CHALLENGES TO CHILDREN OF PATIENTS WITH SCHIZOPHRENIA

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Clinical practice guidelines for treating patients with schizophrenia generally do not include an expanded psychosocial assessment that provides consideration to the patient’s children. The purpose of this literature review is to determine unique challenges of children of patients with schizophrenia. The results of this review reveal that children of parents with schizophrenia face many challenges in their upbringing compared with children of parents without schizophrenia. In order to situate the discussion, schizophrenia is described. Using Dorothea Orem’s General Theory of Nursing Practice as a theoretical framework, potential challenges to children of patients with schizophrenia are discussed. Guidelines for practice are suggested.
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Dedication

Joey, Cabryne, Coldan… you were my strength. I dedicate this to my family for all of their support and sacrifice. Ruben and Jolene, none of this could have been done without you. To my mom for your love and support, and to my dad… because I know this would have made you immensely proud.
Challenges to Children of Patients with Schizophrenia

This paper discusses the mental health challenges that a child might face when raised by a parent with mental illness, particularly schizophrenia. Schizophrenia is a chronic, Serious Mental Illness (SMI) affecting between 0.5 and 1.5 percent of the adult population worldwide (American Psychiatric Association [APA], 2000). In women with schizophrenia spectrum disorders, rates of childbearing have been steadily increasing in the past three decades, likely due to deinstitutionalization, which has led to an increase in social and community involvement and normalization (Nimgaonkar, Ward, Agarde, Weston, & Ganguli, 1997). When patients with schizophrenia become parents, their children are at risk for negative outcomes related to the environment in which their mother’s symptoms may play a major part. In order to situate the topic, a brief introduction to schizophrenia is given as background to discussing the focus of the paper, children of patients with schizophrenia. This paper will review the current literature on some challenges and outcomes inherent in this situation. It includes a discussion of potential guidelines for practice in regards to families of those with chronic and persistent mental illness for use by the Psychiatric Mental Health Nurse Practitioner (PMHNP).

Current practice guidelines for treating patients with schizophrenia do not often include an expanded psychosocial assessment that provides consideration to the patient’s children, who may be at risk for developmental or environmental problems because of their parent’s SMI. In guidelines originating in the United States, assessing the needs of children in the family are never mentioned (APA, 2004). European guidelines do make this consideration. (National Collaborating Centre for Mental Health [NCCMH], 2009).
Purpose Statement

The purposes of this paper are to (a) review existing guidelines for practice with patients with schizophrenia, (b) discuss potential challenges faced by children of patients with schizophrenia, and (c) create an approach using a theoretically based nursing process for this population.

Theoretical Framework

This literature review is guided by Dorothea Orem’s General Theory of Nursing (see Appendix A). The premise of Orem’s General Theory relies on the notion that individuals have self-care needs based on their unique life circumstances. Needs may include hygiene, sustenance, shelter, and affection for example. When a patient, or a caregiver in the case of a child, cannot meet these needs, a self-care deficit exists (McEwen & Wills, 2007). Orem’s General Theory is useful in identifying self-care deficits, as well as developing an inclusive plan that either compensates for deficits or provides a supportive role for meeting these needs. Figure 1 depicts the process of evaluating for self-care deficit and developing a nursing process. A process is proposed (see Appendix B) for the PMHNP to evaluate for self-care deficit in the specific situation addressed in this paper.
**Diagnostic Criteria**

A brief review of schizophrenia is included here in order to situate the discussion. The *Diagnostic and Statistical Manual of Mental Disorders* [DSM-IV-TR] (APA, 2000) states that for Criterion A to be met for the diagnosis of schizophrenia, two or more of the following symptoms must be present for a one-month period (or less if symptoms have been successfully treated): delusions, hallucinations, disorganized speech, disorganized or catatonic behavior; and negative symptoms (such as a blunted affect, alogia, or avolition). If the delusions are deemed bizarre, or if hallucinations include hearing a single voice orating a running commentary of the patient’s actions, or if the hallucinations include two voices in a verbal exchange, then only that symptom is required for the diagnosis to be made. Occupational or social functioning must be markedly impaired and signs of the disturbance must be present for a duration greater than six
months, which may include periods where symptoms wax and wane in prominence. These symptoms must not be accounted for by another mental disorder. Use of a substance and general medical conditions must also be ruled out. If there is a history of pervasive developmental disorder or autistic disorder, the diagnosis of schizophrenia can only be made if hallucinations or delusions are also present for at least a month, or less if symptoms have been successfully treated (APA, 2000).

**Literature Review**

Orem’s General Theory presented three evolutionary components of parenting that may become a focus for nursing care for offspring of patients with schizophrenia. The first component occurs during pregnancy and infancy. Articles reviewed pertain to pregnancy and observed parental attachment patterns. The second component refers to environmental exposure. Articles reviewed pertain to the social environment that can occur as a result of schizophrenia, and it’s subsequent impact on the child. The third stage refers to the potential and actual outcomes that may be experienced by the child; both during development and on into adulthood. These three emerging themes will be referred to as *Pregnancy and Attachment, Social Environment*, and *Offspring Outcomes*.

**Introduction to Schizophrenia**

**Etiology and epidemiology.** Schizophrenia is a SMI that affects both men and women, with onset in men often occurring in their early to mid-twenties, and in women in their late twenties. Worldwide, schizophrenia is observed to occur in as high as 1.5 percent of the population. While there is no known cause for schizophrenia, it is probably due to both environmental and genetic factors. First-degree biological relatives of persons with
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schizophrenia have a risk as much as 10 times greater than the general population for having schizophrenia themselves (APA, 2000).

Prognosis. Historically, schizophrenia has been portrayed as a mental illness with a very poor prognosis. New data suggests that potentially half of those persons living with this illness can experience positive outcomes if given proper early intervention (National Alliance on Mental Illness [NAMI], 2012). Though, the DSM-IV-TR (APA, 2000) indicates that complete remission is uncommon with schizophrenia.

Treatment. Treatment may include pharmacotherapy, family therapy, individual supportive psychotherapy, and electroconvulsive therapy (Hahn, Albers, & Reist, 2010). Recovery-Based Models of treatment for schizophrenia have shown an increase in employment, living independently, and medication adherence, and a decrease in substance misuse and overall inpatient costs compared with standard care (Nihart, Rice & Frese, 2012). These treatment models are centered on hope, empowerment, mutual respect, peer support, the use of personal narratives, and the rebuilding of self-respect (Nihart, Rice & Frese, 2012).

Existing guidelines for practice. Of the guidelines for practice that originate in the United States and are available through the National Guideline Clearinghouse, considerations for the welfare of the offspring of patients with schizophrenia are not mentioned (APA, 2004). Guidelines for practice in the United Kingdom recommend using the “Common Assessment Framework” which is a tool for use by practitioners to assess and determine how to best to meet the needs of children (Department for Education, 2012).

Pregnancy and Attachment

Pregnancy complications. Studies show that mothers with schizophrenia are more likely to experience fetal complications and obstetric complications than mothers without mental
illness (Jablensky, Morgan, Zubrick, Bower, & Yellachich, 2005). Jablensky et al., (2005) used a register-based study to gather a large sample of all women with a diagnosis of schizophrenia (N=382) or major affective disorder (N=1449) that had given birth between 1980 and 1992 in Western Australia. A *register* is an official list of records on a topic and includes national birth records, marriage records, diagnostic data, or death records, as an example. A register-based study utilizes this data to determine correlations between two or more studied variables.

The Western Australian registers used for this study included the Mental Health Information System and the Maternal and Child Health Research Database. The Mental Health Information System is a psychiatric case register that records all inpatient and outpatient contact with public mental health services as well as all inpatient contact provided by private mental health service providers. The Child Health Research Database is a record of data regarding pregnancy and births since 1980. The Maternal and Child Health Research Database also has linkages to other registers such as those that record birth defects, death and cerebral palsy. Their comparison sample was randomly drawn from women who gave birth during the same time period but were not on the psychiatric case register.

They found that mothers with schizophrenia were more likely to be either very young (less than 19 years old) or mature (greater than 35 years old), be single, and have partners that are unemployed or are disabled (including due to psychiatric reasons) when measured against the comparison sample. Their findings also indicated that mothers with schizophrenia were at an increased risk for obstetric complications and neonatal complications. Significant complications in the population of mothers with schizophrenia included placental abruption as well as the necessity to administer naloxone to the newborn. The children of mothers with schizophrenia had a higher proportion of early birth (less than 37 weeks gestation) as well as smaller neonatal
measurements of weight, length, head circumference, after adjustment for gestational age, when compared to the comparison cohort. In this sample, intrauterine growth was found to be in the 10th percentile in mothers with schizophrenia. Overall, birth defects of any type including chromosomal anomalies and congenital malformations were increased in mothers with schizophrenia compared to the cohort sample. Defects also included minor physical defects as well as cardiovascular defects (Jablensky et al., 2005).

The seasons of the year were also considered in factoring birth complications, and separate analyses were conducted for mothers with schizophrenia, bipolar disorder, unipolar disorder, and for mothers without mental illness. In mothers with schizophrenia, the authors concluded that the odds of neonatal complications were increased in Australia’s winter months (June through August) as well as in the third quarter (July through September) compared with other seasons and other quarters, respectively (Jablensky et al., 2005). Regarding specific obstetric complications, women with schizophrenia were found to have a marked peak of low birth weight births in term pregnancies in the spring months of September and October as measured against the comparison cohort. No other seasonal trends were observed in mothers with unipolar or bipolar depression (Jablensky et al., 2005).

Also factored were the relationship of psychiatric status and the likelihood of obstetric complications at the time of birth. The authors used the date of the first psychiatric admission as a proxy for onset of psychiatric illness (Jablensky et al., 2005). They conducted multivariate analysis on onset of psychiatric illness in the mothers from the sample and grouped their infants into two groups, (a) those born before, and (b) those born after the onset of the mother’s mental illness (Jablensky et al., 2005). Mothers whose psychiatric illness began before the birth of their child were significantly more likely to experience obstetric complications as compared to the
comparison cohort. Those mothers whose psychiatric illness began after the birth of their child were no more likely to have obstetric complications than mothers of the comparison cohort (Jablensky et al., 2005). Separate analyses were conducted comparing outcomes of mothers in the comparison cohort against mothers with schizophrenia and also against mothers with affective disorders. In the same study, researchers found a similar pattern with these results.

A limitation of this study was that smoking data was not available to factor in to results; therefore, an alternative method for calculating the projected effect of smoking on the unborn fetus was used. This information was modeled after a meta-analysis of studies predicting a mean birth weight reduction of 69 grams (Windham, Eaton, & Hopkins, 1999). When applied to the observed birth weight difference in mothers with schizophrenia, there was a difference of 17 grams that could not be accounted for by smoking alone (Jablensky et al., 2005). The authors posited that this difference may suggest that intrauterine growth retardation in the mother with schizophrenia may not only be attributed to smoking alone. However, without specific smoking data of the mother, this information could only be modeled. The researchers explained that reproductive hazards in the population of women with schizophrenia are likely associated with behaviors and risks associated with severe mental illness, such as smoking. Also unavailable was data about the participant’s potential medication usage or substance use, as well as how paternal psychiatric morbidity may factor in to the results (Jablensky et al., 2005). It was also not mentioned whether these mothers received prenatal or perinatal care. In addition, consideration must be given when assessing the symptoms of schizophrenia in another culture, in that misinterpretation of patient presentation is a possibility (APA, 2000). Therefore, studies conducted in other cultures must be given this consideration as well.
The study revealed three areas within the research that could imply a broad gene-environment model of causation with this population; the differences in obstetric complications of pregnancy before versus after the onset of major psychiatric disorder, how the complications may or may not be specifically related to a certain diagnostic group, and how the season of winter plays a part in the incidence of these complications (Jablensky et al., 2005). Replicating this study in the northern hemisphere would be beneficial to determine if a similar correlation exists with winter and spring months in the United States as well. Further research could focus on gaining an understanding of genetic and environmental reproductive risks that could play a role in the development of preventive programs to assist with prenatal and postpartum care for these mothers and their children.

**Risk for death.** During fetal development, the PMHNP plays a vital role in the balance of mental wellness for the mother with schizophrenia. While taking care to provide the safest treatment for both the mother and the growing fetus, educating the mother in healthy parenting behaviors may help set the stage for positive attachment and growth of the child.

Research provides evidence that having a parent with schizophrenia confers a higher risk for infant death than for infants whose parents do not have schizophrenia (Nilsson et al., 2008). In another register-based study, Nilsson et al. (2008) obtained information from registers with the intention of evaluating parental schizophrenia and adverse pregnancy outcomes. As previously mentioned, a register-based study uses data from an official list, or *register*, in an effort to determine correlations between two or more studied variables.

In this Swedish study, the authors used five different sources of information, the Multi-Generational Register, the Medical Birth Register, the Hospital Discharge Record, the Cause of Death Register, and the Education Register. They wanted to determine if a correlation existed
between paternal and maternal influences with regard to the association of schizophrenia and risk for adverse pregnancy outcome. Multivariate statistical analysis and logistic regression analysis were used to evaluate the information, and it was determined that schizophrenia in either parent conferred a risk for infant death. After adjusting for covariates known to be common in this population, the authors found that an increased risk still remained for infant death if the father had schizophrenia. Neonatal death (death within the first 27 days of life) had a three-fold increase and post-neonatal death (days 28 through 364 days of life) had a two-fold increase in mothers with schizophrenia. The post-neonatal risk for death among infants who have either a mother or father with schizophrenia was elevated, and categorization of the cause of death did little to explain this increased risk. The authors suggested this elevated risk may have been due to parental neglect or social disadvantage (Nilsson et al., 2008). Because categorizing cause of death did not produce any specific trends, it would appear that a broad-spectrum risk for death could be applied to all children of parents with schizophrenia. At the very least, the data points to the importance of a heightened sense of attention to these children from a PMHNPs vantage point.

Limitations of Nilsson et al. (2008) included the research design, in that, information, such as types of maternal support during the perinatal and post-partum period was not obtained. Also unavailable in a register-based study were socioeconomic factors of the participant. The possibility that participants may have used medications, misused substances, experienced infections during pregnancy, or had attachment problems was uncontrolled (Nilsson et al., 2008). Differences in cultural interpretation of symptomology must also be considered with any research conducted outside of one’s own culture, as previously mentioned.
This study indicated that having a parent with schizophrenia conferred a higher risk for death during infancy than with infants whose parents do not have this mental illness (Nilsson et al., 2008). The finding that paternal schizophrenia conferred a risk to the offspring calls attention to the fact that current interventions almost exclusively focus on the maternal schizophrenia. These results could inform policy development for providing parental support as well as early detection of complications. These findings may be suggestive of a need for continuity of care between health professionals in neonatal, pediatric and psychiatric health care, and are also suggestive that awareness of risk factors should be improved in maternity and child care units. The authors proposed that symptom-based subgroups of parents with schizophrenia should be studied in the future to further understand the increased risk for adverse pregnancy outcomes in this population. More in-depth studies are needed to determine what risk factors are conferred, if any, by gender of the parent, as well as attempting to determine possible causation for this risk, such as specific socioeconomic risk factors (Nilsson et al., 2008). The risk of death to the infant is a very important reason to conduct a thorough assessment and evaluation of a parent with schizophrenia. The PMHNP must keep in mind these risk factors, and if possible, observe attachment and interaction patterns between the parent and the child to evaluate for potential safety concerns.

**Attachment patterns.** In mothers with schizophrenia, research has shown decreased attachment patterns between mother and infant. Wan, Warren, Salmon, and Abel (2008) studied attachment behaviors in a sample of mother-infant dyads on a Mother Baby Unit (MBU) in Manchester, England between May 1996 and August 2000. The MBU is an inpatient unit that allows mothers to adjust to and bond with their infant while also receiving psychiatric care. A total of 45 mothers with schizophrenia, unipolar depressive disorder, or bipolar disorder and their
infants were recruited. Many mothers who participated were actively experiencing positive symptoms, but were judged by staff to be well enough to provide consent for their participation. The aim of the study was to determine, through videotaping a four-minute interaction between the mother and her infant, the quality and presence of interaction observed in the dyad. As a comparison, mothers with affective disorder were also videotaped in a four-minute interaction and the results were compared. The frequency and type of infant behavior was also recorded.

The authors hypothesized that mothers with schizophrenia would show more abnormal, negative, or withdrawn responses, and that their infants would show fewer initiated behaviors as well as more negative behaviors as compared with the comparison group. Behaviors of both the mother and infant were videotaped using a mirror that enabled researchers to observe the simultaneous facial expressions of both the mother and the infant. Researchers then coded these interactions. Behaviors of the infant, called “events,” were designated as positive, negative, neutral, or reflex behaviors. Positive behaviors included smiling, positive and neutral vocalization, and excitement. Negative behaviors included crying, grimacing, fretting, frowning, pouting, and negative vocalization. Neutral behaviors included grabbing, chewing, mouth movement not associated with vocalization, and return of gaze to their mother’s face. Reflex behaviors included yawning, vomiting, or sneezing. During coding, behaviors were specified as either self-initiated or in response to the mother’s initiation. The behavior exhibited by the mother within two seconds following each infant event was coded as well. Responses, including no-response, as well as bizarre behavior by the mother were noted.

Mothers were between the ages of 18 and 41 years old. The authors stated that most infants were less than 20 weeks of age. The mean length of hospitalization since inpatient admission was 5.98 weeks.
The authors noted that mothers with schizophrenia had been hospitalized longer before their mother-infant dyad observation as compared with comparison groups (Wan et al., 2008). The results showed that when compared with the mothers with affective disorders, the mothers with schizophrenia showed poor response to their infant’s behavior. These mothers exhibited a positive response to their infant’s behavior one-fifth of the time, while the mothers with affective disorders showed a positive response one-third of the time. These mothers showed the same amount of positive responses as negative responses to their infant’s behavior, while mothers with affective disorders showed three times as many positive responses as negative responses.

The authors believed that well-timed positive responses by the infant’s primary caregiver are integral in the infant’s understanding of contingent relationships in the physical environment (Wan et al., 2008). Further, mothers with schizophrenia may demonstrate blunted affect or social interactive deficit commonly seen in schizophrenia; which may hinder cognitive development in infancy. Findings also showed that mothers with affective disorder only held a slightly higher overall response rate to their infants as compared with mothers with schizophrenia. However, a possible explanation for this small margin in maternal responsiveness between these groups is that when infants in the study became inactive due to the mother’s withdrawal, there was no infant “event” for the mother to respond to, resulting in the coding of a low maternal non-response rate (Wan et al., 2008).

The authors found that three types of maternal behaviors were unique to the group of mothers with schizophrenia: non-responsive psychological withdrawal, abnormal behavior, and negative responses to positive behaviors, all of which are thought to be the result of social cognitive deficits and positive symptoms common in schizophrenia (Wan et al., 2008). The
authors suggested that not only could these unexpected behaviors be frightening to the infant, but also they could occur far more frequently in a natural setting (Wan et al., 2008).

The researchers did not mention other interactions between mother and infant which could impact attachment such as whether the mothers were breastfeeding or bottle feeding their infants, or how much time each mother was regularly spending with her infant outside of this observation (Wan et al., 2008). The impact of medication on affect was considered as part of the overall presentation of each participant regardless of diagnosis; however, varying approaches to psychopharmacology do not guarantee uniformity even within each cohort. Among many possibilities, a participant could be over-sedated, have refused medications, or be on a different medication than the others in her cohort, therefore, medication in this study could be seen as a confounding variable. Beyond this single four-minute observation of a mother-infant dyad, no subsequent observations were conducted. As previously mentioned, participation was granted when the participant’s nurse determined them to be fit to participate (Wan et al., 2008). However, opinions may vary among nursing staff, and no minimum criteria for participation was indicated.

Limitations of this study included that the coding did not include the extent of positivity, negativity, or action. Sample size was also a limitation (Wan et al., 2008), as was the lack of contrast to expected norms of mother-infant attachment without mental illness. The gestational age of the infant could also factor in to results, and the only information that provided infant age stated that “most” were under the age of 20 weeks. The fact that this research was conducted in a non-natural environment could also be listed among limitations of the study. The authors suggested future research could focus on maternal symptoms versus capacity to respond to her
infant, as well as which maternal symptoms have the greatest negative impact on infants, so that interventions might be developed to combat this problem (Wan et al., 2008).

This study provided insight into possible complications in attachment in mothers with schizophrenia and their infant. Because the PMHNP cannot follow each mother-infant dyad into their natural home environment, group parenting classes for parents with schizophrenia may be beneficial in skill building, serve as a means of social interaction, and provide a collaborative approach between the PMHNP and other mental health workers involved in their care.

**Discussion.** These studies provided insight into prenatal, perinatal, and post-partum risks and challenges to the offspring of a parent with schizophrenia. Mothers with schizophrenia were found to be either much younger or much older than their comparison cohort, and their partners were more likely to be unemployed or disabled, though single motherhood was common as well. Obstetric and neonatal complications, including low birth weight, elevated incidence of pre-term birth, low intrauterine growth rate, and birth defects were among these risks. Season and timing of onset of illness were implicated as possible causative factors of obstetric complications.

Winter months conferred a higher risk of obstetric complications in the mother with schizophrenia as well as infants who were born to mothers with schizophrenia before the onset of their mental illness (Jablensky et al., 2005). Risk for death was elevated in children whose mother or father had schizophrenia (Nilsson et al., 2008). Attachment patterns and positive interactions were decreased in mothers with schizophrenia (Wan et al., 2008), suggesting that interventions to benefit parenting skills and vigilance to risk factors are important considerations to the PMHNP.
Social Environment

Involvement with child welfare services. Mothers with schizophrenia have a higher likelihood of involvement with the child welfare system than mothers without mental illness (Park, Solomon, & Mandell, 2006). However, simply having a diagnosis of schizophrenia does not constitute an automatic referral to the child welfare system, as each mother experiences her own unique course of illness and there is a wide range in severity among individuals. In a quantitative study, Park, Solomon, & Mandell (2006) used administrative data sources to obtain information about a sample of patients with schizophrenia in Philadelphia between 1995 and 2000 for the purpose of determining the correlation between mothers with either schizophrenia or major affective disorders (both considered SMIs) and child custody arrangements. Though these groups had qualitatively different presentations, the inclusion of mothers with affective disorders in this study provided a contrast to the presentation of mothers with schizophrenia, and also provided a more broad understanding of the usage of child welfare services. The data was obtained through Medicaid claims and eligibility files, as well as child welfare data obtained through the Department of Human Services (DHS). The large sample consisted of 4,827 participants who were residents of Philadelphia and were between the ages of 15 and 45, eligible for Medicaid, and had a family member younger than 18 years old when the study began.

The researchers concluded that mothers with SMI were approximately three times as likely to have come to the attention of the child welfare system or to have lost custody of their children, compared with mothers without SMI. Mothers that experienced at least one inpatient admission during the study period translated into a two-fold increase in risk for involvement of child welfare, and a three-fold increase in the risk of having a child placed in out-of-home care.
Mothers with SMI were also four times more likely to experience custody loss than mothers without SMI (Park et al., 2006).

Limitations included an untested algorithm used for the study, the reliance upon Medicaid claims to determine the presence of a psychiatric disorder, and the lack of inclusion of other variables, such as drug use and social support, which often affect involvement in Child Welfare Services (Park et al., 2006). The authors suggested coordination mechanisms be implemented which allow for information to be mutually exchanged between publicly funded mental health systems and child welfare systems to assist those mothers in mental health treatment who are in danger of losing or have already lost custody of their children. Also suggested was the development of a tool to assess for and improve parenting capability for mothers in mental health treatment. The authors recommended further support be provided to these mothers to assist them in understanding their parental rights and with navigating the child welfare system (Park et al., 2006).

The researchers theorized that mothers with mental illness such as schizophrenia may believe their involvement in treatment could lead to loss of custody of their child, thus leaving them unwilling or reluctant to participate in their own treatment. However, the authors believed with earlier referral and treatment entry, there may be a reduction of involvement in the child welfare system with these mothers. They called for increased coordination between mental health systems and the child welfare system, and suggested that child welfare professionals be considered an important part of the referral process in getting these mothers the treatment they need (Park et al., 2006).

This study identified that mothers with schizophrenia were more likely to have involvement with the child welfare system, as well as experience loss of custody of their
children. Mothers with schizophrenia often expressed confusion in negotiating their way through the child welfare system. PMHNPs are in a position to provide not only the one-on-one therapy needed for this population of parents, but are also in a position to facilitate continuity of care among agencies involved.

**Child care usage.** Like mothers without mental illness, mothers with schizophrenia often rely on various means of child care services to meet the needs of their children. Among them include standard day care services and family-based child care. In 1997 and 1998, Hearle, Plant, Jenner, Barkla, and McGrath (1999) recruited 342 individuals with a chart diagnosis of psychotic disorder (schizophrenia, schizophreniform psychosis, depression with psychotic features, schizoaffective disorder, atypical psychosis, delusional disorder, and bipolar affective disorder) through two community mental health services and an extended-care psychiatric hospital in Queensland, Australia with the aim of determining patterns of child care use among parents with psychotic disorders. A brief, structured questionnaire was used to obtain demographic information as well as information about the patient’s illness, child-care arrangements, and parental status. Of the total recruited, 257 participants (182 men and 75 women) met criteria for schizophrenia. Sixty participants (38 men and 22 women) had affective psychosis, mania with psychosis, depression with psychosis, and schizoaffective disorder. Delusional disorder and atypical psychosis comprised the remaining 25 participants. Of these 342 individuals, 124 identified themselves as parents with a total of 323 offspring. Of the 124 parents, 111 parents provided childcare information.

The results showed that a total of 20 of the 48 parents with schizophrenia who had children under the age of 18 still had their children living with them. These individuals reported they relied on friends, foster care, day care, family-based child care, and emergency respite care
for child care. Overall, five percent of the children had been permanently adopted. Parents reported that the agencies used for interventions, as well as for child care assistance, included the state government statutory child protection agency, church groups, mental health clinics, general community agencies, psychiatric hospitals, legal aid services, family courts, maternity hospitals, and ethnic services. Thirteen parents shared that child care intervention had occurred against their will. When asked what factors may have interfered with access to child care assistance, 49% of parents shared that it was their desire to manage alone, 40% of parents stated that they were not able to pay for help, 36% stated they did not know where to get help, 30% stated they feared the removal of their children, 22% stated they were embarrassed to ask for help, 21% stated they did not have services available, and 12% shared that they had asked, but did not receive help (Hearle, Plant, Jenner, Barkla & McGrath, 1999).

Limitations of this study included the study design, in that accurate statistics were contingent upon questionnaire response. Not all participants completed all questions skewing the overall percentages (Hearle et al., 1999). Another limitation of this study included broad acceptance of the chart diagnosis of “psychotic disorder,” making answers specific to schizophrenia alone unable to be ascertained from the data provided. While the information obtained in the study gave insight into child care usage, a control group was not provided for comparison, which would have provided a broader understanding of the data. The authors suggested support be given to these parents to help keep positive support networks intact, and urge health care providers to give respect to these parents and their needs. The authors also acknowledged that barriers to available services, such as affordability, need to be addressed (Hearle et al., 1999).
This study described the patterns of child care usage among mothers with schizophrenia. While a control group was not provided in this descriptive study for comparison, the data provides useful insight into methods of and barriers to their usage of child care. Understanding patterns of child care usage in this population can better inform the PMHNP so that a supportive or compensatory nursing process could be developed for the benefit of the child.

**Perceptions of life stages.** Mothers with schizophrenia experience a sense of loss in many areas of their lives. Among them, loss of custody of children, loss of employment, and loss of self-respect are daily battles they must negotiate. Chernomas, Clarke, and Chisholm (2000) conducted a phenomenological study using a focus group design of 28 women recruited through advertisement and information sheets provided to health professionals working with women with schizophrenia and schizoaffective disorder. The objective was to determine the perception of these women of their needs related to their life stages. Using a focus group design as the primary data-gathering method, these women were placed into five separate focus groups arranged for marital status, age, and parenting responsibilities. Focused questions as well as broad, open-ended questions were used to aid in discussion, and each group discussed the same topics. Group size ranged from four to seven women. Discussion length lasted two hours, and included were the program coordinator (the moderator), an assistant moderator, and a nurse researcher. Topics discussed were recorded with audiotape, transcribed exactly as stated, and were organized by theme.

Results of this research showed that loss was an important and broad discussion topic. This included relationship loss, loss of employment, loss of children, loss of meaningful connection with others, loss of self-respect and pride, and loss of potential social roles. Also noted was the notion that because the health care system focused on their diagnosis rather than
themselves as people, they experienced a loss of themselves as a “woman” and the label of “schizophrenic” remained. The authors stated that many losses resulted in the subsequent loss of well-being, self-image, and self-empowerment and left the participants with a sense of vulnerability (Chernomas, Clarke, & Chisholm, 2000).

Of the women who participated in these focus groups, none were currently employed. Reasons for unemployment ranged from a lack of desire to work, to fear of losing welfare benefits because they became employed or pension benefits if they began working and could not continue. The ability to handle the stress of working was also cited as a reason for unemployment, and participants stated they feared they would be unable to get back on welfare if they could not continue working. Also expressed was a sense of resentment for what they called “restrictive messages” from others that conveyed to them that they were unable to work or go to school because of their diagnosis. However, most participants expressed optimism of working in the future (Chernomas et al., 2000).

Stigma was also an area of expressed concern for participants. Participants stated that they either risked rejection by sharing their diagnosis with others, or they compromised honesty in withholding their diagnosis. Also shared was their fear of others judging them to be inferior, and that society viewed them as a “misfit” or “second-class citizen” (Chernomas et al., 2000). Loss was also experienced in friendships and other family relationships. Participants shared a sense of isolation and loneliness, and the lack of understanding on how to make safe connections with both old friendships and new friendships was also described as an obstacle these women faced. It was this obstacle that participants said created the potential for victimization and left them vulnerable to relapse. Some participants shared a history of prostitution and promiscuity,
while others shared an aversion to sexual intimacy resulting from previous childhood abuse, physical abuse, and rape (Chernomas et al., 2000).

Varied responses were offered on the topic of motherhood and pregnancy. Some participants welcomed the role, while others chose to avoid it completely. Among the responses provided, concern regarding how medication may harm the fetus was significant. In particular, mothers identified unease in balancing their mental health needs with the safety of their baby. The focus group discussion revealed that many of the participants had not followed mainstream women’s health issues, such as parenting, family planning, pregnancy or menopause. Some participants reported that having children provided a sense of purpose and identity, as well as love and support. Others stated their fears of motherhood included the stress of pregnancy, poverty, that their child could be taken away, or that their child could also develop schizophrenia, and that these fears offset the positive aspects of motherhood. Family support and day care support were reported to be a protective factor in whether child custody was lost, and of those women who lost custody, a sense of deep loss and grief was expressed. Some participants expressed a sense of responsibility for their illness, and felt they had caused it or let themselves go once they were diagnosed (Chernomas et al., 2000).

Also of concern to these women was the physical impact of schizophrenia on their bodies. This included side effects of antipsychotic medications such as facial hair, weight gain, amenorrhea, decreased libido and lactation. Participants reported this impacted their sense of femininity, their health, and their sense of self. Many older women felt that the long-term effect of this medication was responsible for their premature aging. Participants also discussed their concerns about the side effect of amenorrhea, stating they felt that health care providers paid little mind to their inquiries. Fatigue experienced by many of these women prevented them from
taking care of personal grooming, appearance, and social interaction. Participants also expressed concern with aging with schizophrenia and how that might pose a threat to their safety. Faith and spirituality were cited as sources of strength and positiveness for these women. Overall, women who participated in this discussion group shared their hope for improvement in their lives (Chernomas et al., 2000).

Topic suppression was a limitation to this study. Though participants were directly questioned about substance abuse, researchers stated there was a general reluctance to discuss this topic, particularly noted in the more mature participants. Also suppressed were the topics of suicide and death. The authors posited that this information was relevant and should be pursued in future research, and that perhaps these topics were inappropriate for a group method of data collection (Chernomas et al., 2000). Acknowledgement of loss, such as in custody of children, could be a consideration for the practitioner who works with this population of women. The researchers recommended practitioners engage women with schizophrenia-spectrum disorders in discussion of treatment options, monitoring side effects of medications, and providing support as well as a positive environment to participate in their care (Chernomas et al., 2000).

This qualitative phenomenological study provided insight into the perspective of women with schizophrenia. Women with schizophrenia experience losses in many aspects of their lives including employment, self-respect, meaningful relationships and their children. Consideration of these challenges is essential to understanding the potential conditioning factors present in the life of their child.

**Discussion.** These studies indicated that mothers with schizophrenia are likely to have come to the attention of child welfare services (Park et al., 2006), experience loss in employment, relationships and other important areas of their lives (Chernomas et al., 2000), and
experience loss of custody of their children as well (Park et al., 2006). Patterns of child care usage in this population reveal several methods used and barriers to its usage (Hearle et al., 1999). Careful evaluation of attachment patterns between parent and child were recommended as was the consideration of community resources and other areas of support for the parent.

**Offspring Outcomes**

Research has shown that the neurocognitive development of children of patients with schizophrenia differ from children of parents without mental illness in the same age cohort. In a quantitative study, Oner and Munir (2005) conducted research on three groups; children and adolescents with known Attention Deficit Hyperactivity Disorder (ADHD), children of patients with schizophrenia, and a comparison group whose parents did not have diagnosis of these disorders. In the case of children of parents with schizophrenia, parents were identified through a university psychiatry department and screened to verify their diagnosis of schizophrenia using the DSM-IV-TR. Their children were also screened using the DSM-IV-TR to determine if a diagnosis of ADHD was present. Children with known ADHD were recruited through the same hospital’s child psychiatry outpatient clinic and their diagnosis of ADHD was verified using the DSM-IV-TR criteria. Children in the control group were recruited from the community and were screened for ADHD, major depression, substance abuse, psychotic disorder, and pervasive developmental disorders. A total of 41 children and adolescents with ADHD were determined to be eligible and were recruited, along with 11 children who were diagnosed with ADHD (High Risk-A group) who also had a parent with schizophrenia, as well as 13 children of a parent with schizophrenia that did not also have ADHD (High Risk-NA group), and the control group, which consisted of 35 participants whose parents did not have these mental illnesses. Ages ranged from 7 to 17 in the ADHD and High Risk groups, and 7 to 16 in the control group. All groups were
given neuropsychological tests, including the *Weschler Intelligence Scale for Children-Revised Form* (WISC-R), the *Stroop Color Word Interference Test* (Stroop), and the *Wisconsin Cart Sorting Test* (WCST).

The results showed that of the groups studied, both the ADHD group and the High Risk groups had significantly lower WISC-R and Verbal IQ scores compared with the control participants. The High Risk groups had significantly lower Performance IQ scores as compared to the control group. High Risk-NA groups were not found to be significantly worse on cognitive measures when compared to controls. The High Risk-A group had lower Picture Arrangement, Comprehension, Picture Completion, and Similarities scores when compared to controls. They also scored lower on Abstraction-flexibility than the control group and ADHD group, as well as lower Performance IQ scores than all other groups including the High Risk-NA group (Oner & Munir, 2005).

Limitations of this study included its small sample size while analyzing multiple comparisons. The inclusion of two High Risk groups made deciphering results difficult, though the overall message that these groups are at an increased risk for neuropsychological limitations was clear. Researchers do not specifically indicate where their sample group was obtained which is a limitation to this study. Though it is mentioned that participants were recruited through “a university hospital” as well as “from the community,” it does not mention what location, or country, which would be relevant information for other researchers to replicate findings. The study also does not mention whether the participants chosen for the sample were raised in the home of the parent with schizophrenia, or if the child is merely offspring of a parent with schizophrenia. It is difficult to conclude with any certainty that these results are due solely to nature or solely to nurture. The authors recommended that supplementing these findings with
other studies, such as neuroimaging studies, could provide more information about the similarities and differences seen in the specific brain regions in these neurodevelopmental conditions. It is also suggested that because the group of children of parents with schizophrenia performed poorly in the tests, more extensive treatment and support should be provided, and cognitive mediation should be considered (Oner & Munir, 2005).

This study indicated that having a parent (either mother or father) with schizophrenia is a risk for neuropsychological deficits as a child. As shown by this research, children with ADHD who also have a parent with schizophrenia were at even greater risk for these deficits. This illuminates the importance of considering all conditioning factors when developing a nursing process for the patient.

Other research has been conducted that supports the hypothesis that children of parents with schizophrenia are at risk for developmental deficits. Davalos, Compagnon, Heinlein and Ross (2003) studied neuropsychological deficits in children of at least one parent with schizophrenia with the aim of understanding the differences between the developmental processes and associated cognitive weaknesses of children who are genetically at-risk for schizophrenia compared with children without this condition. They recruited 51 children with at least one parent that met criteria for schizophrenia. The parents were identified through the University of Colorado Psychiatry Outpatient Program, Denver Veterans Hospital and Medical Center, a parenting group for mothers with schizophrenia, and through referral by local clinicians. The children that were recruited through these parents were between 6 and 15 years of age and screened using the Schedule for Affective Disorders and Schizophrenia for School Age Children – Present and Lifetime Version (K-SADS-PL). A control group, recruited through advertisement, was comprised of 51 children ages 6 to 15 years old who had no personal or
family history of psychotic or neurological disorder, and were matched for both age and gender to the at-risk group. Participants were assessed in the areas of attention/working memory, vocabulary, visuo-spatial skills, inhibition and emotional perception.

Their results showed that children of parents with schizophrenia scored lower on a measure of word knowledge, working memory, visual skills, inhibitory processes, and response execution when compared to the control group. The authors suggest that the biobehavioral markers associated with schizophrenia result in a generally consistent impairment seen in this population of children, and that poor inhibition, working memory impairment and verbal skills impairment may be a neurocognitive marker expressed in childhood and maintained through adulthood in this population. Limitations of this study include that genetic analysis was not conducted on these participants. True genetic vulnerability to schizophrenia in the at-risk group cannot be determined without conducting genetic analysis, therefore the sample size of the at-risk group is limited since it can only be assumed that some of these children may go on to develop schizophrenia. Another limitation in the study design is that it did not include a comparison psychiatric group. Weaknesses found in the group of children at-risk for schizophrenia could be attributed to a more general pattern of neuropsychological performance as in children at-risk for psychopathology, rather than specifically schizophrenia. It was suggested that further research be conducted to determine how developmental processes of schizophrenia evolve from childhood to adulthood for the purpose of intervention and preventive therapy (Davalos et al., 2003).

This study supported the conclusion of Oner and Munir (2005), that children of parents with schizophrenia face neuropsychological challenges as compared with children whose parents do not have mental illness. Offspring outcomes are important for the PMHNP to be aware of so
that proper treatment and intervention might be initiated in the event of behavioral and cognitive abnormalities of the child. Using Orem’s General Theory, the PMHNP could identify self-care deficits such as these and design a nursing intervention that provides the resources and support needed to improve their overall outcome. Without intervention, behavioral and cognitive deficits can have a lasting impact into the adulthood of these offspring.

Terzian, Andreoli, Oliveira, Mari and McGrath (2007) used a cross-sectional study in Brazil with the aim of determining the impact of parental schizophrenia on adult offspring. Public health is available free of charge to citizens of Brazil, and Community Psychosocial Centers (CAPS) are designed to treat severe mental disorders and avert inpatient admission (Mateus et al., 2008). Parents with schizophrenia were identified through a screening of all patients that presented to any outpatient mental health service in Cuiaba, Brazil in a three month period. Criteria for a diagnosis of schizophrenia in the parent was confirmed by researchers using the DSM-IV. A sample of 431 adult offspring aged 18 or older of parents with schizophrenia were identified through a structured questionnaire. Data on these adult offspring was collected and included gender, mean age, reported mental disorder, current employment, marital history, schooling years, and primary caregiver. Data on the parents with schizophrenia was also collected and included gender, schooling years, number of psychiatric admissions and family income. Applicable data was compared against available census data for the general population. Consideration was also given to possible age-grade discrepancy with regards to years of schooling. The Brazilian educational system requires eight years of primary school and three years of secondary school, therefore 18-year-old participants who finished secondary school would have no age-grade discrepancy. Six models of logistic regression were used to analyze the variables associated with parents with schizophrenia and their offspring along with
marital status and employment status – both of which were analyzed by total sample and by gender.

Researchers found no significant age-grade discrepancy with regards to education. The authors stated this may have been due to the fact that in Brazil, greater than 70% of the general population aged 18 to 19 years old do not meet the expectations of minimum grade completion, therefore, in the general population as a whole there exists a wide age-grade discrepancy. This presented as a limitation to this study, and may be remedied by a larger sample. This research did show, however, that none of the adult children of patients with schizophrenia went on to complete higher education. In the general population of Brazil, nine percent complete higher education (Terzian et al., 2007). In comparison, roughly 90% of adults aged 25 to 29 in the United States have completed high school, and approximately 30% go on to complete higher education (Fry & Parker, 2012). Overall, both male offspring and parents with schizophrenia were shown to have fewer schooling years. Children of patients with schizophrenia whose family had a higher income and more education were found to have a higher number of schooling years, which is also true of the general population (Terzian, Andreoli, Oliveira, Mari & McGrath, 2007).

When a healthy parent was the main caregiver, offspring had a better age-grade performance as compared with offspring raised in foster care or with a parent with schizophrenia. Also, children of male patients with schizophrenia were found to have a lower age-grade discrepancy. The adult children of patients with schizophrenia were compared to the general population, and overall, these offspring had a lower employment rate than offspring in the general population of the same age group. Gender was also studied with regards to employment, and male offspring employment status was five times greater than the employment
status of female offspring. These results coincided with what is seen for gender and employment in the general population of Brazil. It was found that schooling years correlated to a higher likelihood of having a job, which was true of the general population as well. In male adult children of patients with schizophrenia, it was found that employment incidence was correlated to greater number of schooling years as well as to having ever been married. In female adult children of patients with schizophrenia, employment incidence was only correlated to schooling years. This data correlates to the general population with regards to gender, schooling years, marital status and employment status (Terzian et al., 2007).

Overall, this study highlighted the social adjustment problems experienced by adult offspring of patients with schizophrenia. Areas of emphasis indicated this population has vulnerability in employment status as well as in marital status. A limitation of this study included that information used to determine a link between employment status and mental disorder was obtained through reported data in interviews, but diagnostic tools were not used to validate the information. Consideration was not given to other types of mental health diagnoses that could be present in this population, such as personality disorders and less-severe psychiatric problems, which could potentially impact employment status as well. Through self-report, a 20% prevalence of mental disorders in offspring of patients with schizophrenia was reported, though it could not be substantiated. Due to the small sample size, and the known age-grade discrepancy of the general population, the impact of parental schizophrenia on education of offspring could not be adequately evaluated (Terzian et al., 2007). In addition, this study did not indicate the circumstances of their upbringing, in that, some participants may have been raised in foster care or by other family members. The authors suggested early preventive strategies could benefit this population to help lessen any unfavorable impact of being raised by a parent with schizophrenia.
Although this study indicated the use of DSM-IV (not the more current DSM-IV-TR) criteria to confirm a diagnosis of schizophrenia in the parent, the Tenth Edition of the International Statistical Classification of Diseases and Health Related Problems (10th ed., ICD-10; World Health Organization [WHO] 1993) is typically used for mental health diagnosis in Brazil. While cross-cultural diagnosis is possible, cultural perceptions of the symptomology of mental diagnoses such as schizophrenia may be interpreted differently compared to the United States. The use of the DSM-IV further complicates the potential for diagnostic uncertainty cross-culturally.

This study illustrated how exposure to parental schizophrenia may have a long-term impact on their children, especially in the areas of future marriage and future employment. Conditioning factors and self-care requisites are not static; therefore, the illustration depicted in Figure 1 is cyclical. The PMHNP must continually re-evaluate the needs of their patient as their life circumstances evolve. Consideration must also be given to how psychological stressors of childhood could potentially impact the long-term physical health of children of parents with schizophrenia.

**Adverse childhood event study.** The Adverse Childhood Event (ACE) study conducted by Felitti et al., (1998) for Kaiser Permanente surveyed 8,056 patients with a questionnaire regarding the environment in which they were raised with the aim of determining impact of abuse, neglect, and household dysfunction on the individual over the course of time. Participants were recruited through Kaiser Health Plan after completion of a standardized medical evaluation at the Health Appraisal Clinic between August through November 1995 and January through March of 1996. Categories were further expanded in the survey to include psychological abuse, physical abuse, sexual abuse, substance abuse, mental illness, violence towards their mother, and
criminal behavior in the household. Embedded within the questionnaire were questions regarding potential protective factors, such as identification of a trusted adult. Ten risk factors for early mortality were included in the questionnaire that included smoking, physical inactivity, obesity, depressed mood, alcoholism, any drug abuse, parenteral drug abuse, suicide attempts, a history of sexually transmitted disease, and high lifetime number of sexual partners (defined as greater than or equal to 50 total sexual partners). Also included were disease conditions such as ischemic heart disease, cancer, emphysema, chronic bronchitis, stroke, hepatitis, diabetes, jaundice, and skeletal fracture.

The results of this study pointed to a strong correlation between exposure to adverse events in childhood and multiple risk factors for leading causes of death in adults. A large majority of patients who acknowledged exposure to one area of abuse or household dysfunction also acknowledged at least one other exposure. Limitations of this study included its reliance upon retrospective self-reported data, as well as the potential for over-reporting and under-reporting of disease conditions and childhood experiences by participants (Felitti et al., 1998).

This ongoing study showed a correlation between adverse events of childhood and risk factors for early mortality in the adult. It is unknown whether therapy or other intervention would play a protective role in these health risks, however, the study included some questions regarding potential protective factors that will hopefully aid in the understanding of what can be done to support these at-risk children. The impact of adversity in childhood should be a prominent consideration of the PMHNP, and collaboration between health care providers could be beneficial for the holistic care of the patient.

**Discussion.** These studies revealed that children of parents with schizophrenia face increased risk for neuropsychological deficits compared with children whose parents do not have
mental illness (Davalos et al., 2003; Oner & Munir, 2005). Children with ADHD who also have a parent with schizophrenia confer an even greater risk (Oner & Munir, 2005). As adults, these offspring of parents with schizophrenia were less likely to be employed or married when compared to others in their age cohort (Terzian et al., 2007). The impact of the exposure to mental illness and other adverse events in childhood confers a risk to the physical health of adult offspring of patients with schizophrenia (Felitti et al., 1998). Collaboration with other health care providers as well as a heightened awareness of these risks was recommended to the PMHNP.

**Discussion**

**Implications for Practice**

Children of parents with schizophrenia begin their exposure to risk and adversity long before their birth. During pregnancy as well as post-partum, the challenges associated with schizophrenia in either parent elevate the risk of death in the infant. Impaired attachment patterns seen in this population result in decreased neuropsychological development of the child. Long-term effects have been observed in physical health of adult offspring who have been exposed to adversity such as serious mental illness. As adults, a decreased incidence of both marriage and employment is also observed compared with the general population.

Losses, such as loss of child custody and loss of employment, are common in parents with schizophrenia. Actual and perceived barriers in this population, such as unaffordability of child care and a lack of available resources, establish a pattern of child care usage that indicate a high likelihood of involvement with child welfare services. Sullivan of the Crisis Response Unit (CRU) in Kennewick, Washington stated, “if the parent is in a crisis state and we become
involved, we contact law enforcement right away for the welfare of the child” (K. Sullivan, personal communication January 8, 2013). Hartwell of CRU shared the following:

When we evaluate someone in a crisis that is also a parent, this does not automatically generate a call to Child Protective Services (CPS) for a home visit. We first evaluate whether the child is in imminent danger, which is determined on a case-by-case basis depending on the nature of the reported crisis. If we do feel the child is not safe to remain with their parent in the home, or if the parent is going to be held for their own safety, we ask the client if they have a family member or trusted adult who can care for their child while they are gone and we attempt to contact that person. Only when there is no one available do we contact CPS (R. Hartwell, personal communication March 7, 2013).

Sergeant Versteeg of Richland Police Department shared, “we only take children who are in imminent danger. We don’t do it often, but if they are likely to get hurt, they are placed into protective custody” (S. Versteeg, personal communication January 8, 2013). Sullivan of Child Protective Services (CPS) stated “it is the objective of CPS to place the child with a willing family member first before seeking arrangements such as foster care, though the majority of these cases do not remain with their parents” (S. Sullivan, personal communication January 9, 2013).

Culture, as it relates to psychiatric illness, is a point that must be considered when literature is reviewed. In the United States, mental health professionals use the DSM-IV-TR and the ICD-10 to make diagnoses. It is difficult to determine with certainty that human behavior exhibited in another culture would meet the same diagnostic criteria as classified according to the DSM-IV-TR and ICD-10. In their epidemiological investigation involving 385 interviews with
patients from a mental hospital and respondents from urban and rural areas in the western region of Nigeria, Leighton and Murphy (1965) concluded that incidence of cultural distortion is an important consideration, but that the frequency is low enough to allow for epidemiological generalization. Kleinman (1988) opined that certain psychiatric diagnoses, such as schizophrenia and affective disorders, are valid worldwide, though symptom classification and diagnosis must be viewed within the context and meaning of the culture itself. All studies conducted in other countries should be viewed with this caution and consideration. This literature review relies on research conducted abroad, and therefore could be viewed as a limitation.

The Common Assessment Framework tool is used in the United Kingdom by practitioners to assess and meet the needs of children (Department for Education, 2012). Current guidelines for practice in the United States do not mention assessing the needs of children (APA, 2004). This review emphasizes the importance of identification of children at-risk for adverse complications of being raised by a parent with schizophrenia as well as the need for the development of an assessment tool to approach this problem. Orem’s General Theory provides a basis for the PMHNP to develop an understanding of each child’s needs, and to develop a nursing process to provide support for identified deficits. Through evaluation of conditioning factors, determination of self-care requisites, assessment of self-care and dependent-care agency, determination of self-care deficits, and the development of an individualized nursing process, the PMHNP can provide resources and support to these at-risk children.

**Implications for Research**

The literature review borrowed research studies from other disciplines, and none were specific to the practice of the PMHNP. Many of the studies found in the search for literature
were conducted in other countries, as were the majority of the studies used for this review. This introduced the potential for differences in perception of symptomology cross-culturally. When considering the implications of schizophrenia on the upbringing of children in the United States, it would be useful for research to be specific to this population as well as specific to the profession of PMHNP. Targeting the culture of child-rearing in the United States as well as mental illness in the United States is crucial in providing the best care possible while using the resources that our mental health system, child services and other ancillary resources offer.

**Conclusion**

The PMHNP has in an important vantage point to identify children at-risk for adverse outcomes due to their exposure to a parent with schizophrenia. This literature review shows that adverse conditions can begin as early as fetal development and carry on into adulthood for these at-risk children. There is compelling evidence for a need for integration and communication among mental health providers and child care services. Using Orem’s General Theory, the PMHNP can identify the needs of these at-risk children and provide age-appropriate care.
References


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Appendix A

Dorothea Orem’s General Theory of Nursing

Orem’s General Theory consists of three interrelated theories; Self-Care Theory (SCT), Self Care Deficit Theory (SCDT), and Nursing Systems Theory (NST) (Sitzman & Eichelberger, 2011).

Self-Care Theory

Self-Care Theory posits that behavior is initiated by the individual to care for themselves and regulate their own development with regards to their health, life or well-being (Sitzman & Eichelberger, 2011).

Self Care Deficit Theory

Self-Care Deficit Theory holds that through self-care agency, which is the acquired skills of the patient and their ability to apply them to tend to their needs, therapeutic self-care demand is met. Dependent-care agency occurs when a patient or child is developmentally unable to care or provide for themselves, therefore an agent, such as a parent, must act on the dependent’s behalf. The patient’s ability to perform self-care requirements are influenced by 10 basic conditioning factors: age, gender, developmental state, health state, sociocultural orientation, health care system factors, family system factors, living patterns, environmental factors, and availability of adequate resources. A self-care deficit occurs when therapeutic demand exists, and the patient, or in the case of a dependent, the agent acting on their behalf, is unable to meet their needs (Sitzman & Eichelberger, 2011).
Nursing Systems Theory

A Nursing Process is the method by which the nurse identifies needs and organizes deliberate actions to meet those needs. These actions can be wholly compensatory, partially compensatory, or supportive/educative (Sitzman & Eichelberger, 2011).
Appendix B

Proposed Nursing Process Protocol

1) The PMHNP determines conditioning factors specific to the parent-child dyad.

2) The PMHNP determines age-appropriate self-care requisites for the child, taking into consideration their unique conditioning factors.

3) The PMHNP determines the reliability and efficiency of the self-care and dependent-care agency with regards to the identified self-care requisites.

4) The PMHNP identifies self-care deficits that exist for the child.

5) The PMHNP develops an approach to wholly or partially compensate for these identified deficiencies, or to provide guidance through supportive/educative assistance.

6) As the child is always in a changing state of development, the PMHNP continually reevaluates conditioning factors and potential self-care deficits.
# Appendix C

## Sample Parent-Child Dyad Worksheet

<table>
<thead>
<tr>
<th>Age</th>
<th>6 years old</th>
<th>45 years old</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>Female</td>
<td>Female</td>
</tr>
<tr>
<td>Health State</td>
<td>Well developed, healthy, meeting appropriate milestones, dependent on others for age-appropriate care.</td>
<td>Smokes tobacco, diagnosis of schizophrenia</td>
</tr>
<tr>
<td>Developmental State</td>
<td>Elementary school, first grade.</td>
<td>Completed high school education</td>
</tr>
<tr>
<td>Sociocultural Orientation</td>
<td>Caucasian, Presbyterian</td>
<td>Caucasian, Presbyterian</td>
</tr>
<tr>
<td>Health Care System</td>
<td>Community Outpatient Clinic</td>
<td>Community Outpatient Clinic</td>
</tr>
<tr>
<td>Family System</td>
<td>Mother, Father (not married living separately), and one sibling (older sister).</td>
<td>Two daughters (age eight and six), unmarried</td>
</tr>
<tr>
<td>Patterns of Living</td>
<td>Living in rented home with mother and sibling.</td>
<td>Living in rented home with two daughters</td>
</tr>
<tr>
<td>Environment</td>
<td>Loud urban neighborhood near busy road, tobacco smoke in home, mother with diagnosis of schizophrenia.</td>
<td>Loud urban neighborhood near busy road, tobacco smoke in home.</td>
</tr>
<tr>
<td>Resources</td>
<td>Mother, father, paternal grandparents.</td>
<td>Peer support network through group therapy, parenting support group for parents with schizophrenia</td>
</tr>
<tr>
<td>Air</td>
<td>Shortness of breath at times. Tobacco smoke in home.</td>
<td>Smokes one pack of cigarettes per day</td>
</tr>
<tr>
<td>Food</td>
<td>Well-nourished, height/weight/age proportionate, well-balanced diet.</td>
<td>Height/weight disproportionate, BMI = 28.0 (overweight)</td>
</tr>
<tr>
<td>Water</td>
<td>Fluid intake sufficient. Fluoridated potable water available in home.</td>
<td>Fluid intake sufficient. Fluoridated potable water available in home.</td>
</tr>
<tr>
<td>Activity/Rest</td>
<td>Daily exercise greater than 30 minutes. Sleep per night = 10 hours of restful sleep.</td>
<td>Denies exercise.</td>
</tr>
<tr>
<td>Elimination</td>
<td>No reported difficulties with elimination or access to sanitary means for elimination.</td>
<td>No reported difficulties with elimination or access to sanitary means for elimination.</td>
</tr>
<tr>
<td>Social Interaction</td>
<td>Reports many friendly relationships at school.</td>
<td>Social events through group therapy and parenting classes.</td>
</tr>
<tr>
<td>Normalcy Promotion</td>
<td>Meaningful interaction with family and friends.</td>
<td>Meaningful interaction with daughters, some isolation from others.</td>
</tr>
<tr>
<td>Hazard Prevention</td>
<td>Fire alarms installed, locked gates outside home.</td>
<td>Fire alarms installed, locked gates outside home.</td>
</tr>
<tr>
<td>Developmental Needs</td>
<td>Feeds self, dresses self, bathes self, needs assistance with meal preparation, homework, financial needs.</td>
<td>Completes ADL’s without assistance.</td>
</tr>
<tr>
<td>Health Deviation Needs</td>
<td>Limited understanding of mother’s mental illness. Limited awareness of needs arising from mother’s mental illness. Limited awareness of dangers of second-hand smoking and course of associated illness.</td>
<td>Adherent with treatment recommendations for mental health, awareness and understanding of diagnosis, has made accommodations, has adapted to needs arising from diagnosis such as medication regimen, therapy, and parenting classes. Limited awareness of dangers of second-hand smoking and associated illness.</td>
</tr>
<tr>
<td>Self-care Deficits</td>
<td>Dependent on mother to provide food, shelter. Loud environment, poor air quality with known breathing difficulties. Limited understanding of mother’s mental illness.</td>
<td>Social interaction impaired. Smokes cigarettes. Denies exercise. Overweight.</td>
</tr>
<tr>
<td>Nursing Process</td>
<td>Supportive/Educative: use age-appropriate language to educate child in mother’s mental illness. Partially compensatory: referral to pulmonologist for asthma.</td>
<td>Educative: Educate parent in need for smoking cessation; smoke outside for children’s health, benefits of diet and exercise for BMI.</td>
</tr>
</tbody>
</table>
Appendix D

Parent-Child Dyad Evaluation Flowchart

PARENT/CHILD DYAD

EVALUATE CONDITIONING FACTORS
age, gender, health state, developmental state, sociocultural orientation, health care system, family system, patterns of living, environment, resources

DETERMINE SELF CARE REQUISITES
air, food, water, activity/rest periods, elimination, social interaction, normalcy, hazard prevention, developmental needs, health deviation needs

ASSESS
Self-care agency
Dependent-care agency

DETERMINE Self-care deficits

RE_EVALUATE

DEVELOP Nursing Process:
Wholly Compensatory
Partially Compensatory
Supportive/Educative