

A Comprehensive Typology for the Biopsychosociocultural Evaluation of Child-Killing Behavior

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ABSTRACT: The homicide of children by their parents has been reported across numerous cultural settings around the world and in many historical periods. A comprehensive and systematic understanding of parental child killing can be optimally obtained through a biopsychosociocultural approach. In this article we present the case of a woman who committed neonaticide. We illustrate the cultural formulation of the *Diagnostic and Statistical Manual of Mental Disorders (DSM-IV)* and recommend that this formulation has a central role in the evaluation of cultural factors of parents who kill their children.

KEYWORDS: forensic science, homicide, infanticide, neonaticide, filicide, cultural formulation, forensic psychiatry, biopsychosociocultural model, violence

The death of children at the hands of their parents constitutes a complex phenomenon observed since the beginning of recorded history (1,2). The parental killing of children has been recorded across most cultural settings around the world and has received more concerted attention in recent times and is generally acknowledged to be a serious international problem (3). Increased sensitivity to the problem may be in part due to an emerging worldwide trend focusing on the betterment of the status of women and children and on the prevention of domestic violence. From the point of view of safeguarding the welfare of children, there is an interest in developing approaches that facilitate comprehensive and reliable evaluations of parents who physically abuse and kill their children (4,5), or who are at risk of doing so.

An effective method for evaluating people who kill children

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requires an approach where different potential causes for such behavior are explored, resulting in the need to develop taxonomies. Classification schemes for child-killing behavior have been proposed by several investigators (6–10). Several strengths and limitations can easily be noted in these taxonomies. This is especially true because these taxonomies are not comprehensive, and therefore they undermine any effort designed to develop well-integrated and systematic evaluations of child-killing behavior. Often the main limitation is the emphasis on categorizing the motivational characteristics of the individual perpetrator at the cost of failing to evaluate the relevant environmental factors in which the homicidal behavior takes place and the role that these play in the conscious and unconscious life of the perpetrators.

Although a well-integrated model for a comprehensive biopsychosociocultural evaluation, in general, has not yet been developed, the recent introduction of a cultural component for psychiatric evaluations in the current edition of the *American Psychiatric Association Diagnostic and Statistical Manual of Mental Disorders (DSM-IV; 11)* suggests a greater readiness of mainstream psychiatry to acknowledge culture and other social structures as an important component of psychiatric evaluation (12). It is therefore possible that violent behavior such as child-killing behavior may be better understood by making use of the cultural formulation as well as other instruments that take into account contextual psychosocial factors. In this article we describe the case of a woman who committed the homicide of her newborn daughter. We use the index case to analyze in detail the causes underlying a specific type of child-killing behavior. We also provide a critique of current systems of classification of child-killing behavior. We then propose a multi-level taxonomic approach that facilitates a more comprehensive analysis of the relevant homicidal behavior. Finally, we use the cultural formulation of DSM-IV as a tool for a biopsychosociocultural evaluation of the index case.

The case was organized in accordance with the *Practice Guideline for Psychiatric Evaluation of Adults* published in 1995 by the work group on psychiatric evaluation of adults of the American Psychiatric Association (13), which is an instrument developed to facilitate a comprehensive and systematic collection of factors relevant for a general psychiatric evaluation.

Case History

Clinical Evaluation

Reason for the Evaluation—This psychiatric-legal evaluation was requested by the court in order to ascertain if any mental factors existed that could have played a role in the index neonaticide. Specifically, the purpose of the evaluation was to investigate

whether psychiatric or psychosociocultural factors had played either a mitigating or aggravating role in the homicidal behavior that a woman had exhibited toward her newborn daughter.

History of the Present Illness—Ms. A was an 18-year-old white Hispanic female who had been arrested for the alleged homicide of her daughter. She reported experiencing chronic feelings of emptiness about her life in general, chronic fears of being criticized and rejected, chronic generalized feelings of poor self-esteem, and some difficulties in interacting socially with people in general. She often stayed home because she viewed herself as unattractive and was fearful that others would criticize her for having accomplished little in life. She feared that she would be matched with an unsuccessful and dissatisfied boyfriend who would remind her of herself. During the few weeks prior to the birth of her daughter she reported substantial anxiety and dysphoria, largely related to this second out-of-wedlock and clearly unplanned pregnancy.

Ms. A stated that two years prior to the index homicide she had begun a sexually intimate relationship with a 25-year-old man that eventually resulted in this second pregnancy. However, soon after she became pregnant she terminated the relationship because he did not maintain an exclusive relationship with her and because he refused to seek gainful employment to support her and their future child. Soon after learning of her second pregnancy, Ms. A had decided to conceal her pregnancy from her family by wearing loose clothes and avoiding changing clothes in front of family members. The reason for hiding her out-of-wedlock pregnancy was in part because she was well aware that her family disapproved of non-marital sexual activity. This situation was worsened by her first out-of-wedlock pregnancy three years earlier. This event had caused serious interpersonal strain between Ms. A and her mother.

Ms. A would usually deal with her anger and dysphoria by avoiding others, adding that her family would not want to discuss her relationships with men or sexuality. Ms. A. stated that her family not only considered abortion sinful but made it clear that alternative methods of birth control were not open for discussion even after her family learned that she was pregnant with her first child. Ms. A had a history of caring for her first child well.

During the day of the killing she found herself alone in the family home where Ms. A, her mother, two sisters, and one brother resided. She recounted that her “water had broken” with the onset of labor pains two hours later. A short time later, while she sat on the toilet, she delivered a baby girl. According to Ms. A, the newborn “fell” into the toilet and she then flushed the toilet. Although she thought the baby might have moved, she made no attempt to revive the baby or enlist the aid of others. She acknowledged attempting to flush the baby into the toilet in order to conceal her pregnancy. When the baby proved to be too large to be successfully flushed, she attempted to cut her into pieces in order to do so. She stopped, however, after she cut one hand and instead decided to hide the body in her bedroom. At no point did she recall reconsidering trying to obtain outside assistance or to notify the authorities to verify the baby’s death and remove the body. Ms. A stated that she had no intention of harming herself during this time period. Ms. A denied experiencing any disorganized thinking, hallucinations, or anger at that time. She provided no evidence suggestive of delusional thinking at the time of her daughter’s death. Ms. A and her deceased baby were discovered by her family soon thereafter when her mother and siblings returned home that day.

She originally had planned to secretly seek an abortion, because she feared the anticipated disapproval and criticism from all members of her strongly Catholic family who vigorously disapproved

of abortion for both moral and religious reasons. Instead, she first searched unsuccessfully for Mexican herbs that she thought would help induce an abortion. She also had planned to go to Ciudad Juarez, Mexico, to seek the services of a folk healer whom she thought would help her with an abortion. She also thought of traveling to Mexico to give her baby to the church, but unfortunately had delivered three weeks earlier than she had expected.

Past Psychiatric History—Prior to the index evaluation Ms. A had never received psychiatric treatment. However, she reported that in the past she had experienced multiple conflicts with her grandmother because Ms. A wanted to have more freedom in dating boyfriends and to attend social events. After one of these she had superficially cut one of her wrists and on a similar occasion she had ingested several pills while experiencing suicidal ideation. She stated that on these two occasions she had experienced frustration and anger but added that her dysphoria would disappear after a few hours. Ms. A never communicated with anyone regarding her impulsive self-destructive behaviors. She also stated that she frequently experienced intense episodes of anger and dysphoria but would keep her feelings to herself and would often cope by socially withdrawing. She reported frequently feeling “empty,” referring to a lack of control of her life and a lack of a sense of direction. At the same time she permitted her family to structure her life and take responsibility for her needs as well as that of her son. She acknowledged feeling anxious in general at the prospect of independence and having to interact with persons outside of her family.

General Medical History—Ms. A had no history of serious non-psychiatric illnesses including neurological problems. She denied any history of head trauma. Both her pregnancies were uncomplicated and terminated with spontaneous vaginal deliveries. She was 17 at the time of her first pregnancy.

History of Substance Abuse—She did not have any difficulties with drug or alcohol abuse.

Development and Psychosocial History—Ms. A was the second of four children born to Mexican parents in Agua Prieta, Sonora, Mexico. She was raised by both parents until age 13 when her parents divorced.

No significant abnormalities were noted in the developmental history. No behavioral abnormalities indicative of mental illness were noted in childhood. However, she tended to be a timid, somewhat withdrawn child, and had few friends. She adjusted well to school and was an average student. She completed elementary school and part of junior high school in Mexico. After 14 years of age she immigrated from northern Mexico to a large city in the southwestern United States because her family was looking for a more stable economic life. She reports experiencing modest difficulties in learning English and completed the 10th grade. During adolescence her self-esteem plummeted because of obesity. Ms. A is of Catholic upbringing and throughout childhood and adolescence attended mass and observed religious holidays on a regular basis. Ms. A had never experienced any physical or sexual abuse. Discipline in her family did not involve corporal punishment.

Social History—Prior to the events encompassing the instant offense, Ms. A had no criminal history.

Occupational History—She had no significant history of employment.

Family History—There is no history of major mental disorder, alcohol or drug abuse, or neurological disease in Ms. A's family. Her immediate family did not suffer from any major medical problems.

Review of Systems—There was no evidence of fever, physical pain, or symptoms suggestive of major medical or neurologic problems.

Physical Examination—Her physical examination revealed no evidence of physical or neurological disease.

Mental Status Examination—Her appearance was consistent with a moderately obese woman dressed in jail clothing. Her mood was mildly depressed. She became agitated and tearful when she spoke of the circumstances of her child's death. Her speech showed no abnormalities. She was fluent in both English and Spanish but preferred to speak in Spanish. Her motor activity occasionally displayed episodes of fidgeting. As previously stated, no psychotic symptoms were reported. Her thought content contained themes of remorse regarding her child's death. She was well oriented to person, place and time. Her attention and concentration were normal. Her fund of knowledge was appropriate for her educational level. Her judgment and abstraction were within normal limits.

Functional Assessment—At home both her family and Ms. A reported that she participated regularly in cleaning the house. She took good care of her hygiene both at home and in jail. Her first child was well nourished and there was no physical evidence of abuse.

Diagnostic Tests—She was cooperative with psychological testing. Her Minnesota Multiphasic Personality Inventory (MMPI) was considered valid and suggested features of anxiety, depression, and obsessional characteristics. There was evidence of feelings of helplessness, chronic detachment, and isolative behavior. On the Thematic Apperception Test (TAT) she produced a high number of responses involving imaginary or painful relationships leading to unfulfillment and reflecting depression. Nevertheless, she appeared to desire satisfactory relationships with others.

On the Rorschach Inkblot Test, Ms. A produced a high number of percepts involving human anatomy, especially the pelvic area as genitalia. These results were interpreted as indicative of depression, self-absorption and somatic concerns. The high number of anatomical responses may have been associated with concerns about the instant offense and/or chronic concerns about her body image and associated low self-esteem.

Ms. A was thought to have met DSM-IV criteria as described in Table 1. After about four weeks of treatment with tricyclic antidepressant medication, Ms. A reported a substantial reduction in her depressive symptoms.

The prosecution in Ms. A's case was of the opinion that there was insufficient evidence for premeditated (first degree) murder even though her hiding of the pregnancy could be interpreted as the beginning of a plan to kill the child once born. Ms. A was convicted of a lesser degree of homicide, voluntary manslaughter.

Discussion

The Classification of Child-Killing Behavior

Parental killing of neonates is a phenomenon that has been noted in a wide range of sociocultural, ecological and historical settings

TABLE 1—*Multiaxial DSM-IV diagnosis.*

Axis I. Clinical disorder	1. Dysthymic disorder
Axis II. Personality disorder	1. Personality disorder not otherwise specified
Axis III. General medical condition	1. None
Axis IV. Psychosocial and environmental problems	1. Problems with primary support group (nuclear family) 2. Problems related to the social environment 3. Problems related to interaction with the legal system
Axis V. Global assessment of functioning (GAF)	GAF = 51 (at the time of her forensic psychiatric evaluation) GAF = 5 (at the time of the homicide)

(1,2,5,14,15). Neonaticide is a subtype of infanticide. While infanticide covers victims who are between one day and 12 months of age depending on the development categorization utilized, neonaticide covers only the newborn as victims. Resnick defined neonaticide as the killing of a son or daughter within the first 24 hours of life (7). In modern times both the psychiatric and the legal professions have focused on motivational factors within individual perpetrators as a way to understand the basic psychological structures underlying child-killing behavior as well as a basis for developing relevant taxonomies (6,7).

Resnick is a major proponent of classification of infanticide based on motivation factors. Based on a review of the world literature on child killing from 1751 to 1968, and three cases treated by Resnick himself, he identified 168 case reports, of which 37 met Resnick's definition of neonaticide. He concluded that parental child-killing behavior in general could be classified according to motive. He also found that infanticide cases were classifiable according to four "motives." In the acutely psychotic killing the perpetrator kills under the influence of an active psychotic process. In altruistic parental infanticide the parent believes that killing the victim will relieve the child of real or imagined suffering. Accidental infanticide occurs in the absence of homicidal intent. Neglect of the victim is not infrequently noted in these cases. In unwanted infanticide the victim is killed because he or she was never desired or is no longer wanted by the parent (7).

The case of Ms. A fits well with the unwanted category since it is clear that given her personal circumstances she did not want to have a second child. Unfortunately, a taxonomy based on motivation alone may fail to take into account rich contextual factors surrounding the person. Several investigators have discussed the need to take into account other factors besides those involving motivation for killing, and have cautioned that classification of parental child-killing behavior is likely to result not in "discrete entities but rather [in] an 'unbroken spectrum of parental action'" (8, p. 120). Scott provided a critique of "motivational" taxonomies of child-killing behavior and pointed out that other psychological factors such as stressors that undermine psychological defenses are important to take into account. Moreover, he also realized that stimuli that arise outside of the victim in addition to factors within the victim, are important for a classification of parental child-killing behavior (8). d'Orban proposed a similar taxonomy as that of Scott and added neonaticide to his categorization, thus combining a category based on development, namely neonaticide, with five categories based on motivation (9). In contrast to Scott and d'Orban, although Resnick placed little emphasis on environmental categorization, he did recognize developmental age of the victim as an important factor in classification of parental child killing.

Resnick’s review of previous cases based on the developmental age of the victim supported the importance in his categorization model that distinguished the killing of a one-day-old neonate versus an older infant by noting a different frequency of motives between the two groups (7). Bourget and Bradford proposed a system that they believed would encompass different clinical situations. In fact, their taxonomy included one based on psychopathology which they called pathological filicide, two of Resnick’s motivational categories (accidental and retaliating filicide), one category based on developmental age of the victim (neonaticide) and one category based on the gender of the perpetrator which they called parental filicide (10). While it is true that most systems of classification that utilize motivational categories tend to simplify and all but ignore many other important factors in child-killing behavior, other systems are at a disadvantage by including overlapping categories that create further confusion. Thus, in the typology of Bourget and Bradford, by including parental gender as a category they introduce a factor that may co-occur with pathological filicide, accidental filicide, retaliatory filicide and occasionally even neonaticide. While it is critical to recognize that there is considerable overlap between categories, as most investigators to various degrees have done (6,10), there still remains a need to develop a taxonomy that takes into account the overlap problem and minimizes the introduction of substantially different variables as comparable categories.

From the available information on taxonomies on child-killing behavior, we can surmise that to a significant extent the types of categories in the proposed classifications involve rather arbitrary choices regarding which type of categories are deemed more important. Based on the available systems of classification we note four important general categories, at least one of which is present in each of the available systems of classification (6–8,10). These categories may be termed: (1) diagnostic, (2) behavioral, (3) developmental, and (4) psychosociocultural/ecological. The extent to which these categories are emphasized in different taxonomies of child killing behavior is presented in Table 2.

The diagnostic category is present in all psychiatric-based classifications of child killing. This makes sense, because by definition, psychiatric classifications rely on categories of psychopathology. However, in none of the taxonomies is psychiatric diagnosis prominent. The reason for this is because it is generally recognized that although psychopathology is an important causative factor in a large proportion of cases, several other factors are very important in many of the cases.

The behavioral category incorporates behavioral variables that cannot be easily accounted for by psychopathology. This is by far the most prominent of all categories in most taxonomies, in part due to the fact that refusal to have and care for the child is recognized as

a very common factor by most taxonomies. Other factors, such as accidental killings, are also important behavioral factors that are often not easily wholly explainable via psychopathology. Developmental considerations are represented insofar as neonaticides versus the killing of older children appear to involve different motivations and perpetrators. Interestingly, developmental aspects of the perpetrators themselves are not usually given important consideration in child-killing behavior taxonomies although the young age of many perpetrators suggests that this may be relevant in some cases (10,16,17).

Although psychosociocultural and ecological considerations have been accorded importance in the classification of child-killing behaviors, these tend to represent a highly complex category. This category is likely to include not only aspects of Resnick’s motivational categories but can also be affected by demographic, socioeconomic, cultural, and even ecological factors. Scott and d’Orban have similar limitations to Resnick’s system, although a need was recognized to take extrapersonal or ecological factors into account (8,9). Bourget and Bradford represent an improvement from other taxonomies in that they recognize that gender is sufficiently important to be included as a category in and of its own. However, they failed to formalize a need for a category of factors outside of the perpetrator as did Scott and d’Orban. Interestingly, none of the reviewed taxonomies recognize that child-killing behaviors are also brought about by non-parental figures. Although parental child-killing behavior can at first glance be assumed to be a different phenomenon than non-parental child-killing behavior, differences and similarities need to be systematically explored. In summary, available classifications consider important psychiatric and behavioral non-psychiatric, including developmental categories. They also vary in the extent they consider psychosocial, cultural and ecological factors. However, important omissions or lack of emphasis using these categories exist (see Table 2). We therefore conclude that the available taxonomies of child-killing behavior are characterized by significantly arbitrary as well as redundant contingencies that limit the validity and usefulness of these taxonomies.

A New Multi-Level System of Classification

In order to minimize the previously enumerated problems in classification, we propose a taxonomy that incorporates a multi-level approach where the four previously discussed factors are taken into account. The proposed model of classification can be conceptualized as a hierarchy of levels of psychobiological organization that begin at the organismic level and that include normal as well as abnormal behaviors (Levels I and III; 18,19). Human behavior implies an evolving dynamic process that consists of different stages of cognitive and emotional development (Level II; 18–20). Human behavior must also be conceptualized as embedded in multiple complex ecologies consisting of physical and social structures that are themselves in the process of change (Level IV; 18,19). This multi-level method not only recognizes, as most classifications do, that categories tend to overlap each other, but formalizes the categories into a structure that requires that such factors be taken into account. Furthermore, our proposed method has the potential to help clarify the degree to which each category is impregnated with other categories that compose the taxonomy (see Table 3). Thus, for example, the developmental category of neonaticide may also be related to a cultural matrix that encourages the killing of the newborn under certain circumstances such as appeared to be the case in some Eskimo groups, especially during earlier historical periods (21).

TABLE 2—*Categorization of classification for neonaticidal behavior.*

Category	Resnick (1970)	Scott (1973)	d’Orban (1979)	Bourget & Bradford (1990)
Diagnostic	+	+	+	+
Behavioral	++	++	+	++
Developmental	++	–	+	+
Psychosocio-cultural/ecological	+	+	+	+

++ = present, given significant importance.
 + = present, given moderate importance.
 – = absent.

TABLE 3—Multi-level approach for the classification of child-killing behavior.

Level I.	Psychiatric diagnostic factors
	a. Functional psychoses
	b. Substance abuse/dependence
	c. Other psychiatric disorders
Level II.	Developmental factors
	a. Neonaticide versus older children
	b. Age-related effects of the perpetrators
Level III.	Behavioral non-psychopathological factors
	a. Unwanted children
	b. Accidental deaths
Level IV.	Psychosociocultural/ecological factors
	a. Demographic effects (e.g., gender, marital and socioeconomic status)
	b. Cultural factors
	c. Stressors

The case of Ms. A can be classified under the proposed system Level I by her having a personality disorder. She evidenced chronic difficulties with mood instability, inappropriate anger, and chronic feelings of emptiness, consistent with borderline personality disorder traits. She also had difficulties expressing disagreement with others and tended to have others take responsibility for her activities of daily living. These traits are consistent with dependent personality disorder traits.

Under Level II, the index case involved neonaticide since the baby was killed almost immediately after birth. Another important developmental factor was the age of Ms. A who was 18 years old. This is an important consideration because mothers who kill their newborns appear to be younger than those who kill older children (17). On Level III, behavioral factors, we note that Ms. A clearly did not want another child. The reasons for this will be discussed. Level IV covers the psychosociocultural/ecological factors. Because these factors in the present case may be significant in the genesis of Ms. A's homicidal behavior, we discuss them below in a separate section making use of the DSM-IV cultural formulation outline.

Cultural Formulation

The DSM-IV has introduced the outline for cultural formulation to facilitate and systematize the assessment of cultural factors in diagnostic and psychosocial evaluations. The outline is composed of five categories. Each section in turn may be divided into several subsections according to the needs of the mental health clinician and the nature of the specific case. In this article we follow the outline suggested by Manson (22).

Cultural Identity of the Individual

The first category is the cultural identity of the individual. In this section the person's ethnic or cultural affiliation is described, along with the degree of involvement with both culture of origin and the host culture, if applicable. Language abilities and preferences are also noted.

Cultural Reference Groups—Ms. A was born of Mexican parents. She was raised in Mexico for the first 14 years of her life. Both of Ms. A's parents considered themselves "Mexican." In fact, her father has lived only in Mexico and is monolingual. Her mother has lived primarily in Mexico and almost always conversed

in Spanish. Ms. A considers herself more "Mexican" than "American."

Language—Ms. A's native language is Spanish. She shared this characteristic with her primary family unit of parents and siblings. Ms. A is, however, fluent in English. While the language of conversation with her parents was Spanish, she spoke a mixture of English and Spanish with her siblings and acquaintances.

Cultural Factors in Development—The fact that Ms. A was raised in Mexico for approximately the first four-fifths of her life suggests that she might be more comfortable within the Mexican culture. In fact, most of her close relationships were with those who were born in Mexico. During her childhood she attended mass and religious holidays of the Catholic Church on a regular basis. At the time of her current evaluation, she considered herself a practicing Catholic, although she did not agree with her family's and the Church's anti-abortion views. She clearly stated that her "pro-choice" views on abortion had been learned through exposure to mainstream American culture. Ms. A lived in a large urban center in the United States and attended school there. She aspired to emulate the lifestyles that she perceived many (non-Hispanic) Caucasians to have.

Involvement with Culture of Origin—Relative to her family of origin, she felt comfortable dealing with American culture, though it was notable that she was even more comfortable with Hispanic people. This was highlighted by the fact that her boyfriends, friends and other close acquaintances were mostly of Hispanic origin. Aside from Catholic Church activities she regularly participated in secular Mexican holidays of a social and political nature such as Mexican Independence Day.

Involvement with Host Culture—Ms. A interacted regularly with non-Hispanic Caucasians in the community. She felt relatively comfortable in interacting with her non-Hispanic Caucasian teachers. She acknowledged learning much about American society from school and from television and appreciated the freedom of ideas and the relatively less rigid possibilities of American mainstream society such as greater sexual freedom for females, and the fact that, although abortion was controversial in the United States, the society allowed for women to have the choice of whether to have one.

Cultural Explanations of the Individual's Illness

In this section the idioms or symbols of distress embedded in symptoms or needs for social support as well as the perceived severity of symptoms in relation to the norms of the cultural reference group, are documented. Any illness categories characteristic of the cultural reference group, usually known as culture bound syndromes, are described in detail.

Predominant Idioms of Distress and Local Illness Categories—Ms. A's experiences of distress and withdrawal were viewed by her family in part as adolescent behavior and partially as part of her individual temperament. Her family did not view Ms. A as being mentally ill and even after learning of her homicidal behavior they continued to view her tendency to be guarded and impulsive as only a normal variant of behavior, although of course, they viewed the killing of her child as an abnormal act of desperation. Neither Ms. A nor her family viewed her maladaptive personality

traits as consistent with a culture bound syndrome. The latter is defined by DSM-IV as “recurrent, locality-specific patterns of aberrant behavior and troubling experience that may or may not be linked to a particular DSM-IV diagnostic category. Many of these patterns are indigenously considered to be ‘illnesses,’ or at least afflictions, and most have local names” (11, p. 844).

Meaning and Severity of Symptoms in Relation to Cultural Norms—Understanding Ms. A’s dysphoria both with respect to standards of sexual behavior and acceptable disposition of an unwanted child needs to be evaluated from a developmental and cultural perspective. Both Mexican and American mainstream cultures take a dim view of adolescent sexual intercourse between unmarried partners. However, American culture allows for greater intergenerational communication regarding sexual behavior. In a Hispanic society, families are therefore less likely to initiate discussion regarding sexuality with the result that problems involving sexual behavior are not openly discussed and consequently these issues are less likely to be dealt with effectively. In Ms. A’s case the problem was complicated by the fact that her mother and her mother’s relatives continued to adhere to conservative and more culturally congruent views that sexuality need not be discussed since sexuality was only acceptable behavior within marriage. This stand was also preserved after Ms. A had delivered her first out-of-wedlock child. This situation is possibly consistent with some denial in Ms. A’s family regarding the need to openly discuss premarital sexuality and pregnancy. Ms. A’s premarital sexual behavior may also be interpreted as a developmentally appropriate issue although not necessarily a behavior that is sanctioned in a given society. From Ms. A’s point of view the issue of emancipation not only from a family but also from a culturally and religiously repressive infrastructure needs to be acknowledged. Therefore her differing viewpoints regarding sexuality in comparison to her family also represents an issue of intergenerational cultural differences, a situation that can be most clearly seen between a generation raised in one country and the succeeding generation raised in the country where a family ultimately settles.

Cultural Factors Related to Psychosocial Environment and Levels of Functioning

Here we describe the “culturally relevant interpretations of social stressors, available social supports, and levels of functioning and disability” (11, p. 844). The stresses of the familial as well as broader social environment are noted. The role of religion, kin networks as well as culturally relevant community support systems are taken into account.

Ms. A’s explanation of conflicts with her family involved the standard view in both American and Mexican cultures that parents and their children frequently come into conflict especially when the latter reach adolescence. However, Ms. A also experienced stress because she viewed her parents’ Mexican values as too constricting to her and she therefore favored the mainstream American societal context in which sexual behavior and its potential conflicts were more open for discussion and understanding. It is important to emphasize that Ms. A believed that if such conflicts had not existed between her and her family she would not have felt so compelled to hide her pregnancy and that the sequence of events leading to her daughter’s death could have been avoided. Nevertheless, she tried to rely on social support systems from her original culture such as thinking about leaving her baby to the Catholic Church in Mexico, and attempting to seek help from folk healers

and herbalists in Mexico. She did not feel comfortable even though she was aware that United States health clinics could have provided help regarding her situation. Her source of discomfort appeared to originate in her lack of exposure to clinical facilities in the United States.

Cultural Elements of the Relationship Between the Individual and the Clinician

In this section, “differences in culture and social status between the individual and clinician and problems that these differences may cause in diagnosis and treatment” are considered (11, p. 844). Both Ms. A and the forensic psychiatrist who evaluated her had similar experiences in that both were immigrants from northern Mexico who had arrived in the United States at similar ages. This point of identification enabled Ms. A to have some understanding that her life development, including the nature of being an adolescent immigrant, having to learn a new language and the potential conflicting nature of two different sets of cultural values, would be more directly comprehensible to the evaluating psychiatrist. The fact that both Ms. A and the forensic psychiatrist were of similar Hispanic origins also enabled her to feel more comfortable during the interview. This was especially important when she spoke about culturally laden issues such as folk healers, herbal medicine, the nature of motherhood and its association with her religion, and her family’s moral values. Given that she was only seen for a total of five sessions encompassing nine hours, no in-depth analysis or therapy were involved. However, the fact that she was able to discuss the multiple issues leading to the homicide of her daughter, and that many of these factors were cultural in nature, enabled the forensic psychiatrist to formulate a more comprehensive and comprehensible account and analysis of the nature of the infanticide.

Overall Cultural Assessment for Diagnosis and Care

The fifth component of the cultural formulation is called the overall cultural assessment for diagnosis and care. In this section relevant cultural factors and how they affect diagnosis and care are discussed.

The case of Ms. A exemplified a young woman who suffered from personality pathology who was also in the process of attempting to resolve important developmental issues during her adolescence. She was in the process of consolidating her sexual autonomy; however, her approach soon came in conflict with her family’s moral and religious values when Ms. A not only became involved in premarital sex but when her sexual activity resulted in an out-of-wedlock pregnancy.

Ms. A was a relatively new young immigrant to the United States who clearly felt comfortable with her native Mexican culture but also enjoyed the relative freedom that she encountered in American society. Her case highlights the stressful process of adolescence in a cross-cultural context in which ambivalent and contradictory factors need to be faced and integrated not only from the standpoint of adolescence but also from a different cultural perspective.

This case also exemplifies a young woman clearly appearing to be more comfortable in seeking help from social support systems in her own native culture. She felt relatively uncomfortable regarding the utilization of social networks such as the available health care clinic system that could have helped her resolve her problem via such

preventative actions as birth control strategies, termination of pregnancy, or placement of an unwanted child, as well as counseling to help her deal effectively with her family and cultural conflicts.

Ms. A's case reveals the need for counseling with a balanced biopsychosociocultural approach, which might have helped her resolve her situation more effectively and may have helped prevent a tragedy. Her case also exemplifies the need to go beyond understanding "motives" for her homicidal behavior, and to focus on causes that may be conscious or unconscious, as well as individual or social group dependent in order to develop an optimally comprehensive understanding of her child-killing behavior. In addition, the proper elucidation of child-killing behavior can also require a biopsychosociocultural approach and a typology of child-killing behavior that understands such behavior as a function of multiple levels of biological and psychosociocultural organization. Furthermore, the cultural outline of DSM-IV represents an effective tool that may help achieve this end. The case of Ms. A exemplifies how her neonaticidal behavior can be optimally clarified if cultural parameters are considered. In her case several factors, including cultural and developmental influences, reluctance to utilize available health care resources, intergenerational values conflict, and ecological parameters associated with poor education, were identified as potentially legally mitigating. However, the absence of serious psychopathology such as a major mental disorder can be viewed as potentially damaging to her legal case.

In conclusion, Ms. A's psychological and legal difficulties were more comprehensively analyzed using a taxonomy of child-killing behavior with a biopsychosociocultural perspective (4,5,23). Failure to utilize this approach can lead to consequences such as poor understanding of developmental, ecological, and cultural factors that may have played a role in homicidal behaviors by parents directed at their children. Also, failure to provide a comprehensive picture of a defendant like Ms. A might lead to an inequitable delivery of justice because important aggravating and mitigating factors were not considered. From a clinical standpoint, a less than comprehensive assessment may lead to suboptimal intervention and failure to diminish the risk defendants such as Ms. A pose when they are released from the supervision of the legal system and reenter the community.

Systematic study of the use of the cultural formulation is still in its early stages for psychiatric cases in general. Moreover, it is well recognized that the cultural formulation outline itself represents only a starting point in the development of approaches to elucidate the nature of the interaction between psychiatric disorder and culture (24). However, this is especially true for cases of a psychiatric-legal nature where the idea of a "cultural formulation" has only very recently been mentioned at a national forensic psychiatry meeting (25). The fact that American society is becoming increasingly multiculturally diverse, and that this trend is expected to continue into the 21st century (26), suggests that competency in the cultural evaluation of psychiatric cases will be in great demand. Moreover, there is currently a great increase in the numbers of psychiatric patients from a multiplicity of cultural backgrounds being treated within the jail system. This will necessitate competency in the evaluation of both cultural and legal issues from a psychiatric-legal perspective.

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References

1. Langer WL. Infanticide: a historical survey. *History of Childhood Quarterly: The Journal of Psychohistory* 1973-1974;1:353-65.
2. Breiner SJ. *Slaughter of the innocents: child abuse through the middle ages and today*. New York: Plenum Press, 1990.
3. Piers MW. *Infanticide*. New York: Norton, 1978.
4. Silva JA, Leong GB, Weinstock R, Yamamoto J, Ferrari MM. A biopsychosociocultural approach for the evaluation of parents who kill their children. *Am J Forensic Psychiat* 1996;17:25-36.
5. Silva JA, Leong GB, Yamamoto J, Weinstock R, Ferrari MM. A transcultural forensic psychiatric perspective of a mother who killed her children. *Am J Forensic Psychiat* 1997;18:39-58.
6. Resnick PJ. Child murder by parents: a psychiatric review of filicide. *Am J Psychiat* 1969;126:325-34.
7. Resnick PJ. Murder of the newborn: a psychiatric review of neonaticide. *Am J Psychiat* 1970;126:1414-20.
8. Scott PD. Parents who kill their children. *Med Sci Law* 1973;13:120-6.
9. d'Orban PT. Women who killed their children. *Br J Psychiat* 1979;134:560-71.
10. Bourget D, Bradford JMW. Homicidal parents. *Can J Psychiat* 1990;35:233-8.
11. American Psychiatric Association. *Diagnostic and statistical manual of mental disorders*, 4th ed. Washington, DC: American Psychiatric Association, 1994.
12. Mezzich JE. Cultural formulation and comprehensive diagnosis, clinical and research perspectives. *Psychiatr Clin No Amer* 1995;18:649-57.
13. American Psychiatric Association. *Practice guidelines for psychiatric evaluation of adults*. *Am J Psychiat* 1995;152(Suppl):65-80.
14. Trexler RC. Infanticide in Florence: new sources and first results. *History of Childhood Quarterly: The Journal of Psychohistory* 1974-1975;2:98-116.
15. Hoffer PC, Hull NEH. *Murdering mothers: infanticide in England and New England 1558-1803*. New York: New York University Press, 1981.
16. Harder T. The psychopathology of infanticide. *Acta Psychiatr Scand* 1967;43:196-245.
17. Adelson L. Pesticide revisited: the slaughter continues. *Am J Forensic Med and Path* 1991;12:16-26.
18. Bronfenbrenner O. *The ecology of human development*. Cambridge: Harvard University Press, 1979.
19. Silva JA, Liederman PH. The life-span approach to individual therapy: an overview with case presentation. In: Baltes PB, Featherman DL, Lerner RM, editors. *Life-Span Dev and Behavior*, Vol 7. Hillsdale, New Jersey; Lawrence Erlbaum Associates, 1986: 113-34.
20. Erikson EH. *Identity and the life cycle*. New York: W.W. Norton and Company, 1980.
21. Balicki A. *The Netsilik Eskimo*. New York: The Natural History Press, 1970.
22. Manson SM. The wounded spirit: a cultural formulation of post-traumatic stress disorder. *Culture, Medicine and Psychiat* 1996;20:489-98.
23. Yamamoto J. Psychiatric diagnosis and neurasthenia. *Psychiatr Ann* 1992;22:171-2.
24. Kleinman A. How is culture important for DSM-IV?. In: Mezzich JE, Kleinman A, Fabrega H, Parron DL. *Culture and Psychiatric Diagnosis: A DSM-IV Perspective*. Washington, DC: American Psychiatric Press, 1996:15-29.
25. Griffith EEH. Ethics in forensic psychiatry: a cultural response to Stone and Appelbaum. Presented at the 28th Annual Meeting of the American Academy of Psychiatry and the Law, Denver, Colorado, 23-26 Oct. 1997.
26. McRae H. *The World in 2020: Power, Culture and Prosperity*. Boston: Harvard Business School Press, 1994.

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