	.26**(1) .21**(7)
C5	Do you have a child with a learning or behavior problem?	.60**(18) .49**(20)	.75**(36) .57**(26) .50**(33) .37**(18) .34**(21) .27**(20) .22**(13,19)
D3	Do you currently use programs such as WIC, Food Stamps, or Medicaid?	.34**(10)	.22**(11)

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Table 4.11 (continued)

Number	Question	Spearman's rho (PSI-SF number)	
		Agency	Online
D4	Do you have credit problems?	.68* (31)	
E2	Do you have spouse/partner conflicts?	.36**(7)	.24**(7)
E4	Do you have childcare that meets your family needs?	.63*(32)	
F1	Does your family join in community activities?	.44**(4) .36**(9)	.21**(10)
F2	Do you have people to talk to about your problems?	.27*(18)	.21**(22)

*p < .05; ** p < .01

Research Question 1.b.

Correlations were computed to investigate the association between ASQ:SE

scores and ESQ scores for agency and online samples to answer the question, "*What is*

the relation between child problem score as measured by the Ages and Stages

Questionnaire: Social Emotional and caregiver ESQ score?" The ASQ:SE was not

correlated with the ESQ total scores for the agency sample, but was significantly

correlated for two intervals of the ASQ:SE for the online sample: 6 months $r(35) = .43$, p

$< .01$ and 48 months $r(31) = .39$, $p < .05$. When examining the ASQ:SE cutoff scores

(children who need to be evaluated further for social emotional problems), and the ESQ

total scores, the scores of the online sample had significant correlations at the 60 month

interval $r(24) = .41$, $p < .05$.

Upon further examination of the ESQ by area, significant correlations with the ASQ:SE were found for the agency sample in three ESQ areas (Table 4.12). Housing (B) was negatively correlated at 60 months; Child and Family Health (C) was positively correlated at 6, 18, and 36 months. Home and Family (E) was positively correlated with the ASQ:SE at 18 months and negatively correlated at 60 months.

For the online sample significant positive correlations were found in the area Education and Employment (A) for 48 months; Child and Family Health (C) for 6, 12, and 18 months; Economic and Financial (D) for 6 and 48 months; and Home and Family (E) for 18 and 48 months.

Table 4.12

ASQ:SE Total Score and ESQ Area Correlations

Sample	ESQ area	*N*	ASQ:SE interval	*Spearman rho*
Agency				
	B	13	60	-.59 *
	C	13	6	.75**
	C	9	18	.84**
	C	13	36	.67*
	E	9	18	.68*
	E	13	60	-.68*
Online				
	A	36	48	.42**
	C	36	6	.40*
	C	26	12	.41*

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Table 4.12 (continued)

Sample	ESQ area	N	ASQ:SE interval	Spearman rho
	C	30	18	.42*
	D	36	6	.40*
	D	36	48	.37*
	E	30	18	.39*
	E	36	48	.35*

*p < .05; **p < .01

Simple linear regression was conducted to investigate how well total scores on the ESQ predict problem behavior on the ASQ:SE. The dependent variable was ASQ:SE total scores by age intervals and the independent variable was ESQ total scores. The results were statistically significant for the online sample for four ASQ:SE intervals: 6, 18, 24, and 36 months (Table 4.13).

Table 4.13

Means, Standard Deviations, and Regression Results for ASQ:SE Total Score and ESQ for Online Sample

Variable	N	M	SD	F	df	B	β	R^2
ASQ:SE interval								
6	34	19.17	15.33	4.70*	1.33	12.51	.21	.10
18	27	29.30	30.46	8.47**	1, 26	11.50	.45	.22
24	21	36.04	29.23	6.65*	1, 20	21.54	.47	.22
36	21	42.92	39.47	6.41*	1, 20	22.48	1.07	.21

*p < .05. **p < .01

Simple linear regression was also conducted to investigate how well the ESQ area of Child and Family Health scores predicted problem behavior on the ASQ:SE. The results were statistically significant for the agency sample at 18 month ASQ:SE interval, $F(1,7) = 20.74$, $p < .01$. The adjusted R^2 value for the agency sample was .71, which indicates that 71% of the variance in ASQ:SE scores of problem behavior was explained by the ESQ total scores for the 18 month interval. The online sample was also significant for three ASQ:SE intervals: 6, 12, and 18 months (Table 4.14)

Table 4.14

Means, Standard Deviations, and Regression Results for ASQ:SE Total Score and ESQ Area C Scores for Online Sample

Variable	N	M	SD	F	df	B	β	R^2
ASQ:SE interval								
6 month	35	19.17	15.33	9.34**	1, 34	2.78	.26	.19
12 month	24	22.28	12.14	4.52*	1, 23	3.21	.28	.13
18 month	29	29.30	30.46	17.06**	1, 28	5.71	.44	.36

* $p < .05$.   ** $p < .01$.

Research Question 2.

Caregivers' responses to ESQ open-ended questions and results of the caregiver and professional utility survey are reported below. Results from the open-ended questions and caregiver survey included both agency and online samples. Quantitative and qualitative data were gathered to gain a better perspective on the utility of the ESQ and are included in this section. First, caregiver data for open-ended questions are reported,

followed by caregiver and professional utility data.

ESQ Open-Ended Questions

Open-ended questions allow for detailed responses not otherwise collected, thereby increasing the utility of the screening tool. The ESQ gives caregivers the opportunity to indicate if they have received help for specific problems in each area and if they wanted assistance with problems of concern. This feature of the screening tool allows professionals to determine if the family has received help and if not, to pinpoint specific services the family may need.

The following section discusses the responses to two open-ended questions by ESQ area. The open-ended questions were worded differently for each area; therefore, the questions will proceed the results. Questions regarding needing assistance with specific areas of risk were not included in the online sample because it was beyond the scope of this study to offer assistance or referrals to services outside of the researcher's community. However, 4% of online caregivers chose to disclose specific problems in each ESQ area, with most responses in Child and Family Health. Eighteen percent of agency caregivers answered the open-ended questions and responded most frequently to the Housing questions.

Education and Employment

Are you receiving help with school or jobs? And, Would you like help with questions or concerns about education or jobs? If yes, what kind of help? ($n = 18$)

Caregivers in the agency sample tended to have less education and lower income levels as reported in the demographic information, thus many were seeking assistance in this area. Caregivers with a disability or criminal record indicated they needed help

seeking employment ($n = 5$). One caregiver reported, *"I don't want to work in fast food again, I would like help with finding new jobs ok with limited hearing."* Additionally, caregivers indicated they would like help with information about college, the enrollment process, and financial aid or funding ($n = 6$).

Caregivers in the online sample indicated that their health or their living situation impacted their ability to obtain employment at the level they would like to be employed. Caregivers indicated medical problems or a disability kept them from obtaining or seeking employment ($n = 4$). Caregivers also had problems with their work schedule or type of work, which impacted job satisfaction ($n = 3$). *"I am a skilled IT needs analysis worker but I am caring for a pre-K child and can not find suitable part-time work."*

Housing

Have you received help to pay for housing now or in the past? Would you like help with questions or concerns about housing? If yes, what kind of help? ($n = 26$)

Almost 30% of the agency sample were women living in a residential drug and alcohol treatment facility and 24% were women survivors of domestic violence, many of whom were actively seeking help with permanent housing upon treatment graduation. Of the 21 caregivers who responded to these open-ended questions, 74% reported they needed help finding housing or housing related services such as clearing an eviction off their record, accessing subsidized or low income housing, and help with utilities. *"I need any and all the help I can get finding, getting, keeping (housing)."* Six caregivers reported already receiving help with housing issues, including subsidized housing and financial help from churches or church-based non-profit organizations.

Similarly, the online sample reported having received help from family, friends or a church (*n* = 4). *"I have had to ask churches for help in the past, and in fact I am in that situation right now. Money is tight and sometimes-unexpected expenses set us back. Right now we are behind rent by $600 but I will find some way to get it caught up. I always do."* Safety of the neighborhood or the particular housing unit was also of concern to some caregivers, especially for families with a child with a disability (*n* = 2).

Child and Family Health

Have you or anyone in your home, received help with major health or behavior problems? Would you like help with questions about your health or another family member's health or behavior? (n = 27)

Most of the families in the agency sample were receiving help in this area, therefore the response rate was low (*n* = 7). Two out of seven caregivers were receiving help with their child's health or disability. Five out of seven caregivers were in need of help concerning child behavior problems or adult anger problems. *"(I need) help with my daughter's behavior."*

In contrast to the lack of responses in the Child and Family Health area for agency caregivers, this area had the highest frequency of representation for the online caregivers (*n* = 20). Five out of twenty caregivers reported they had received help for mental health related problems and two caregivers reported they still needed help in this area. Three caregivers indicated they did not have adequate health coverage for their family. *"We do not have benefited jobs and can only afford to pay for our son's healthcare - my husband and I are uninsured because we can't pay for private insurance and aren't eligible for*

income-based insurance programs like Medicaid." Eight caregivers reported on their child's type of disability, whereas two reported on health conditions.

Economic and Financial

Have you received help with financial problems? (Examples include credit counseling, food banks, and emergency financial services.) Would you like help with questions or concerns about money problems? If yes, what kind of help? (n = 22)

Although many of the agency families were accessing public and private services, many indicated they needed further help. Ten out of fourteen caregivers indicated they need financial help ranging from accessing public services (i.e. TANF, SNAP, WIC) to help with utilities or housing. Some of the same caregivers also indicated they have debt or credit problems and would like help in this area as well (*n* = 5). One caregiver wrote, "*(I need*) *any and all services, have zero income at present time."*

Similar to the agency sample, some online caregivers said they had problems with credit including foreclosure or student debt. Five out of eight caregivers reported they were receiving or had received help from public assistance or family. Three caregivers indicated they had enough money for basic necessities, but little else. "*We get by but live paycheck to paycheck each month with little to spare."*

Home and Family

Have you gotten help with any family problems? (Examples include counseling, parenting classes, support from child protective services). Would you like help with questions or concerns about your relationships or home-related problems? If yes, what kind of help? (n = 20)

Some of the caregivers in the agency sample were receiving mental health related services such as drug and alcohol treatment, domestic violence counseling and support, or parenting classes for families at risk for child abuse and neglect. *"My son saw violence at home, he will get counseling at school."* However, eight out of ten caregivers indicated they needed continued support in the area of counseling and parenting classes.

Five out of 10 caregivers in the online sample reported they had received help with counseling for relationship and personal problems or parent training. Three caregivers said having an absent parenting partner due to work-related travel, caused some stress in the family. *"I do experience a good deal of stress and tension because my spouse is away on business travel very often. I end up snapping and yelling at him and at my parents (who help care for our children) frequently."*

Community

Have you used services in the community? (Examples include family fun guide, local support groups, and library story hour). Would you like help with questions or concerns about community issues or transportation? (n = 17)

The Northwest community, where this study took place, has a wealth of free or low cost community related activities and events for families. Nine agency caregivers said they would like to receive help or information regarding low cost or free community events, especially library services. Five out of 14 caregivers reported needing help or support with transportation related problems including learning how to drive a car.

Only three online caregivers responded to the open-ended questions in this area. The answers varied for each caregiver, one reporting the spouse does not join in community family outings and another reporting they had recently moved to the area and

planned to become more involved in community activities in the future. Finally, a caregiver reported her son had behavior problems that prevented him from having successful peer relationships.

Caregiver Utility Survey

The utility survey included quantitative questions with varying response options (Appendix C). One open-ended question was included that asked for general feedback on improving the ESQ: *How would you change the ESQ to make it better?* First, quantitative data are reported in Table 4.15, followed by the qualitative responses from caregivers on how to improve the ESQ.

Table 4.15

Utility Responses for Agency and Online Samples

Question	Response	n	Percent (sample)
What method did you use to fill out the ESQ?			
	Computer	252	100% (O)
	Completed it myself	59	82% (A)
	Professional helped me	12	17% (A)
How long did it take you to complete the ESQ?			
	Less than 10 minutes	19	26% (A)
		202	80% (O)
	10-20 minutes	18	25% (A)
		37	15% (O)
Table 4.15 (continued)			

Question	Response	n	Percent (sample)
	20-30 minutes	18	25% (A)
		2	.8% (O)
	30-60 minutes	16	22% (A)
		1	.4% (O)
It was easy to understand the ESQ.			
	Yes	66	93% (A)
		237	97% (O)
	Sometimes	4	6% (A)
		6	3% (O)
	No	0	0
Completing the ESQ was: (mark all that apply)			
	Helpful	28	67% (A)
		55	23% (O)
	Not too long	19	26% (A)
		244	97% (O)
	Not a waste of time	33	46% (A)
		243	99.6% (O)
	Waste of time	1	.4% (O)
	Interesting	18	44% (A)
		92	38% (O)
	Gave me ideas about community support	16	41% (A)

Table 4.15 (continued)

Question	Response	n	Percent (sample)
Completing the ESQ was: (mark all that apply)			
	Helped my child's caregiver learn more about my family and me.	6	17% (A)
	Helped me think about my current situation.	17	24% (A)
		110	45% (O)
	Not useless	29	83% (A)
		174	71% (O)
	Useless	6	17% (A)
		70	29% (O)
Please describe the ESQ (online sample only)			
	I liked the questions	215	88%
	Some of the questions were too personal	26	11%
	Many of the questions were too personal	1	.4%
	I did not like the questions	1	.4%

Note. A= agency sample; O= online sample.

Improving the ESQ

Caregivers were asked, "How would you change the ESQ to make it better?"

and to comment on the ESQ questions by area. Specifically, the researcher was

interested in gathering data on the clarity of the questions, if questions were culturally

appropriate, and if caregivers felt the questions were too personal. The following section describes the qualitative data gathered from the utility survey from the online and agency samples. Data were combined for this section due to the low response rate (agency, 18%, online, 4%).

Education and employment. Four caregivers in the agency sample indicated this section was a problem for them ($n = 4$). Specifically, question A.5 caused confusion, *Are you currently employed at the level that you'd like to be?* Ninety-eight percent of parents who choose to stay home with their children rather than seek employment found the ESQ lacking representation of their population ($n = 13$). Regarding question A.5, one respondent said, *Am I currently employed at the level I'd like to be? I'm a stay at home mom and I want to be*.

Housing. Two caregivers commented on Question 1. *Do you own or rent a home or apartment?* The purpose of this question was to determine homelessness. Many demographic forms separate owning from renting to determine financial stability. The caregivers' comments were similar; they expected this question to be separated into two questions: 1. Do you own a home or apartment, and 2. Do you rent a home or apartment?

Child and family health. One caregiver reported the following open-ended question was unclear: *Have you or anyone in your home, received help with major health problems or behavior problems?* The term "major" needed to be defined for clarity and the type of help (i.e. public or private help). Another caregiver reported the ESQ does not take stepchildren into consideration.

Economic and financial. Five caregivers reported confusion with question D.5 *Do you have regular telephone service?* Caregivers indicated cell phones were their

primary telephone and were unsure if "regular telephone" included cell phones.

According to Pew Research Center (2012) over one quarter of all Americans have only

cell phones and another 18% of adults take most of their calls on cell phones rather than a

landline.

Teacher and Program Staff Utility

The ESQ professional utility survey was collected from all participating agencies

and was completed by a variety of professionals ($n = 17$). Similar to the caregiver utility

survey, the teacher and program staff utility survey had quantitative and qualitative

questions. The purpose of the utility survey was to discover the usefulness of the ESQ in

real-world settings that serve families with young children. One consideration was time

constraints for professionals who serve families and children. Another consideration was

the usefulness of the information gathered. Additionally, the researcher wanted to

understand the process professionals used to administer the ESQ with caregivers. First,

quantitative data will be reported, followed by qualitative data to open-ended questions.

Administration method. The suggested ESQ administration method is via

personal interview to gain the most comprehensive and useful information while also

building rapport and clarifying questions for caregivers. Although the suggested

administration method is via personal interview, the researcher was interested in the

actual method of administration agencies used with caregivers. Understanding the

variations of administration method will help refine user instructions in future revisions.

Many agencies used more than one method of administration depending on the

professional roles and caregiver preference. The methods of administration included (1)

during a home visit, (2) a phone interview, (3) at a center or clinic, (4) through the mail,

and other method of administration (Table 4.16). Professionals indicated three different types of *other* administration, (1) during a support group, (2) at a domestic violence shelter, and (3) during an office visit.

Table 4.16

Method of Administration by Type of Agency

Type of Agency	Method	*n* (%)
Education/Special Education		
	Home visit	4 (50)
	Mail	3 (33)
	Center or clinic	2 (17)
Social Service		
	Home visit	5 (36)
	Phone interview	1 (9)
	Center or clinic	1 (9)
	Other	5 (46)

Usefulness. Understanding the method of administration is important for future revision of the screening instructions, but it was also important to understand how professionals felt about using the ESQ for specific purposes and if they would consider using the ESQ again in future work with families. Responses for education/special education (S) and social services professional (S) are summarized in Table 4.17 below.

Two professionals also wrote comments regarding future ESQ use. One early intervention specialist wrote, "*It depends. I think it sets families up to think if we are*

asking the question, resources are available and this isn't always true or can be

frustrating waiting to access them because of minimal resources available to families." A

home visitor working with caregivers with disabilities reported, *"Depending on the*

situation. Some parents were suspicious of the questionnaire and declined participation."

Table 4.17

Utility Data by Type of Agency

Question	Response	*n* (agency)	Percentage
I plan to use the ESQ again.			
	Strongly agree	2 (E)	33% (E)
		6 (S)	55% (S)
	Agree	2 (E)	33% (E)
		4 (S)	36% (S)
	No opinion	1 (E)	20% (E)
		1 (S)	9% (S)
The information obtained through the ESQ is useful in my work with families.			
	Strongly agree	4 (E)	66.7% (E)
		9 (S)	82% (S)
	Agree	4 (E)	33% (E)
		2 (S)	18% (S)
	Disagree	0	0
	Strongly disagree	0	0
Using the ESQ helps caregivers identify areas of family strengths and resource needs.			
	Strongly agree	4 (E)	68% (E)
		11 (S)	100% (S)
	Agree	2 (E)	33% (E)

Table 4.17 (continued)

Question	Response	*n* (agency*)*	Percentage
Using the ESQ helps caregivers identify areas of family strengths and resource needs.			
	Disagree	0	0
	Strongly disagree	0	0
	Strongly agree	4 (E) 9 (S)	80% (E) 82% (S)
	Agree	1 (E) 2 (S)	20% (E) 18% (S)
	Disagree	0	0
	Strongly disagree	0	0
The ESQ will help me to monitor family strengths, risks, and needs over time.			
	Strongly agree	3 (E) 7 (S)	60% (E) 64% (S)
	Agree	2 (E) 3 (S)	40% (E) 27% (S)
	Disagree	1 (S)	9% (S)
	Strongly disagree	0	0

Note. E = education/special education agency; S = social service agency

Open-ended questions. Professionals responded to three open-ended questions on the utility survey: (1) What did you like about the ESQ, (2) What did you dislike about the ESQ, and (3) Please list any changes to specific sections or general suggestions you have for improving the ESQ. The data were coded by themes and reported in the table and text below (Table 4.18).

Table 4.18

Summary of Themes for Question 1 and 2.

Major Themes	Benefits	Obstacle	Utility survey data
Administration	Easy to use and score. Fast and simple. Easily understood by caregivers.	Lengthy. Confusing scoring.	*Seems comprehensive and easy to use.* (E) *Really simple format. Easy to understand the questions.* (E) *It could be somewhat difficult for moms trying to take care of their children and fill it out at the same time.* (S) *I would often get confused with the scoring. I understood it, but my mind kept wanting to keep "z" and "x" in their same rows.* (E)
Communication	Facilitates communication with caregiver regarding effects of risk factors on child development.		*It opened up a good conversation for how DV/home stress effects children.* (S) *Opens up conversation about potential barriers family may be running into-able to direct them in the right direction.* (E)

Table 4.18 (continued)

Major Themes	Benefits	Obstacle	Utility survey data
Information and referrals	Effectively identifies risk, resilience, and resource needs. Helps monitor caregiver's needs.		*It's helpful for identifying an individual's support system.* (S) *Seemed very helpful for the mothers with young children in terms of referrals and talking points.* (S) *I especially liked the "Follow Up Action Taken" section to keep track of areas addressed over time.* (E)
Appropriateness		Personal questions or questions that make caregivers uncomfortable. Not prepared or not the focus of work with families.	*Asks very personal questions, which may make families focus on what they don't have and jeopardize the home visiting relationship.* (E) *Very personal-potentially opens up issues I am not prepared to deal with and takes focus off of special education.* (E) *Some of the questions may be concerning to the parents-especially given the population served (parents with developmental disabilities) and their worries about child welfare involvement.* (S)

Note. E = Education/special education; S = Social services.

ESQ suggestions. Professionals were asked to respond to the following prompt to gain information regarding improvements or changes that could be made to the ESQ: *Please list any changes to specific sections or general suggestions you have for improving the ESQ.* Four professionals gave suggestions for improvements in three general areas. The first area of concern related to *time frame* of the questions. Some professionals commented on the ambiguity of time frames, although the ESQ provides administration guidelines that includes instructions on time frame (*Some questions ask about specific time periods and some questions are open-ended. Encourage caregivers to answer the questions as best fits the time frame*). An early intervention teacher and a family advocate from a social service agency both commented that it would be more useful if parents could think about a specific time frame when answering questions in the Home and Family section.

Family advocate:

> *For our agency (DV) it would be more helpful if the "home and family" section was more time specific (i.e. In the last month do you have...). We often talk about the ripple effect of just having left the relationship or home situation.*

A home visitor commented on the redundancy of the scoring chart on the summary page, *Given the grid for assessing scores for each section embedded in the section, it seems that only section totals are needed on the last page.* Finally, a teacher commented on the cultural appropriateness of a question B2 in the Housing section, *Do you need to live with friends or family because you can't afford your own housing?*

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Teacher:

> *Many family members significantly influence the growing years of young children, especially when they are all in the same household. In the Housing section (B-2), it states living with family because of affordability. But nothing is mentioned about cultural reasons. The parent(s) child(ren) may be living with family because it's a choice and culturally appropriate for them to do so. Because of these circumstances, this question might be confusing as to how to answer.*

CHAPTER V

DISCUSSION

The primary purpose of this study was to examine the validity of the ESQ. Convergent agreement was examined between the ESQ and the Parenting Stress Index-Short Form to discover if caregivers with high stress levels would also have more risk factors. Convergent validity was also tested by examining relationships between the ESQ and the Ages and Stages Questionnaire: Social Emotional to discover if caregivers with more risk factors would also have children with more problem behavior. Another intent of this study was to examine the utility of the ESQ for caregivers and professionals.

This chapter discusses interpretations and implications of the findings and limitations of the study. Future research on the ESQ, implications for practice, and final thoughts are also included.

Interpretations of Results

Participants

Caregivers. A total of 324 caregiver/child dyads were recruited for this study. Of those, 252 completed it online through the Ages and Stages Questionnaire study site. The remaining participants were recruited through local agencies that serve families with children in the Eugene, Oregon area ($n = 72$).

The online caregivers were significantly different from the local caregivers in multiple demographic characteristics and number of family environmental risk factors as identified by the ESQ. The online caregivers tended to have higher income levels, more education, were married rather than single, and were older at age of birth of first child. Caregivers in the agency sample had an ESQ mean score ($M = 89.31$), over two and half

times higher than online caregivers (*M* = 35.74). Although the online sample was recruited nationally through Facebook and online parenting sites, Oregon was over-represented in the total sample (63.5%) as well as mothers (98%) over fathers (3%). O Eighty percent of the high-risk group were online caregivers, while only 20% were agency caregivers.

Children. Male and female children were equally represented in both the agency and online samples. When asked to complete information about their child's disability, many online caregivers did not respond. Twenty-eight online caregivers (11%) indicated their child has a disability, while only one caregiver responded to the prompt, *no, my child does not have a disability*. Sixty-five percent of agency caregivers reported their child did not have a disability, while 31% said their child had a disability.

Agency caregivers reported most frequent type of child disability as communication disorders (13%) and autism (11%). Eight caregivers for the online sample reported type of disability; autism (5) and physical disability (3). It is unclear why the online caregivers did not report on child disability. One explanation could be that children had not yet been made eligible for EI/ECSE services. Seventeen percent of children from the online sample scored above the ASQ:SE cutoff, yet only 11% of parents indicated their child had a disability. This study did not include overall developmental assessments, therefore no conclusions can be drawn about disability type for the sample. The high-risk group had more males than females and slightly over half of children (*n* = 8) were receiving EI/ECSE services.

Teachers and program staff. This study included the opinions and feedback from professionals working with families (*n* = 17). Professionals evaluated the ESQ to

gain a better understanding of how the ESQ worked in real-world settings. Most participating professionals were women ($n = 16$) and had varying years of experience and education working with families and children.

Agencies. As stated previously the agency sample had more than 2.5 as many risk factors, which is not surprising when examining the types of services caregivers were accessing. Caregivers were accessing services at six different agencies in Lane County, Oregon. A brief description of each agency and the relevant services caregivers were accessing can be found in Appendix F.

Research Question 1.a.

Validity is an important psychometric property to determine when developing an assessment instrument. Convergent validity refers to how well a new assessment instrument measures similar constructs in comparison to a well-validated assessment instrument. For this study, the ESQ was examined with the criterion measure of the PSI-SF. Spearman's rho was used to examine correlations between the PSI-SF and the ESQ for the agency and online sample. The results indicated the PSI-SF and ESQ were correlated for the online sample, but not the agency sample. This is expected, given agency caregivers with higher risk factors may have had lower stress levels due to the services they were receiving.

The Spearman rho correlation was not large for the online sample (.23), but when broken down by area, trends emerged in the correlations. The ESQ areas of Child and Family Health, Economic and Financial (for online and agency samples), and Community (for online sample) had the highest correlations.

The Child and Family Health section has questions regarding overall family health, access to health insurance, alcohol and drug problems, mental health, and child behavior problems. Correlations would be expected due to the PSI-SF questions regarding child behavior and parent's overall life stress. The Child and Family Health section correlated with the PSI-SF for the agency sample at .33 ($p < .05$) and with the online sample, .27 ($p < .01$).

The Economic and Financial area relates to food shortage, credit, and income problems. Caregivers who were low income tended to have more parenting stress, which is expected given some of the questions on the PSI-SF. For example, the PSI-SF subscale, Parental Distress, asks questions such as, "Since having this child, I have been unable to do new and different things" and "I don't enjoy things as I used to" (Abidin, 1995). The Economic section correlated with the PSI-SF for the agency sample at .30 ($p < .05$) and with the online sample, .15 ($p < .05$).

The ESQ Community area asks questions regarding family involvement in community activities, social support, and peer relationships for children. Some questions on the PSI-SF refer to parent's social support, "I feel alone and without friends" and I am not as interested in people as I used to be" (Abidin, 1995). The Community section correlated with the PSI-SF for the online sample, .22 ($p < .01$).

Establishing red flag questions. Correlations were examined between ESQ items and PSI-SF items and revealed useful preliminary information in establishing *red flags*. A total of eleven questions representing all six areas of the ESQ were found to have significant correlations. The following information pertains to the red flag questions.

The ESQ areas of employment, financial difficulties, and social support and PSI-SF areas of overall life satisfaction and lack of interest in social connections were highly correlated. The literature supports these relationships, relating under-employment to decreased overall life satisfaction and depression (McKee-Ryan & Harvey, 2011). One possible interpretation of the agreement is that caregivers who are having employment and financial difficulties are not utilizing friends or family for support or do not have these support systems in place.

Housing problems for the agency caregivers were linked to caregivers having negative feelings about their child (PSI-SF question 35; *My child turned out to be more of a problem than I expected*). This correlation could be due to the agency sample being comprised mostly of single mothers with lower income levels. It may be more difficult for these mothers to find adequate housing for their families, which is validated in the literature by higher rates of single women with children living in substandard housing (U.S. HUD, 2010). PSI-SF question 35 was also correlated with ESQ question A5, *Do you have problems reading or writing?* The purpose of question A5 was to gain information about literacy barriers to employment. Perhaps the strong correlation between parental literacy and negative feelings about their child is related, again, to lower employment and income levels for caregivers who have limited English proficiency, a well documented risk factor (Maxwell, 2010).

A body of research has made the connection between maternal depression and poor social emotional outcomes for children (Augustine & Crosnoe, 2010; Bagner, et al., 2010; Compas et al., 2011). ESQ question C4, *Does anyone in your home have problems with depression, anger, or anxiety?* is correlated with PSI-SF question 7, "There are quite

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a few things that bother me about my life" Abidin, 1995). The overall Parental Distress subscale was well represented by ESQ question C4. Moreover, PSI-SF question 7 (*There are quite a few things that bother me about my life)*, was also correlated with ESQ question E2, *Do you have spouse/partner conflicts?* One possible interpretation of these results is that caregivers with more mental health problems and spouse/partner conflicts also have higher levels of parenting stress. Likewise, ESQ question C5 *(Do you have a child with a learning or behavior problem?)* was well correlated with numerous PSI-SF questions. Research has shown that child problem behaviors are related to parental stress and is associated with harsh and inconsistent punishment (Baillargeion, et al., 2007; Briggs-Gowan, et al., 2006; Crawford & Manassis, 2001; Ziv, & Sorongon, 2011).

In the ESQ area of Home and Family, problems with childcare were strongly correlated with the PSI-SF in areas of parental competency and empowerment for the agency sample. This is a finding consistent with the literature (Child Care America, 2011). Affordable and high quality childcare is beyond the reach of many low-income families, especially those who are just above poverty levels (Campbell, et al., 2008).

 Social supports can be a strong protective factor and can buffer the affects of poverty for children and caregivers (Williams et al., 2011; Green et al., 2011). In this study, ESQ area F (Community) was related to lack of social support or community connections and parent's feelings of loneliness and lower levels of parental competence on the PSI-SF.

When examining the high-risk group's responses to the preliminary red flag questions, all 11 questions were indicated as areas of risk for this group, further confirming these questions as problem areas. Moreover, when examining the high-risk

group ESQ means by area, A. Education and Employment (M = 20.67), C. Child and Family Health (M = 18.00), and D. Economic and Financial (M = 17.33) had the highest average scores indicating that on average, the high-risk caregivers had two problems in each of these areas.

ESQ open-ended questions. The open-ended answers to ESQ questions were helpful in determining specific areas of need and areas that families considered strengths. Although a small percentage of families completed the open-ended questions, professionals found the information useful. *"I like the way it helps me to identify further services that my families may benefit from."* Moreover, 94% of professionals who assisted caregivers in the study reported they found the ESQ helpful in making referrals for needed family services. Open-ended questions can help with the utility of an assessment instrument in identifying specific family needs. More detailed information about caregivers' perceptions of the ESQ was gained by a utility survey.

Research Question 1.b.

The convergent validity of the ESQ and ASQ:SE was examined for relationships between family risk factors and child problem behavior. The ESQ and ASQ:SE were examined for correlations by age interval and found to correlate moderately with the total ESQ score at two intervals (6 and 48 months) for the online sample and to correlate with ASQ:SE cutoff scores at 60 months also for the online sample only.

Upon examining ASQ:SE and ESQ correlations by area, Education and Employment, Child and Family Health, Economic and Financial, and Home and Family all had positive correlations for the online sample. Two of those areas were also found to

have significant correlations for the agency sample: Child and Family Health and Home and Family.

Overall, the ESQ area of Child and Family Health had the highest frequency of significant positive correlations for ASQ:SE age intervals (Table 5.1). Moreover, question C1 (*Do you or anyone in your home have major health problems?*) had the greatest frequency of positive correlations across ASQ:SE age intervals (6, 18, 30, and 60 months), followed by question C4 (*Does anyone in your home have problems with depression, anger, or anxiety?*) for the online sample at 18 and 24 months. These results are not surprising since research has shown that children of mothers with health problems experience more internalizing and externalizing behaviors, insecure attachment, social, and health problems than children of mothers who do not have health problems (Evans et al., 2007; Rafferty et al., 2010).

Question C4 was negatively correlated at 60 months for the agency sample, indicating children whose parents were receiving services had fewer social emotional problems at 60 months of age. This is expected since many of the children in the agency sample were attending programs such as Early Head Start, Head Start, therapeutic preschools, and EI/ECSE programs. This finding is also consistent with the literature in that programs such as Early Head Start and Head Start have been shown to improve the well-being of young children and caregivers (Mervis, 2011). Similarly, Question C3 (*Does anyone in your home have alcohol or drug problems?*) was also negatively correlated with the agency sample. This can be explained by the total of 20 caregivers (28%) who were receiving drug and alcohol treatment at the same time their children were receiving therapeutic child development services for the agency sample.

Table 5.1

ASQ:SE Total Scores and ESQ Area C Correlations

Sample	N	ASQ:SE	ESQ area	ESQ Question	*Spearman's rho*
Agency					
	13	36	C2	Do you and your family members have health insurance or access to regular medical and dental care?	.63*
	13	60	C1	Do you or anyone in your home have major health problems?	.61*
	13	60	C3	Does anyone in your home have alcohol or drug problems?	-.77**
	13	60	C4	Does anyone in your home have problems with depression, anger, or anxiety?	-.72**
Online					
	36	6	C1	Do you or anyone in your home have major health problems?	.70**
	30	18	C1	Do you or anyone in your home have major health problems?	.52**
	30	18	C4	Does anyone in your home have problems with depression, anger, or anxiety?	.41**
	27	30	C1	Do you or anyone in your home have major health problems?	.69**

Table 5.1 (continued)

Sample	N	ASQ:SE	ESQ area	ESQ Question	*Spearman's rho*
	34	48	C4	Does anyone in your home have problems with depression, anger, or anxiety?	.34*

*p < .05. **p < .01

In summary, the study findings did not show strong correlations between the ESQ and

the two criterion measures, the PSI-SF and the ASQ:SE. Correlational studies must be

viewed with caution as no causation can be made from the results. However, preliminary

results show the ESQ had weak to moderate correlations with the PSI-SF and the

ASQ:SE. The ESQ was able to predict ASQ:SE scores for four age intervals with the

online sample. The ESQ area of Child and Family Health predicted 71% of the variance

for 18 month children for the online sample and also predicted scores for 6, 12, and 18

months for the online sample. One reason for the weak correlation with the PSI-SF could

be that the two assessments are measuring different constructs. Perhaps parents with

environmental risk factors are managing better than we hypothesized. Since the ESQ

Child and Family Health area had the most correlation with both the ASQ:SE and the

PSI-SF, this seems to indicate the three assessment tools are measuring similar

constructs. One interpretation is that parents who had a child with learning or behavior

problems and other family health related issues also had high levels of parenting stress

and their child's social emotional development was at increased risk. Examination of the

high-risk group also confirmed this finding (see parent comments in Appendix E). The

weak to moderate correlation is promising for a preliminary investigation and further

revisions and study should refine the effectiveness of the ESQ. Additionally, ESQ utility results will also assist in future revisions.

Research Question 2.

Another important feature in developing assessment instruments is that of utility. Utility refers to assessment usefulness for caregivers and professionals. The researcher developed and tested a utility survey with a small group of parent volunteers ($n = 22$). The survey was revised and included in the caregiver study packets and also embedded in the online study.

Overall feedback from the utility study showed that most of the agency caregivers completed the survey by themselves. Many professionals reported they discussed the ESQ results after the parent had completed all study forms. Often, these discussions resulted in caregiver awareness of the connection between children's social emotional development and environmental risk factors. Similarly, professionals who asked parents to complete the study forms during support group time found the ESQ led to helpful conversations between professionals and caregivers regarding strengths and areas of need. Some professionals completed the forms with caregivers during home visits. Three of these professionals found administering the ESQ during a home visit to be difficult. Reasons stated included (1) it took the focus off the intended purpose of the home visit (early intervention services), (2) the professional did not feel adequately trained to have a discussion about family strengths and risk factors (early intervention professional) and, (3) parents feared repercussions from child welfare (parents with developmental disabilities).

Total time to complete assessments is one feature of importance when developing

assessment tools (Galesic & Bosnajak, 2009). Caregivers can experience test fatigue if

given too many questions to answer and busy professionals often do not have the time to

help caregivers complete forms or debrief afterwards. The range of time to complete the

ESQ was larger for the agency sample (10-60 minutes) with approximately equal

numbers in each group of time measurement. The method agency professionals used to

complete the study forms can explain the range of time. In contrast, 80% of online

caregivers were able to complete the ESQ in 10 minutes or less. One difference in the

time could be that online caregivers were not asked the open-ended question at the end of

each ESQ section regarding if they needed help and if so, what kind of help.

Caregivers were also asked to respond to questions regarding usefulness and ease

of completion for the ESQ. Over 90% of both agency and online caregivers said the ESQ

questions were easy to understand and most found the questions to be helpful overall

(67%) or specifically in thinking about their current situation (45%). Moreover, 88% of

online caregivers indicated the questions were not too personal for them. This is an

important finding, indicating that when caregivers complete the ESQ through computer

format, they feel comfortable answering the questions.

Professionals overwhelmingly agreed the ESQ was helpful in assessing family

strengths and risk, referral decisions, monitoring outcomes, and generally helpful in their

work with families. One strong indication of the adequacy and usefulness of an

assessment tool is the intention of professionals to use the assessment again in the future

(Kennedy, 2005). Over 80% of professionals indicated they would use the ESQ again

when working with families.

The usefulness of the ESQ is apparent for agencies and programs that serve high-risk caregivers, however, EI/ECSE professionals can also use the ESQ as a way to address family outcomes on the Individualized Family Service Plan (IFSP). Part C of IDEA states the IFSP must include, "a *family*-directed assessment of the resources, *priorities, and concerns* of the *family and* the identification of the supports *and* services necessary to enhance the family's capacity to meet the developmental needs of the infant or toddler…" [34 CFR §303.344(b)].

Concerns raised in the literature regarding family assessment in EI/ECSE include loss of privacy, raised expectations of additional resources that may not be available, and negatively affecting the professional/family partnership (McDonald, et al., 1997). EI/ECSE professionals in this study raised these same concerns. Slentz and Bricker (1992) argue that family assessment measures used in EI/ECSE should result in services directly related to the child's disability and their family. McDonald et al. (1997) list considerations for EI/ECSE professionals to keep in mind when assessing family strengths and risks for the purpose of the IFSP: (1) make caregivers aware of how the assessment information will be used, (2) inform caregivers of the purpose of the assessment and potential outcomes from the information gained, (3) caregivers should be able to accept or decline family assessments with no affects on their child's placement or services, and (4) family assessments should be completed in the context of a mutually supportive relationship with caregivers.

Clearly, the ESQ's usefulness in the EI/ECSE setting has value and also limitations, and should be used with consideration, caution, and respect for the caregiver/professional relationship while also remaining cognizant of the primary focus of EI/ECSE—the child

with a disability. We know from the vast research on social emotional development that environment plays a prominent role in later life outcomes. EI/ECSE professionals can ill afford to overlook family risk and resilience factors when providing services to children (Knitzer, 2000).

EI/ECSE professionals are trained in multidisciplinary methods and family systems models (Klein & Gilkerson, 2000). The focus of EI/ECSE training is including families in decision-making regarding their child's goals, intervention, and placement. Moreover, professionals are trained on how to sensitively work with parents as partners in their child's intervention (Klein & Gilkerson, 2000). However, additional training may be needed for many EI/ECSE professionals before using the ESQ to assess family priorities and concerns. One EI/ECSE professional in this study commented that she felt unprepared to effectively address family risk factors and needs identified in the ESQ.

Effectiveness of intervention could be in question when EI/ECSE professionals are working with families with multiple risk factors. Bronfenbrenner's ecological model (1979) posits that we must approach intervention within multiple interrelated contexts. Additionally, Maslow's hierarchy of needs provides a useful framework for understanding how multiple risk factors can affect the caregiver's ability to support their young child's development (Maslow, 1954; Noltemeyer, Bush, Patton, & Bergen, 2012). EI/ECSE training programs should provide cross training with other professional development programs, such as social work or counseling, to learn effective strategies for working with high-risk families.

The ESQ may be a useful tool in assessing families within the EI/ECSE system; however, other professionals may find the ESQ a good fit for the families they serve as

well. In a future study, the usefulness of the ESQ as an overall programmatic screening tool will be tested in a mid-sized urban coordinated health care program. The method of implementation is through computer notebooks in the clinic waiting room. The preliminarily ESQ results from this study will provide information about the validity of using the ESQ through computer-based screening. Considering that the ESQ and ASQ:SE identified seven families through the computer format that were in need of family and child services but not currently receiving them, the usefulness of the ESQ as an overall family risk and resilience screening measure is supported.

Although the utility data indicated many positive features of the tool, some problems were also found. One aspect of the ESQ that was underutilized is the open-ended comment sections after each ESQ area. Written comments by caregivers add clarity and precision in explaining the binary questions that precede them. Only 18% of agency and 4% of online caregivers chose to complete the open-ended questions. Additionally, only 13.5% of caregivers used the concern column. The purpose of the concern column was to differentiate between risk factors that were of immediate concern for families and those that may be addressed at a later time. The lack of response to the open-ended questions and concern column could be a result of ambiguity with the ESQ administration directions. Another related problem is the time-sensitive nature of questions in the ESQ Home and Family section. Feedback on this section suggests clarity could be improved by adding a prompt such as; *Thinking about the last month, please answer these questions*. Confusion regarding administration procedures indicates that many caregivers and professionals did not utilize the instructions on the cover page. Perhaps the cover page is too lengthy and caregivers or professionals skip this initial step

in administration.

Other feedback relates to clarity of the ESQ questions. The online sample included many self-identified *stay-at-home mothers* who felt the Education and Employment section did not fairly represent them. Regarding this issue, question A5 was of particular concern (*Are you currently employed at the level you'd like to be?*). The intent of this question was to ask families about under-employment (i.e. part-time work only, over qualified for current position, undesirable work shifts). Future revisions should clarify the question's intent. Similarly, two caregivers commented on question B1 (*Do you own or rent a home?*), again, clarity of purpose would help reduce confusion. Finally, revising question D5 (*Do you have regular telephone service?*), to *Do you have access to a phone when you need to make calls?* would capture a better picture of caregiver's need in this area.

Limitations

Limitations to the study are discussed below. They include: (1) lack of diversity in the sample, (2) small agency sample, and (3) limited utility data from professionals, and (4) limited statistical power due to multiple testing of variables.

The combined sample for this study was predominantly female caregivers (97%). Recruitment methods for the online sample may have been partially responsible for this limitation. More women than men may frequent the selected social media sites and parenting websites where recruitment took place. Similarly, half of agencies recruited for this study had only women clients (Womenspace, Willamette Family Treatment Services, and Education Options). A more diverse gender sample may reveal different results. Ethnic diversity was also lacking for the combined sample (85% Caucasian). One reason

for the lack of ethnic diversity is that 53% of families were from Oregon, a state that has

limited ethnic diversity. According to Oregon Employment Department (2012), 83.6% of

Oregon's population is Caucasian, compared to the national average of 72%; therefore

the study findings cannot be generalized to other populations.

The second limitation is the small agency sample ($n = 72$). As stated previously,

recruitment of a local diverse risk sample was not successful. This resulted in a primarily

high environmental risk group that was statistically different from the online sample, thus

data were analyzed separately. This also resulted in low numbers in each ASQ:SE

intervals which in turn, affected the analysis of correlations between the ASQ:SE and

ESQ. Another confounding factor with the agency sample was that they were already

receiving services, which may have impacted their stress levels and their children's

ASQ:SE scores. Future studies should seek to recruit a larger and more diverse sample

that includes fathers, more ethnic groups, and a larger sample of families who are

engaged in different levels of services from intake to completion.

Third, considering the low number of professionals who participated in the study,

one must view the professional utility data with caution. The researcher also had

professional relationships with all of the agencies; therefore the feedback may be biased

in favor of the utility of the ESQ. Recruiting more programs from different states with

diverse populations would facilitate better understanding of how the ESQ works in

programs that serve children and families.

Finally, the results of correlational analyses must be taken with caution due to

repeated testing. Running multiple analyses outside of an a priori hypothesis can lead to

inflation of the Type 1 error rate (Strube, 2006). However, the intent of the multiple analyses was exploratory and will help determine future research on the ESQ.

Future Directions

Social emotional development in young children is of great concern for all, as our future depends on today's children. Research has made the connection between social emotional development, school readiness, and future school outcomes (Fantuzzo, et al., 2011; Powell, et al., 2006; Raver, et al., 2009). Family risk and resilience are associated with life long outcomes for children, impacting emotion regulation in infants to building positive social relationships in adolescence, and expanding to future employment and financial outcomes in adulthood (Beirman, et al., 2008; Jain, Buka, Subramanian, & Molnar, 2012; Shonkoff & Phillips, 2000; Squires & Bricker, 2007). Although the connection between poverty and poor social emotional and school outcomes is well validated, many other forms of family risk can affect outcomes for children and the more pervasive and long-lasting the family stress, the more tragic the outcomes (Goodman, Miller, & West-Olatunji, 2011; Shonkoff & Levitt, 2010).

A family's ability to support their young child's social emotional development may be hindered due to stress associated with environmental risk factors that affect responsive parenting (Fenning & Baker, 2012). If parents are worried, stressed, and overwhelmed with attending to multiple family problems, (i.e. lack of sufficient income, unstable housing, medical problems, relationship problems, and lack of emotional support) then optimal parenting becomes more difficult and children's social emotional development is impacted (Sameroff, et al., 1993).

Family functioning and children's social emotional development can be viewed within multiple and interrelated contexts. The ecological approach to healthy family functioning provides a dynamic framework of multiple supports given within each system, from individual supports such as drug and alcohol treatment to helping families access public and community supports (i.e. SNAP, TANF, and library services) (Bronfenbrenner, 1979). This study supports the conceptual model discussed in Chapter 1 (see Figure 1.); families and children who have multiple risk factors may benefit from intensive interventions thereby improving family and child outcomes. Families who were accessing services in the agency sample had similar stress levels on the PSI-SF as those families who had higher incomes and less environmental risk factors in the online sample. One interpretation of this finding is that accessing resources within the community mediates parental stress. Likewise, there was a negative correlation between the ASQ:SE and ESQ for children 60 months of age in the agency sample for questions relating to housing and relationship problems. This is an important finding given that children in the agency sample are accessing high quality early childhood programs in the community.

Providing needed supports for struggling families is essential to optimal social emotional development for children (Campbell, Wasik et al., 2008; Mervis, 2011). However, some multi-stressed families go undetected by medical, social services, and education professionals. Some agencies and programs that serve families have developed their own criteria and intake tools for assessing high-risk families (Slentz & Bricker, 1992). However, many of these tools are not comprehensive and few are validated (McDonald, Kysela, Drummond, Martin, & Wiles, 1997). Efficient, accurate, and easy to

use assessments are increasingly in demand due to decreases in staff and funds for programs that serve families. Just as universal screening is important in catching early developmental problems in young children, family risk screening may be helpful in ameliorating family problems before they become entrenched (Squires & Bricker, 2007).

The Environmental Screening Questionnaire (ESQ) was developed to quickly identify environmental risk and resource needs that could affect parents' ability to support their child's development, especially in the area of social emotional development while also building on existing family strengths (Squires & Bricker, 2007). Linking families with needed resources and community services is made possible after identification of family needs. Although many programs are not designed or equipped to provide intervention for high-risk families, many can follow through with referrals to community services and resources.

Family assessment measures have many purposes; assessing pathology of family dysfunction, measuring stress, identifying family strengths and needs to provide needed services or resources. Family assessments are developed for specific purposes, but matching the purpose of an assessment to the families being served by a particular program can be problematic (Slentz & Bricker, 1992). Moreover, agencies may not have staff with skills and knowledge to administer some family assessments. For caregivers, family assessments can feel intrusive and judgmental. Observational assessments require a time commitment many professionals and families do not have. The ESQ addresses some of these concerns: It is a brief screening tool effective for agencies and programs that serve diverse families; it can be administered by agency staff with little training or administered through computer format by the caregiver alone; and families are able to

identify their areas of strength as well as need. The current study adds to the research literature on the effectiveness of family assessment measures, however caregiver and professional feedback indicates a need for revisions in some areas of the ESQ.

Revising the ESQ to address caregiver and professional concerns would be the first step before future research can begin. A pilot test of the revised version would determine if those concerns were addressed. A factor analysis would also be appropriate in determining if questions overlap. For example, some items may be collapsed together to reduce administration time. Further testing on the ESQ should involve a larger and more diverse caregiver and agency sample. Gathering more utility data would be beneficial in establishing the ESQ's usefulness across programs. Research should also include method of administration (i.e. computer, interview, group) and if results show differences between groups. Finally, ESQ red flags should be tested to confirm or deny the effectiveness of using red flags to triage families with significant needs.

Implications for Practice

As programs try to serve more families with fewer resources, assessing family strengths and needs may become essential. Triaging the families in most need and also the services that would have the greatest impact on the whole family may be an important function of family assessments in the future. Additionally, as programs struggle with funding, assessing family progress and monitoring access to services may benefit program evaluation efforts.

Programs that serve high-risk families have already used the ESQ for purposes other than intended, such as educational purposes. The potential is promising for multiple uses within agencies that serve high-risk families. Screening at intake and upon

completion of services could document progress toward family goals. Similarly, utilizing the ESQ for developing functional family goals could be useful in establishing family progress and access to needed services in EI/ECSE. Moreover, giving programs options of administration methods will improve the ESQ's usefulness across different programs.

As discussed previously, children with significant behavioral or social emotional problems and from high-risk families may go undetected. Family risk factors as well as children's social emotional development should be screened simultaneously. For example, the accumulative family risk factors in the high-risk group should be brought to the attention of professionals. Seven high-risk online caregivers were not receiving services for their child. This could indicate that some families are unaware of the severity of their child's behavioral problems, have not sought out further evaluation and services, or services are unavailable.

Ultimately, the primary purpose of the ESQ is to improve the family situation thereby improving the young child's environment and providing the occasion for optimal social emotional development, future school readiness, and later school success. This preliminary study investigated the validity and utility of the ESQ; it is my hope this family screening measure will be a valuable tool for improving the lives of children and families in the future.

APPENDIX A

RECRUITMENT

Do you have a child between the ages of 6 months &

5 ½ years?

Would you like to earn a $20 gift certificate?

The University of Oregon Early Intervention program seeks your help to learn more

about how family strengths and needs affect young children.

If you would like more information please see _____(your child's teacher or

program staff).

For more information about the study please contact:

Kathy Moxley (541-517-0621 or kmoxley@uoregon.edu)

Program Recruitment Email

Dear _____ (child care director, teacher, home visitor, agency representative)

My name is Kathleen Moxley. I am a doctoral candidate at the University of Oregon Early Intervention program. I am working on my dissertation study, the Environmental Screening Questionnaire: A Validity and Utility Study. The Environmental Screening Questionnaire (ESQ) is a 36-item tool used to understand risk, resilience, and family resource needs with the aim of improving family outcomes that will affect caregivers' ability to support their young children's social emotional development. I would like to talk with you about the study and how your program staff, caregivers, and children could be involved in the study. Please respond to this email or call 541-517-0621 if you are interested in learning more about the study.
Thank you for your time,
Kathleen Moxley, M.S.

Research Study/Consent Script

1) Introduce study:
    a. I would like to invite you to participate in a study being conducted by Kathy Moxley, a doctoral student in the Early Intervention program at the University of Oregon. You have been invited to participate because you have a child between the ages of six months and 5 ½ years of age. If you agree to participate in the study, you will need to complete some forms, which will be described in a consent form that you will need to sign. Completing all of the forms will take approximately 1 ½ hour of your time. You will receive a $20 gift certificate upon completion of the forms.
    b. Benefits of the study include finding out more about services that may be available in the Lane County area and you will receive a Lane County resource guide. The study could help researchers, early childhood programs, and other parents and children by understanding how family strengths and needs affect young children's development and overall family functioning.
    c. Would you like to read the consent form or have me read it to you?
        i. If yes, read the consent form or give it to the caregiver to read.
        ii. If no, thank the caregiver for their time.

APPENDIX B

CONSENT FORMS

University of Oregon
University of Oregon Early Intervention Program
Parent/caregiver Consent to Take Part in Research
Of the Environmental Screening Questionnaire
Kathy Moxley, M.S., Doctoral Candidate
Jane Squires, Ph.D., (Advisor)
U of O IRB Protocol Number: [12122011.006]

You are invited to participate in a research study conducted by Kathy Moxley, M.S., a doctoral student in the Early Intervention Program at the University of Oregon (UO)**.** As part of my dissertation I am gathering information on a parent/caregiver-completed risk and resilience screening tool named the Environmental Screening Questionnaire (ESQ).

Why have I been asked to take part in the study?
- Because you have a child between the ages of 6 months and 5 &1/2 years.

What do I do first?
- Before agreeing, please read this form.
- Please ask any questions that you may have.

What is the Study about?
- We are studying how well a parent/caregiver-completed questionnaire identifies family strengths, risks, and resource needs.
- An accurate parent/caregiver-completed questionnaire may help identify family needs that may support their child's social emotional development.

Who will take part in the Study?
>   Any parents/caregivers who have children between the ages of 6 months and 5 & 1/2 years.
- Teachers/program staff that have direct contact with families of young children.

If I agree to take part, what will I be asked to do?
- Complete 1 questionnaire about your family and 1 about your child.
- Complete a questionnaire about your stress level.
- Complete information about your family such as income, education, and ethnicity.
- Complete a satisfaction survey.
- Completing the questionnaires will take about 1.5 hours total time.
- You will receive a gift certificate for $20 (after all questionnaires are completed)

What are the risks of being in the study?:
- There is a small risk that the information you share would not be kept private.
- Researchers follow rules to make sure records are kept private.

- Due to the personal nature of some of the questions on the ESQ, you may feel some emotional discomfort.

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What are the benefits of being in the study?

- If you have concerns about your family's needs or your child's development, you can talk to your child's teacher, home visitor, program staff, or the researcher about resources in your community and receive a Lane County resource guide.
- You may experience good feelings for helping other families and children through information gained in the study

How will things I say be kept private?

- The records of this study will be kept private.
- In any type of report we may write, we will not include your name or your child's name.
- Research records will be kept in a locked file.
- Research records will be destroyed within 3 years.
- Access to the research records will be limited to the researchers.
- Although we will otherwise maintain confidentiality, we are required to report evidence of child or elder abuse.

What if I choose to not take part or leave the study?

- Your participation is voluntary.
- If you do not participate it will not affect your relationship with the University of Oregon or your child's current educational placement.
- If you decide to participate, you are free to stop participation at any time.

Who can I contact if I have any questions?

- You can call Kathy Moxley at 541-517-0621 or Dr. Jane Squires at 541-346-0807.
- If you believe you may have suffered injury or harm from this research, call Kathy Moxley, 541-517-0621 or Dr. Jane Squires (advisor), 541-346-0807. She will tell you what to do next.
- If you have any questions about your rights as a person taking part in the study, you may call: Office Protection of Human Subjects, University of Oregon at 541-345-2510, human_subjects@uoregon.edu.

Statement of Consent:

- I have read (or have had read to me) the contents of this consent form.
- I have been encouraged to ask questions.
- I have received answers to my questions.
- I give my consent to take part in this study.
- I have received (or will receive) a copy of this form

Study Participant (Print Name):

Participant Sign Here
Date of Signature

ESQ Oregon online consent form Nov 25, 2011

Dear Parents,

You are invited to participate in a research study that will investigate the use of an online risk, resilience, and resource need questionnaire to help families check their strengths and needs in multiple areas.

If your child is between birth and 5 1/2 years she/he can participate in the study. If you decide to participate you will complete one questionnaire about your family and one questionnaire about your child's social emotional development. You will also be asked to supply some background information on your family such as education and ethnic group and complete a survey about the family questionnaire. The total time to complete the questionnaires, background information, and the survey will take about 1hour to complete.

All your responses will remain anonymous unless you instruct the researcher to get in touch with you regarding your child's social emotional development. Your name will not appear anywhere on the questionnaire. Websites are secure and password protected to ensure participant confidentiality. Upon submission, answers are sent directly to the researcher with random identification number that is created when you submit the consent form. The identification number provides anonymity of data stored on a separate, secure database. Your email address will only be used to respond to your requests. This database is secure and password protected, accessible only to the researchers on this project. Any identifying information connected to your computer (IP address) will not be recorded at any time. In addition, all data will be analyzed according to groups rather than by individual case.

There are benefits involved for participants and for humanity in general. An accurate screening tool for family strengths and needs as well as accurate screening for social emotional development may improve the quality of life for some families and children by providing referral information for further assessment and early intervention services in a timely manner. Participants will be provided a contact email and phone number to discuss any concerns related to their child's development.

If you have any questions regarding the research, contact Kathy Moxley, doctoral candidate at (541) 517-0621. You may also reach us at the Early Intervention Program, University of Oregon, 5253 University of Oregon, Eugene, OR 97403-5253. If you have any questions regarding your rights as a research subject, please contact the Office of Human Subjects Compliance at the University of Oregon at 541.346.2510. Thank you for your help.

Submitting this form indicates that you have read and understand the information provided above, that you willingly agree to participate, that you may withdraw your

consent at any time and discontinue participation at any time without penalty, and that you are not waiving any legal claims, rights or remedies.

You may save this consent form and print for your records here.

Sincerely,

Kathy Moxley

kmoxley@uoregon.edu

541-517-0621

University of Oregon
University of Oregon Early Intervention Program
Teacher/Program Staff Consent to Take Part in Research
Of the Environmental Screening Questionnaire
Kathy Moxley, M.S., Doctoral Candidate
Jane Squires, Ph.D., (Advisor)
U of O IRB Protocol Number: [12122011.006\]

You are invited to participate in a research study conducted by Kathy Moxley, M.S., a doctoral student in the Early Intervention Program at the University of Oregon (UO). As part of my dissertation I am gathering information on a parent/caregiver-completed risk and resilience screening tool named the Environmental Screening Questionnaire (ESQ).

Why have I been asked to take part in the study?
- Because you are a teacher, home visitor, or other program staff who has a relationship with parents/caregivers in the program where you work.

What do I do first?
- Before agreeing, please read this form.
- Please ask any questions that you may have.

What is the Study about?
- We are studying how well a parent/caregiver-completed questionnaire identifies family strengths, risks, and resource needs.
- An accurate parent/caregiver-completed questionnaire may help identify family needs that may support their child's social emotional development.

Who will take part in the Study?
- Any parents/caregivers who have children between the ages of 6 months and 5 & 1/2 years.
- Teachers/program staff that have direct contact with families of young children.

If I agree to take part, what will I be asked to do?
- Help the caregiver complete 1 questionnaire about their family and 1 about their child (ASQ:SE).
- Help the caregiver complete a questionnaire about their stress level regarding parenting.
- Complete a one-time demographic/satisfaction survey.
- Helping families to complete the questionnaires could take about 2 hours total time.
- If you choose to give the information to families to complete on their own, it would take about 15 minutes to explain the procedures and record code numbers
- You will receive a gift certificate for $25 (independent of number of family cases).

What are the risks of being in the study?:
- There is a small risk that the information you share would not be kept private.

- Researchers follow rules to make sure records are kept private.
- Due to the personal nature of some of the questions on the ESQ, you may feel some emotional discomfort when talking to caregivers regarding personal risk factors.

What are the benefits of being in the study?
- You may gain a better understanding of the families you work with and be able to assist them in finding resources.

- You may feel altruistically about the research by helping to promote professional/caregiver relationships that will assist families in supporting their young children's social emotional development.

How will things I say be kept private?
- The records of this study will be kept private.
- In any type of report we may write, we will not include your name or any families' names you work with.
- Research records will be kept in a locked file.
- Research records will be destroyed within 3 years.
- Access to the research records will be limited to the researchers.

What if I choose to not take part or leave the study?
- Your participation is voluntary.
- If you do not participate it will not affect your relationship with the University of Oregon or your work place.
- If you decide to participate, you are free to stop participation at any time.

Who can I contact if I have any questions?
- You can call Kathy Moxley at 541-517-0621 or Dr. Jane Squires at 541-346-0807.
- If you believe you may have suffered injury or harm from this research, call Kathy Moxley, 541-517-0621 or Dr. Jane Squires (advisor), 541-346-0807. She will tell you what to do next.
- If you have any questions about your rights as a person taking part in the study, you may call: Office Protection of Human Subjects, University of Oregon at 541-345-2510, human_subjects@uoregon.edu.
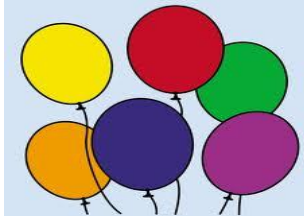
Statement of Consent:
- I have read (or have had read to me) the contents of this consent form.
- I have been encouraged to ask questions.
- I have received answers to my questions.
- I give my consent to take part in this study.
- I have received (or will receive) a copy of this form

Study Participant (Print Name):

Participant Sign Here   **Date of Signature**

APPENDIX C

MEASURES

ESQ Study
Family / Child Information Form

1. Person completing this form…
__Mother, __Father, __Both parents, __Grandparent(s), __Guardian,
__Foster parent, __ Adoptive parent(s), __Teacher/ Home visitor
__Other

2. Current age of person completing this form: _____

3. Mother's age at birth of first child: _____

4.. Marital status (please circle one):
a. Married or domestic partnership   c. Single never married
b. Divorced/ separated   d. Widowed
e. Other

5. Parent/caregiver education (person completing form)
a. Elementary   e. AA/2yr degree
b. Some high school   f. Four year degree
c. High school/GED   g. Graduate degree
d. Some college

6. How many adults in your household _____

7. How many children in your household   _____

8. Parent/caregiver? Annual household income (circle one)
a. $ 0 – 12,000   c. $ 24,000- 40,000
b. $ 12,00-24,000   d. $Over 40,000

8. Parent /caregiver ethnicity (circle one)
a. White   b.Black or African American,   c.Asian,
d.Native American,   e.Pacific Islander   f.Hispanic or Latino
g.Some other race,   h. Two or more races   i.Don't know

9. Gender of person completing form (circle one)
a. male   b. female

10. Does your child have a disability or delay in development? (circle one)
a. no   b. yes   c. not sure

11. If yes, or not sure, please
describe:_____

12. Is your child currently receiving support services? (Circle one)   a. no   b. yes

13. If yes, please describe the
services:_____

Environmental Screening Questionnaire (ESQ™)
Experimental Edition

The Environmental Screening Questionnaire (ESQ) was designed to identify risk and protective factors in a child's environment that might affect a parent or other caregiver's ability to support his or her child's social emotional development. Risk factors related to poverty, such as no telephone or transportation, frequent moves, and credit problems are included on the ESQ as well as emotional stresses such as an absent partner, child with behavior problems, and caregiver depression. Also assessed are the protective factors that may assist a family in providing a supportive and nurturing environment for their child, such as the availability of friends and family, educational assets, and reasonable living arrangements.

Administration

An explanation of the intent of the ESQ should be offered to caregivers before it is completed. The explanation should include the measure's purpose: *to look at factors in the child's environment that might affect the caregiver's ability to support his or her child's development.* In addition, all caregiver questions and concerns should be addressed to ensure that maximum comfort levels and understanding have been reached.

The ESQ can be completed using a variety of strategies; however, if program resources permit, the preferred strategy for completing the measure is through caregiver interview. Program personnel can read and discuss each item with the caregiver. An interview format permits program personnel to explain items to caregivers, answer questions that may arise, and discuss issues that may surface for caregivers. Caregivers can also complete the ESQ independently, with a follow-up discussion completed by program personnel.

Caregivers should be encouraged to consider each item and select the "Yes" or "No" option depending on their situation. Caregivers should be encouraged to answer all questions; however, they may choose not to answer questions that they feel are too personal.

Some questions ask about specific time periods and some questions are open ended. Encourage caregivers to answer the questions as best fits the family's current situation.

Caregivers should be encouraged to check the box marked "Concern" if an item is a concern for them, or if they are having difficulty in that area and/or they would like assistance with that particular item or issue. Practitioners should discuss caregiver concerns with the caregiver and should respond to all concerns by exploring available resources and making appropriate referrals.

Scoring

Each question has a z or an x next to the "Yes" and "No" box options. The z answers receive 0 points and the x answers receive 10 points. Items that parents checked as a "Concern," indicated with a v, receive an additional 5 points. Points are summed to get a score for each area as well as a total score for the tool. Higher scores indicate a greater number of risk factors that *may* impact caregivers' ability to meet their child's developmental and social emotional needs and may indicate a need for additional resources to support the family.

Prior to using the ESQ, personnel should have assembled a list of available resources and referral agencies so that caregivers who indicate a significant problem can be offered timely and appropriate referrals. The final page of the ESQ is a Summary of Scores/Referral Form that should be completed for any caregiver/family whose score indicates a problem.

Environmental Screening Questionnaire (ESQ™)
Experimental Edition

Caregivers Name: _____

Date: _____

Please read each question carefully and
1. Check Yes or No to answer each question.
2. Check the "Concern" box if you are worried about this area.

A. Education and Employment	Yes	No	Concern?
1. Are you a high school or GED graduate?	□ z	□ x	□ v
2. Do language problems get in the way of finding or keeping a job?	□ x	□ z	□ v
3. Do you have problems with reading or writing?	□ x	□ z	□ v
4. Are you currently employed or enrolled in classes or job training?	□ z	□ x	□ v
5. Are you currently employed at the level that you'd like to be?	□ z	□ x	□ v
Total			

Are you receiving help with school or jobs?
Would you like help with questions or concerns about education or jobs? If yes, what kind of help?

	Area total	

B. Housing	Yes	No	Concern?
1. Do you own or rent a home or apartment?	□ z	□ x	□ v
2. Do you need to live with friends or family because you can't afford your own housing?	□ x	□ z	□ v
3. Have you moved three or more times in the last year?	□ x	□ z	□ v
4. Does your home have heat, electricity, and water?	□ z	□ x	□ v
5. Do you and your children feel safe in your neighborhood?	□ z	□ x	□ v
Total			

Have you received help to pay for housing now or in the past?

Would you like help with questions or concerns about housing? If yes, what kind of help?

	Area total	

C. Child and Family Health	Yes	No	Concern?
1. Do you or anyone in your home have major health problems?	☐ x	☐ z	☐ v
2. Do you and your family members have health insurance or access to regular medical and dental care?	☐ z	☐ x	☐ v
3. Does anyone in your home have alcohol or drug problems?	☐ x	☐ z	☐ v
4. Does anyone in your home have problems with depression, anger, or anxiety?	☐ x	☐ z	☐ v
5. Do you have a child with a learning or behavior problem?	☐ x	☐ z	☐ v
Total			

Have you or anyone in your home received help with major health problems or behavior problems?

Would you like help with questions or concerns about your health or another family member's health or behavior? If yes, what kind of help?

Area total ☐

D. Economic and Financial	Yes	No	Concern?
1. Do you have food for 2 meals each day?	☐ z	☐ x	☐ v
2. Does your income cover your monthly expenses?	☐ z	☐ x	☐ v
3. Do you currently use programs such as WIC, Food Stamps, or Medicaid?	☐ x	☐ z	☐ v
4. Do you have credit problems?	☐ x	☐ z	☐ v
5. Do you have regular telephone service?	☐ z	☐ x	☐ v
Total			

Have you received help with financial problems? (Examples include credit counseling, food banks, and emergency financial services).
Would you like help with questions or concerns about money problems? If yes, what kind of help?

Area total ☐

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Environmental Screening Questionnaire (ESQ™)
Experimental Edition

E. Home and Family	Yes	No	Concern?
1. Do you have a spouse/partner who lives with you most of the time?	☐ z	☐ x	☐ v
2. Do you have frequent spouse/partner conflicts?	☐ x	☐ z	☐ v
3. Are you in a relationship in which you have been physically hurt, felt threatened, or controlled by someone else?	☐ x	☐ z	☐ v
4. Do you have childcare that meets your family's needs?	☐ z	☐ x	☐ v
5. Has your child seen or heard violence at home or in the neighborhood?	☐ x	☐ z	☐ v
Total			

Have you gotten help with any family problems? (Examples include counseling, parenting classes, support from child protective services).
Would you like help with questions or concerns about your relationships or home-related problems? If yes, what kind of help?

Area total [   ]

F. Community	Yes	No	Concern?
1. Does your family join in community activities? (Examples include going to the library, doing sports, going to church, other events in the community).	☐ z	☐ x	☐ v
2. Do you have people to talk to about your problems?	☐ z	☐ x	☐ v
3. Does your child or children get along well with other children?	☐ z	☐ x	☐ v
4. Do you have friends or family who can help when you need it?	☐ z	☐ x	☐ v
5. Do you have regular transportation? (Examples include car, bus, train, subway.)	☐ z	☐ x	☐ v
Total			

Have you used services in the community? (Examples include family fun guide, local support groups, and library story hour).
Would you like help with questions or concerns about community issues or transportation?

Area total [   ]

Environmental Screening Questionnaire (ESQ™)
Experimental Edition
Summary of Scores Referral Form

Caregiver's name or code #:
Child's name or code #:
Person filling out the ESQ:
Administering program/provider:

Transfer scores from each question and area.

	Q1	Q2	Q3	Q4	Q5	Total
Education/employment						
Housing						
Health/behavior						
Economic/ Financial						
Home & Family						
Community						
						Total Score

Follow-up Action Taken: check all that apply and describe below.

____Refer for (check all that apply):

      ____Educational assistance (circle all that apply): GED classes, ESL Classes, Other

      ____ Job training/employment assistance

      ____ Housing assistance

      ____Medical/dental care

      ____Alcohol and/or drug treatment

      ____Counseling/therapy (circle all that apply): individual, couples, family

      ____Early intervention/early childhood special education

      ____Financial counseling/credit counseling

      ____Domestic violence counseling

      ____Anger management

      ____Parenting support

      ____Family support services (e.g., respite care, family recreation activities, family support groups)

      ____Community resources (e.g., spiritual/religious, sports, camps, arts, community gardens)

____Other (specify):

____IFSP/IEP Family Priorities/Concerns (specify):

____No further action taken at this time

____Rescreen in ____ months

Please list actions taken:

PSI-SF

Name_____ Gender_____ Date of birth_____ Ethnic group_____ Marital status_____

Child's name _____ Child's gender_____ Child's date of birth_____ Today's date_____

SA = Strongly Agree	A = Agree	NS = Not Sure	D = Disagree	SD = Strongly Disagree

1.	I often have the feeling that I cannot handle things very well.	SA	A	NS	D	SD
2.	I find myself giving up more of my life to meet my children's needs than I ever expected.	SA	A	NS	D	SD
3.	I feel trapped by my responsibilities as a parent.	SA	A	NS	D	SD
4.	Since having this child, I have been unable to do new and different things.	SA	A	NS	D	SD
5.	Since having a child, I feel that I am almost never able to do things that I like to do.	SA	A	NS	D	SD
6.	I am unhappy with the last purchase of clothing I made for myself.	SA	A	NS	D	SD
7.	There are quite a few things that bother me about my life.	SA	A	NS	D	SD
8.	Having a child has caused more problems than I expected in my relationship with my spouse (or male/female friend).	SA	A	NS	D	SD
9.	I feel alone and without friends.	SA	A	NS	D	SD
10.	When I go to a party, I usually expect not to enjoy myself.	SA	A	NS	D	SD
11.	I am not as interested in people as I used to be.	SA	A	NS	D	SD
12.	I don't enjoy things as I used to.	SA	A	NS	D	SD
13.	My child rarely does things for me that make me feel good.	SA	A	NS	D	SD
14.	Sometimes I feel my child doesn't like me and doesn't want to be close to me.	SA	A	NS	D	SD
15.	My child smiles at me much less than I expected.	SA	A	NS	D	SD
16.	When I do things for my child, I get the feeling that my efforts are not appreciated very much.	SA	A	NS	D	SD
17.	When playing, my child doesn't often giggle or laugh.	SA	A	NS	D	SD
18.	My child doesn't seem to learn as quickly as most children.	SA	A	NS	D	SD
19.	My child doesn't seem to smile as much as most children.	SA	A	NS	D	SD
20.	My child is not able to do as much as I expected.	SA	A	NS	D	SD
21.	It takes a long time and it is very hard for my child to get used to new things.	SA	A	NS	D	SD

For the next statement, choose your response from the choices "1" to "5" below.

22.	I feel that I am:	1. not very good at being a parent	1	2	3	4	5
		2. a person who has some trouble being a parent					
		3. an average parent					
		4. a better than average parent					
		5. a very good parent					

23.	I expected to have closer and warmer feelings for my child than I do and this bothers me.	SA	A	NS	D	SD
24.	Sometimes my child does things that bother me just to be mean.	SA	A	NS	D	SD
25.	My child seems to cry or fuss more often than most children.	SA	A	NS	D	SD
26.	My child generally wakes up in a bad mood.	SA	A	NS	D	SD
27.	I feel that my child is very moody and easily upset.	SA	A	NS	D	SD
28.	My child does a few things which bother me a great deal.	SA	A	NS	D	SD
29.	My child reacts very strongly when something happens that my child doesn't like.	SA	A	NS	D	SD
30.	My child gets upset easily over the smallest thing.	SA	A	NS	D	SD
31.	My child's sleeping or eating schedule was much harder to establish than I expected.	SA	A	NS	D	SD

For the next statement, choose your response from the choices "1" to "5" below:

32.	I have found that getting my child to do something or stop doing something is:	1. much harder than I expected	1	2	3	4	5
		2. somewhat harder than I expected					
		3. about as hard as I expected					
		4. somewhat easier than I expected					
		5. much easier than I expected					

For the next statement, choose your response from the choices "10+" to "1-3."

33.	Think carefully and count the number of things which your child does that bother you. For example: dawdles, refuses to listen, overactive, cries, interrupts, fights, whines, etc.	10+	8-9	6-7	4-5	1-3
34.	There are some things my child does that really bother me a lot.	SA	A	NS	D	SD
35.	My child turned out to be more of a problem than I had expected.	SA	A	NS	D	SD
36.	My child makes more demands on me than most children.	SA	A	NS	D	SD

36 Month/3 Year ASQ:SE ❀ Questionnaire ❀

(For children ages 33 through 41 months)

○ ○

Please provide the following information.

Child's name: _____

Child's date of birth: _____

Today's date: _____

Person filling out this questionnaire: _____

What is your relationship to the child? _____

Your telephone: _____

Your mailing address: _____

_____

City: _____

State: _____ ZIP code: _____

List people assisting in questionnaire completion: _____

_____

Administering program or provider: _____

ASQ❀SE™

Please read each question carefully and
1. Check the box ❑ that best describes your child's behavior *and*
2. Check the circle ◯ if this behavior is a concern

		MOST OF THE TIME	SOMETIMES	RARELY OR NEVER	CHECK IF THIS IS A CONCERN
1.	Does your child look at you when you talk to her?	❑ z	❑ v	❑ x	◯
2.	Does your child like to be hugged or cuddled?	❑ z	❑ v	❑ x	◯
3.	Does your child talk and/or play with adults he knows well?	❑ z	❑ v	❑ x	◯
4.	Does your child cling to you more than you expect?	❑ x	❑ v	❑ z	◯
5.	When upset, can your child calm down within 15 minutes?	❑ z	❑ v	❑ x	◯
6.	Does your child seem too friendly with strangers?	❑ x	❑ v	❑ z	◯
7.	Can your child settle herself down after periods of exciting activity?	❑ z	❑ v	❑ x	◯
8.	Can your child move from one activity to the next with little difficulty, such as from playtime to mealtime?	❑ z	❑ v	❑ x	◯
9.	Does your child seem happy?	❑ z	❑ v	❑ x	◯

TOTAL POINTS ON PAGE _____

	MOST OF THE TIME	SOMETIMES	RARELY OR NEVER	CHECK IF THIS IS A CONCERN
10. Is your child interested in things around him, such as people, toys, and foods?	☐ z	☐ v	☐ x	○
11. Does your child do what you ask her to do?	☐ z	☐ v	☐ x	○
12. Does your child seem more active than other children her age?	☐ x	☐ v	☐ z	○
13. Can your child stay with activities she enjoys for at least 5 minutes (not including watching television)?	☐ z	☐ v	☐ x	○
14. Do you and your child enjoy mealtimes together?	☐ z	☐ v	☐ x	○
15. Does your child have eating problems, such as stuffing foods, vomiting, eating nonfood items, or _____ ? (You may write in another problem.)	☐ x	☐ v	☐ z	○
16. Does your child sleep at least 8 hours in a 24-hour period?	☐ z	☐ v	☐ x	○
17. Does your child use words to tell you what he wants or needs?	☐ z	☐ v	☐ x	○

TOTAL POINTS ON PAGE ___

	MOST OF THE TIME	SOMETIMES	RARELY OR NEVER	CHECK IF THIS IS A CONCERN
18. Does your child follow routine directions? For example, does she come to the table or help clean up her toys when asked?	☐ z	☐ v	☐ x	○
19. Does your child cry, scream, or have tantrums for long periods of time?	☐ x	☐ v	☐ z	○
20. Does your child check to make sure you are near when exploring new places, such as a park or a friend's home?	☐ z	☐ v	☐ x	○
21. Does your child do things over and over and can't seem to stop? Examples are rocking, hand flapping, spinning, or _____ . (You may write in something else.)	☐ x	☐ v	☐ z	○
22. Does your child hurt himself on purpose?	☐ x	☐ v	☐ z	○
23. Does your child stay away from dangerous things, such as fire and moving cars?	☐ z	☐ v	☐ x	○
24. Does your child destroy or damage things on purpose?	☐ x	☐ v	☐ z	○
25. Does your child use words to describe her feelings and the feelings of others, such as, "I'm happy," "I don't like that," or "She's sad"?	☐ z	☐ v	☐ x	○

TOTAL POINTS ON PAGE ___

139

	MOST OF THE TIME	SOMETIMES	RARELY OR NEVER	CHECK IF THIS IS A CONCERN
26. Can your child name a friend?	☐ z	☐ v	☐ x	○
27. Do *other* children like to play with your child?	☐ z	☐ v	☐ x	○
28. Does *your child* like to play with other children?	☐ z	☐ v	☐ x	○
29. Does your child try to hurt other children, adults, or animals (for example, by kicking or biting)?	☐ x	☐ v	☐ z	○
30. Does your child show an interest in or knowledge of sexual language and activity?	☐ x	☐ v	☐ z	○
31. Has anyone expressed concerns about your child's behaviors? If you checked "sometimes" or "most of the time," please explain:	☐ x	☐ v	☐ z	○

_____

_____

_____

_____

32. Do you have any concerns about your child's eating, sleeping, or toileting habits? If so, please explain:

_____

_____

_____

_____

TOTAL POINTS ON PAGE ____

33. Is there anything that worries you about
    your child? If so, please explain:

    _____

    _____

    _____

    _____

34. What things do you enjoy most about your child?

    _____

    _____

    _____

    _____

36 Month/3 Year ASQ:SE Information Summary

Child's name: _____   Child's date of birth: _____

Person filling out the ASQ:SE: _____   Relationship to child: _____

Mailing address: _____   City: _____ State: _____ ZIP: _____

Telephone: _____   Assisting in ASQ:SE completion: _____

Today's date: _____   Administering program/provider: _____

● ●

SCORING GUIDELINES

1. Make sure the parent has answered all questions and has checked the concern column as necessary. If all questions have been answered, go to Step 2. If not all questions have been answered, you should first try to contact the parent to obtain answers or, if necessary, calculate an average score (see pages 39 and 41 of *The ASQ:SE User's Guide*).

2. Review any parent comments. If there are no comments, go to Step 3. If a parent has written in a response, see the section titled "Parent Comments" on pages 39, 41, and 42 of *The ASQ:SE User's Guide* to determine if the response indicates a behavior that may be of concern.

3. Using the following point system:

Z (for zero) next to the checked box	= 0 points
V (for Roman numeral V) next to the checked box	= 5 points
X (for Roman numeral X) next to the checked box	= 10 points
Checked concern	= 5 points

Add together:

Total points on page 3	= _____
Total points on page 4	= _____
Total points on page 5	= _____
Total points on page 6	= _____
Child's total score =	_____

SCORE INTERPRETATION

1. *Review questionnaires*

   Review the parent's answers to questions. Give special consideration to any individual questions that score 10 or 15 points and any written or verbal comments that the parent shares. Offer guidance, support, and information to families, and refer if necessary, as indicated by score and referral considerations.

2. *Transfer child's total score*

   In the table below, enter the child's total score (transfer total score from above).

Questionnaire interval	Cutoff score	Child's ASQ:SE score
36 months/3 years	59	

3. *Referral criteria*

   Compare the child's total score with the cutoff in the table above. If the child's score falls above the cutoff and the factors in Step 4 have been considered, refer the child for a mental health evaluation.

4. *Referral considerations*

   It is always important to look at assessment information in the context of other factors influencing a child's life. Consider the following variables prior to making referrals for a mental health evaluation. Refer to pages 44–46 in *The ASQ:SE User's Guide* for additional guidance related to these factors and for suggestions for follow-up.

   * Setting/time factors
     (e.g., Is the child's behavior the same at home as at school?, Have there been any stressful events in the child's life recently?)

   * Development factors
     (e.g., Is the child's behavior related to a developmental stage or a developmental delay?)

   * Health factors
     (e.g., Is the child's behavior related to health or biological factors?)

   * Family/cultural factors
     (e.g., Is the child's behavior acceptable given cultural or family context?)

● ●

Ages & Stages Questionnaires®: Social-Emotional, Squires et al. ASQ&SE™ 36 months/3 years
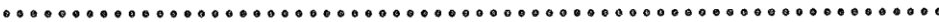
Caregiver/Parent ESQ Satisfaction Survey

Instructions: **Please complete this survey** *after* **completing the Environmental Screening Questionnaire.**

1. What method did you use to fill out the ESQ?

   ___I filled it out myself ___A teacher or staff member helped me to fill it out

   ___I filled it out on a computer
         Other_____

2. How long did it take you to complete the ESQ?

   ___Less than 10 minutes _____10-20 minutes

   ___20-30 minutes _____more than 30 minutes

3. It was easy to understand the questions on the ESQ. **Please circle one.**

   Yes

   Sometimes No

   Please list any questions that were **difficult** to understand.
   Section & Question Number(s) **Comments?**
   _____

   _____

4. Were there any questions that you did not answer on the ESQ? If so, what was it about the question that kept you from answering it?
         Section & Question Number(s) Comments?

_____

_____

_____

(Please continue on other side of this form)

5. Please check all that apply.
   Completing the ESQ:
   __ was helpful
   __ was useful
   __ helped me think about how our current situation affects our family (or child/children)
   __ gave me ideas about support from community services that might be available
   __ helped my child's caregiver learn more about me and my family
   __ was not helpful
   __ was a waste of my time
   __was interesting
   __ didn't tell me much

   Comments
   _____
   _____
   _____
   _____

6. How would you change the ESQ to make it better?
   _____
   _____
   _____
   _____

Teacher/Program Staff
Environmental Screening Questionnaire (ESQ) Satisfaction Survey

SECTION I (*Please check **all** that apply*)

1) Your Field/Agency

___ Public Health

___ Education/Special Education

___ Mental Health

___ Social Services

___ Other (please describe) _____

2) Your education level

___ Partial High school

___ High School degree

___ Partial college/AA degree

___ 4 year college degree

___ Graduate degree

3) Years of Experience_____

4) Your Job Description ESQ?

__ Child care provider

___Nurse/healthcare provider

___ EI/ECSE provider

___ Home visitor

___ Intake/Assessment Specialist to caregiver

___ Mental Health Specialist describe):_____

___ other (please describe) : _____

5) How did you administer the

___ on a home visit

___ phone interview

___ at a center/clinic

___ sent it home after explaining it

___ other (please describe):

6) I plan to use the ESQ again. (Check one)

巋Strongly agree   巋Agree   巋No opinion   巋Disagree   巋Strongly disagree

*If not, please comment on your reason(s):*_____

_____

_____

SECTION II (*Please circle the # that best describes your feeling about the following statements*)

1) **The information obtained through the ESQ is useful in my work with families.**
Strongly Disagree   Strongly Agree
1   2   3   4

2) **Using the ESQ helps caregivers identify areas of family strengths and resource needs.**
Strongly Disagree   Strongly Agree
1   2   3   4

3) **Using the ESQ helps identify areas of family resource need and helps me to make referral decisions.**
Strongly Disagree   Strongly Agree
1   2   3   4

4) **The ESQ will help me to monitor family strengths, risks, and needs over time.**
Strongly Disagree   Strongly Agree
1   2   3   4

SECTION III *(Please give us feedback on the ASQ:SE)*

1) What did you like about the ESQ?

_____

_____

_____

_____**2) What did you**

dislike about the ESQ?

_____

_____

_____-

_____

_____

3) Please list any changes to specific sections (e.g., questions you would like added, omitted or reworded) or general suggestions you have for improving the ESQ:

_____

_____

_____

_____

_____

_____

_____

_____

_____

THANK YOU VERY MUCH FOR YOUR TIME AND HELP
Please call Kathy Moxley at 541-517-0621 or email
kmoxley@uorgeon.edu

APPENDIX D

ESQ RED FLAG TABLES

Table 1.D
ESQ and PSI-SF Correlations by Question-Parental Distress Subscale

Sample	ESQ area and question	PSI Question	Spearman's rho
Agency			
	A1	5	-.32
	A5	10	.28
	A5	11	.31
Online			
	A1	10	.21**
	A3	5	-.21
	A3	12	.24**
	A5	7	.15
	A5	9	.16
	A5	10	.19**
	A5	11	.23**
	A5	12	.18
Agency			
	B1	8	.27
	B1	10	.30
	B2	7	.27
	B4	5	-.31
Online			
	B2	2	-.15
	B3	2	-.20**
	B5	4	.18
	B5	8	.20**
Agency			
	C2	9	.27
	C4	5	.29
	C4	9	.27
	C4	10	.29
	C4	12	.34**
Online			
	C3	1	.17
	C3	3	.18**
	C3	5	.15
	C3	7	.15
	C3	8	.17
	C4	1	.26**
	C4	5	.15
	C4	7	.21**
Agency			
	D3	9	.27

Table 1.D (continued)

Sample	ESQ area and question	PSI Question	Spearman's rho
	D3	10	.34**
	D4	2	-.27
	D4	4	-.31
Online			
	D2	5	.14
	D3	7	.15
	D3	11	.22**
	D4	6	.22**
	D4	7	.23**
	D5	9	.15
Agency			
	E2	7	.36**
	E2	9	.30
	E2	12	.31
	E3	9	.32
	E4	4	.33
	E5	8	.28
	E5	10	.40**
Online			
	E2	7	24**
	E2	8	.17
	E3	7	.16
	E4	9	.20**
Agency			
	F1	4	.44**
	F1	9	.36**
	F3	8	-.26
	F4	8	.27
	F4	12	.28
Online			
	F1	4	.15
	F1	7	.18
	F1	10	.21**
	F1	11	.15
	F1	12	.15
	F2	5	.16
	F2	7	.21
	F2	9	.24**
	F2	10	.22**
	F2	12	.20**
	F3	1	.18**
	F4	9	.17
	F4	10	.16

*$p < .05$; ** $p < .01$

Table 2.D

ESQ and PSI-SF Correlations by Question-Parent-Child Dysfunctional Interaction Subscale

Sample	ESQ area and question	PSI Question	Spearman's rho
Agency			
	A2	13	.27
Online			
	A1	15	.15
	A2	18	.18
	A2	22	.15
Agency			
	B2	21	-.26
	B3	13	-.35**
	B4	18	-.31
	B4	20	-.33
	B5	18	-.29
Online			
	B1	22	.15
Agency			
	C1	20	.30
	C2	17	.27
	C3	18	-.37**
	C5	18	.60**
	C5	20	.49**
	C5	21	.30
Online			
	C3	19	.14
	C4	18	.17
	C5	13	.22**
	C5	15	.16
	C5	17	.18
	C5	18	.37**
	C5	19	.22**
	C5	20	.27**
	C5	21	.34**
	C5	24	.17
Agency			
	D2	18	-.34
	D3	18	-.29
	D3	20	-.31
	D4	18	-.38**
	D5	13	-.33
	D5	22	-.29

Table 2.D (continued)

Sample	ESQ area and question	PSI Question	Spearman's rho
	E3	13	-.27
	E3	14	-.26
	E4	22	-.34
Online			
	E5	18	.20**
Agency			
	F2	18	.27
Online			
	F1	14	.21**
	F1	18	.14
	F1	19	.21**
	F1	20	.23**
	F1	22	.14
	F1	23	.23**
	F2	22	.21**
	F3	13	.18
	F3	16	.19**
	F3	18	.17
	F3	19	.18
	F3	20	.19**
	F3	22	.16
	F3	23	.14
	F4	21	.16

*$p < .05$; ** $p < .01$

Table 3.D
ESQ and PSI-SF Correlations by Question- Difficult Child Subscale

Sample	ESQ area and question	PSI Question	Spearman's rho
Online			
	A2	25	.40
	A2	26	.42
	A2	27	.40
	A2	33	.43**
	A3	35	.70
	A3	36	.35
	A4	36	.34
	A5	26	.38
	A5	27	.37
Agency			
	B2	35	.63
	B2	36	.63
Agency			
	C5	33	.63
Online			
	C4	27	.33
	C4	30	.38
	C5	25	.48**
	C5	26	.57**
	C5	27	.47**
Sample			
	C5	30	.47**
	C5	33	.50**
	C5	35	.42
	C5	36	.75**
Agency			
	D3	28	-.60
	D4	31	.68
Online			
	D2	26	.36
	D2	28	.35
	D2	29	.44**
	D2	30	.40
	D2	35	.48**
	D3	26	.35

Table 3.D (continued)

ESQ area and question	PSI Question	Spearman's rho	.63
Online			
	E1	31	-.34
	E4	35	.42
Online			
	F2	35	.56**
	F4	35	.70**

*p < .05; ** p < .01

SUPPLEMENTAL MATERIALS

ESQ Study Agency Participants

Willamette Family Treatment Services is and agency that serves men and women with addiction problems through residential and outpatient treatment programs since 1960 (http://www.wfts.org). Willamette Family Women's Services is a drug and alcohol treatment center specifically for women with an on-site child development center, parent training classes, mental health counseling, and transitional housing.

Options Counseling, founded in 1991, provides mental health and skill building to individuals and families (http://www.options.org/). The Options program, Family Builders, provides intensive services aimed at keeping child welfare involved families together who are at risk of failing to provide a safe home. Services include case management provided by a family advocate 24 hours a day, 7 days a week for a period of approximately 10 weeks.

Womenspace is a non-profit domestic violence prevention and support agency (http://www.womenspaceinc.org). Womenspace provides advocacy services, referrals, case management, career counseling, children's services, and support groups to survivors of domestic violence.

Pearl Buck Center is a non-profit organization promoted to integrating adults with disabilities into the community by providing employment services, recreational activities, and life skills support *(*www.pearlbuckcenter.com/). Pearl Buck Preschool, founded in

1976, serves the children of adults with disabilities and provides a safe and stimulating environment as well as family supports such as parent fun nights and home visiting services.

Education Options is an alternative high school functioning in the 4-J school district (http://www.4j.lane.edu/schools/edoptionseast). High school students who are not successful in the regular high school setting often flourish in the accelerated program. Education Options provides students with degree choices, transition services, and a teen parent program. The teen parent program includes an on-campus child development center that serves the children of teen parents and community children.

Early Childhood CARES provides early intervention and early childhood special education to infants, toddlers, and preschoolers in Lane County Oregon since 1977 (http://earlychildhoodcares.uoregon.edu/). Early Childhood CARES provides home visiting services, parent support groups, parent-toddler groups, specialized preschools, consultation, and speech therapy.

Table 1.E

High-risk Group Comments

Major Themes	Problem areas	Data
Behavior concerns	Play. Overly active. Sensitive. Hurts self of others.	*Doctor was concerned that not waving or playing peek-a-boo. Thinks it may just be opportunity. (NS)*
		Others have mentioned his sensitivity to new people and environments and attitude. (S)
		She gets really upset and hits her head on things.
		Hitting or not sharing with little brother. (NS)
Speech	Limited language. Difficult to understand.	*Doesn't talk as much as other kids. Difficult to understand. (NS)*
		He has a speech delay and has failed the hearing test. (NS)
		His speech isn't as advanced as other kids. (NS)
		Lack of communication. (S)
Eating	Picky eater. Over-eating. Lack of appetite.	*She is a very picky eater and will only eat lightly at meals. I'm often not sure if she is getting enough to eat. (NS)*
Sleeping	Wakes often. Hard to get to sleep. Does not wake up easily. Nurses at night.	*Does not sleep through the night-wakes up 2- 5 time crying hysterically - nightmares. (NS)*
		Yes, when he wakes up from sleep day and night its like he never went to bed. He is tired, crabby, crying, groggy. (S)
		She gets up to nurse still at night and comes in to our bed still. (S)
Toileting	Slow to toilet train. Irregular toileting.	*3 years old and not showing interest in potty training. (S)*
		She won't go to the toilet frequently. She usually waits until she is almost bursting before she will go. (NS)

Table 1.E

Major Themes	Problem areas	Data
Joys	Watching child grow and change. Child's smile and laughter.	*Watching him and his twin brother do new things everyday. They are growing up way to fast! (NS)*
		His smiles and laugh. (S)
		He loves to laugh and is so good at smiling at you when you need it. (NS)
		Usually always happy. (S)

Note. NS = child not enrolled in services; S = child enrolled in services.

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