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Biopsychosocial Risk and Resilience and Strengths Assessment

This book is organized with a biopsychosocial risk and resilience framework for understanding and intervening with people who have mental disorders. In this chapter, we describe this framework and its advantages for social work assessment. Then we detail a number of risk and protective factors at the biological, psychological, and social levels that may contribute to or inhibit the development of mental disorders.

DEFINITIONS AND DESCRIPTION

Although the biological and psychological levels relate to the individual, the social aspect of the framework captures the effects of the family, the community, and the wider social culture. The processes within each level interact, prompting the occurrence of risks for emotional or mental disorders and the propensity toward resilience, or the ability to function adaptively despite stressful life circumstances (Garcia-Dia, DiNapoli, Garcia-Ona, Jakubowski, & O'Flaherty, 2013). Risks can be understood as hazards occurring at the individual or environmental level that increase the likelihood of impairment (Furber, Leach, Guy, & Segal, 2016). Protective mechanisms involve the personal, familial, community, and institutional resources that cultivate individuals' aptitudes and abilities while diminishing the possibility of problem behaviors. These protective influences may counterbalance or buffer against risk (Werner, 2000) and are sometimes the converse of risk (Jessor, Van Den Bos, Vanderryn, Costa, & Turbin, 1997). For instance, at the individual level, poor physical health presents risks while good health is protective. It must be noted that research on protective influences is limited compared with information on risks for various disorders (Donovan & Spence, 2000).

The biopsychosocial emphasis expands one's focus beyond the individual to a recognition of systemic factors that can both create and ameliorate problems. The nature of systems is such that the factors within and between them have transactional and reciprocal influence on one another, with early risk mechanisms setting the stage for greater vulnerability to subsequent risks. The

development of oppositional defiant disorder and conduct disorder (see Chapter 12) is a case in point that shows how the presence of certain risk or protective mechanisms may increase the likelihood of other risk and protective influences.

Although precise mechanisms of action are not specified, data have begun to accumulate that four or more risk influences may overwhelm an individual and represent a threat to adaptation (Epps & Jackson, 2000; Frick, 2006; Garmezy, 1993; Runyan et al., 1998). Although some researchers have found that the more risks, the worse the outcome (Appleyard, Egeland, van Dulmen, & Sroufe, 2005), others have argued that risk does not proceed in a linear, additive fashion (Greenberg, Speltz, DeKlyen, & Jones, 2001). Nor are all risk factors weighted equally. The associations between risk and protection and outcomes are complex and may involve changing conditions across a person's development.

The biopsychosocial framework holds a number of advantages for the assessment of mental disorders. It provides a theoretical basis for social workers to conceptualize human behavior at several levels and can assist them in identifying and bolstering strengths as well as reducing risks. The framework offers a balanced view of systems in considering both risks and strengths, as well as recognizing the complexity of individuals and the systems in which they are nested.

The chapters in this book delineate the risk and protective influences for both the onset of particular disorders and for an individual's adjustment or recovery. Some of the influences discussed in each chapter are nonspecific to that particular disorder; in other words, certain risks and protective mechanisms play a role in multiple disorders. These common mechanisms, discussed at the individual and social levels, are good targets for intervention and prevention and are given an overview here.

INDIVIDUAL FACTORS

Individual factors encompass the biological and psychological realms. Within biology we will discuss genes and heritability, neurotransmitters, temperament, physical health, developmental stage, and intelligence. At the psychological level we will explore individual patterns of behavior.

Biological Mechanisms

Genes and Heritability

Although information on the genetic influences of all mental disorders is not available, the disorders differ in the extent to which genetic causes are attributed to them. For instance, heritability for major depression ranges from 31% to 42% (Sullivan, Neale, & Kendler, 2000); similarly, many anxiety disorders seem to be moderately heritable. Certain other disorders, such as bipolar disorder and schizophrenia, may be more heritable (Ruderfer et al., 2014; McCarthy, Liang, Spadoni, Kelsoe, & Simmons, 2014).

For most disorders, specific genetic markers have not been delineated, and genetic models for many disorders increasingly include a number of genes (Williams, Reardon, Murray, & Cole, 2005). There also may be common genes that play a role in various disorders. For example, the neurodevelopmental disorders, including autism spectrum disorders, ADHD, and learning disorders, may stem from the same genes (Pettersson, Anckarsater, Gillberg & Lichtenstein, 2013).

Even for disorders assumed to have genetic causes, those conditions result not only from abnormalities in inherited genes but also from certain gene combinations or other errors in genes caused during pregnancy by such events as infections and exposure to x-rays. Finally, it is widely

behavior disorders (Latimer et al., 2012). Cigarette smoke exposure is associated with a higher risk of school-age children developing behavioral problems, such as hyperactivity, attention deficits, or peer relationship problems (Rückinger et al., 2010). Controlling for other social influences, children who were exposed to tobacco smoke only prenatally have a 1.9 times higher risk of developing abnormal behavioral symptoms in comparison to children with no exposure. The risk for such children first exposed to tobacco smoke after birth is 1.3 times higher. Further, children who were exposed to tobacco smoke while in the womb and while growing up had twice the risk of developing abnormal behavioral symptoms. Similarly, Ekblad, Gissler, Lehtonen, and Korkeila (2010), in a Finnish study, found that the rate of psychotropic medication use in young adults was highest in those whose mothers smoked more than 10 cigarettes a day while pregnant (16.9%), followed by youths whose mothers smoked fewer than 10 cigarettes a day (14.7%) and unexposed youths (11.7%).

Developmental Stage

Mental disorders often emerge early in life. About 50% of cases have their onset by age 14, and 75% begin by age 24 (Kessler, Adler et al., 2005). The risk of mental disorders continues to be high through the age category 30 to 44; prevalence then declines for people who have matured out of this high-risk age range. For example, the borderline and antisocial personality disorders may remit as afflicted individuals mature into their 40s (Paris, 2003).

In Werner and Smith's (2001) longitudinal study on resilience, many people whose lives had been characterized by adversity and mental health or learning disabilities in their teens were able to make a positive adjustment by age 40. Protective influences for positive adaptation involved education at community colleges, educational and vocational skills garnered during military service, a stable marriage, active participation in a religious faith, and the experience of life-threatening accident or illness.

Intelligence

A high intelligence quotient (IQ) is a protective factor, resulting in higher school performance despite life stress and more effective problem solving in peer social situations (Wachs, 2000). Conversely, low IQ is a central risk factor for antisocial behavior, over and above socioeconomic status (SES). More specifically, reading and reasoning skills have been identified as critical to a child's long-term development (Werner & Smith, 2001). Parental education is also key, extending from adjustment in childhood, all the way into middle age (Werner & Smith, 2001).

Psychological Mechanisms

Self-efficacy and Self-esteem

Children with positive self-concepts and a self-perception that is characterized by an internal sense of control, a belief that they can influence their environment, and effective coping strategies, are better equipped to face life stressors (Wachs, 2000; Werner & Smith, 2001).

Self-regulation and Emotion Regulation

A child who can listen, pay attention, follow instructions, and persist on a task, even if faced with stressful life events, will achieve greater success in school (Sektnan, McClelland, Acock, & Morrison, 2010). When controlling for other risk factors, children whose parents and teachers reported that they had strong self-regulation in preschool and kindergarten did significantly better in math, reading, and vocabulary at the end of first grade.

Emotional regulation refers to the ability of the child to identify, tolerate, express a range of emotions, and to be able to recover from a challenging emotional state and return to a level of equilibrium (Davila, Ramsay, Stroud, & Steinberg, 2005). The ability to self-regulate is generally assumed to evolve from secure caregiving. When caregivers are unable to regulate their children's and their own emotional states, the children do not have opportunities to develop effective strategies for responding to their own emotions or those of others.

Coping Strategies

A tendency toward rigid belief systems and certain cognitive distortions puts people at risk for mental disorders. For example, depression is related to significant cognitive distortions, such as Beck's conceptualization of the "cognitive triad" of depression: thoughts about the self as worthless, the world as unfair, and the future as hopeless (Beck, Rush, Shaw, & Emery, 1979). In addition, youth with conduct problems display distortions in how they perceive and code their social experiences (Kazdin, 2017). These conduct problems include the inability to produce a variety of strategies to manage interpersonal problems, difficulty figuring out ways to achieve a particular desired outcome, difficulty identifying the consequences of a particular action and its effects on others, a tendency to attribute hostile motivations to the actions of others, and misunderstanding of how others feel. The combination of perceived threat and limited options for managing social situations makes antisocial youth more likely to respond with aggression rather than with more productive problem-solving strategies.

The nature of one's coping strategies is also a general risk or protective mechanism. For example, certain coping strategies are problematic for the development of anxiety and depressive disorders. One type of problematic coping pattern involves avoidance coping. For instance, some anxiety disorders develop partly because individuals avoid situations that trigger anxiety. They do not allow themselves to tolerate a situation until the anxiety begins to dissipate. Unfortunately, a style of avoidance for dealing with depression might lead a person to experience more life stress and depressive symptoms as a result (Holahan, Moos, Holahan, Brennan, & Schutte, 2005).

Rumination is another detrimental coping pattern. Rumination is the proclivity to focus on the symptoms of a distressed mood, or to mull over the reasons for its occurrence in an incessant and passive way (Nolen-Hoeksema, 2002), rather than using problem-solving strategies to resolve it (Hino, Takeuchi, & Yamanouchi, 2002). It is not only the internalizing disorders that are linked with problematic coping; conduct problems in girls have also been associated with poor coping skills (Burke et al., 2002). Interpersonal skills can also be subsumed under the category of coping strategies. These skills involve the ability to create and maintain relationships and to communicate effectively and assertively (Henggeler et al., 2009).

SOCIAL MECHANISMS

Family factors have a major influence on whether an individual with a biological vulnerability develops a mental disorder. For instance, family characteristics explain more of the variance in adolescent substance use than do any other factors (Hopfer, Stallings, Hewitt, & Crowley, 2003). Families transmit both genetic material and an environmental context for children (Wachs, 2000), although the extent to which heredity or the family environment explains its influence is not always well understood. Other important influences in the social environment include neighborhood, church, school, and other community resources available to families. The influence of each of these mechanisms will be discussed, although it is important to point out that these aspects of the

community context interact with one another (e.g., schools are part of the neighborhood) and with other levels (e.g., individuals and families make up neighborhoods).

Family

Several patterns are indicative of families in which mental disorders develop, among them hostility, conflict, isolation, low cohesion, enmeshment, and an absence of nurturing (e.g., Yap, Pilkington, Ryan, & Jorm, 2014). Certain family variables center on the parent–child relationship. Parental rejection of the child, inconsistent and ineffective discipline, lack of supervision, and lack of involvement in the child's activities are also mechanisms of risk. On the other side, positive parenting, healthy family functioning and family environment was associated with decreased depression and anxiety in African-American youth (Washington et al., 2017). Positive parenting has also shown a buffering effect on neighborhood disadvantage to adolescent brain development (Whittle et al., 2017).

Parent–infant attachment is especially central. The developing child requires a sense of security that caregivers will respond in warm, consistent, and sensitive ways to his or her needs (Bowlby, 1969, 1973, 1980). Early attachment is hypothesized to result in the formation of *working models*, beliefs and experience about the self and others that will influence functioning across a person's life (Davila et al., 2005). Indeed, attachment style has been shown to afford stability into adulthood (Hazan, Campa, & Gur-Yaish, 2006).

Further risks in the context of the family involve instability and parental conflict, such as discord, separation and family violence, and high parental stress (Loeber, Farrington, Stouthamer-Loeber, & Van Kammen, 1998). Chronic marital discord and family violence are associated with risks to maternal mental health, increased incidence of depression and PTSD (Golding, 1999), aversive parenting practices (Krishnakumar & Buehler, 2000), and the development of mental health disorders in children (Briggs-Gowan et al., 2010). Psychopathology afflicting parents that compromises their abilities also constitutes a risk for mental health disorders in children (Milne et al., 2009).

Conversely, family stability, a stable parental relationship (including parental agreement on values and discipline), and social support for parents are seen as protective. Families that have effective discipline skills, healthy cohesion, and positive communication help buffer their children against the development of mental disorders. Further, adolescents whose parents provide emotional support and structure the environment with consistent rules and monitoring tend to group with peers who share similar family backgrounds (Steinberg, 2001). Supportive parenting in turn affects the characteristics of the child, in that he or she learns to regulate emotional processes and develop cognitive and social competence (Wachs, 2000). Individual characteristics of parents are also key; parents who have problem-solving ability and resourcefulness, experience low stress, and demonstrate frustration tolerance and patience are more effective in their role as parents (Henggeler et al., 2009).

Household Composition

Household composition refers to familial structure and includes the size of the family, the number of parents in the home, and the spacing of children's births. Larger family size (more than three children) is a risk factor, as precious family resources are then spread among many children (Werner, 2000). Living in a single-parent family has also been identified as a risk factor. Compared to teens with married or cohabiting parents, those with divorced parents are at higher risk for a mental health disorders, especially anxiety, behavior, and substance use disorders (Merikangas, He, Burstein, Swanson et al., 2010). Whereas in two-parent families two adults can provide financial security,

guidance, and emotional support, single parents are more likely to work full time and therefore are not as available for supervision, monitoring, or time spent with their children. Rapid childbearing (defined as less than a two-year spacing between children) further presents risk, because it limits the amount of time devoted to the first child (Klerman, 2004).

Traumatic Events and Loss

These experiences are grouped with family factors because events such as sexual abuse and physical abuse often occur in the context of the family. Child maltreatment is a risk factor for both health problems (Norman et al., 2012) and mental health disorders in both childhood and adulthood (Scott et al., 2010; Washington et al., 2017). When abuse and neglect are severe, children may be removed from their own homes and placed into foster care; these situations put them at further high risk for mental health problems (Fazel, Doll, & Langstrom, 2008). Childhood adversities (defined as physical and sexual abuse, neglect, family violence, parental mental illness, substance use disorders, and criminality) may be associated with up to 45% of all mental disorders that have an onset in childhood, and at least 25% of disorders with later onset (Green et al., 2010). The deleterious effect of adverse childhood experiences were documented in a systematic review (Kalmakis & Chandler, 2014). Types of experiences, including parental mental illness, physical and emotional abuse, and witnessing abuse, were found to be associated with all psychiatric outcomes. Events were also cumulative—the more adverse the experiences, the greater the effect on both mental and physical health.

Neighborhood

Although individual and family characteristics are major contributors to child and young adult outcomes, neighborhood factors are also key (Ellen, 2000; Leventhal & Brooks-Gunn, 2003). Living in poor and disadvantaged communities creates substantial risks of antisocial behavior in children. Such risks include poverty, unemployment, community disorganization, availability of drugs, the presence of adults involved in crime, overcrowding, community violence, and racial prejudice (Hill, 2002; Loeber, Burke, Lagey, Winters, & Zera, 2000). Parenting abilities are often challenged by the many stressors that attend to living in a low socioeconomic stratum, among them unemployment, underemployment, the lack of safe child care, the lack of transportation, inadequate housing, and exposure to crime. These stressors may not only negatively affect parenting but may also inhibit access to general health and mental health care services.

An extensive review of the literature on neighborhood effects (Leventhal & Brooks-Gunn, 2003) found evidence that living in a disadvantaged neighborhood had negative consequences for young children's mental health functioning. A large, population-based study in Sweden found that high neighborhood deprivation was related to two-fold higher odds of conduct disorder, 40% higher odds of anxiety disorders, and 21% higher odds of depressive disorders or bipolar disorder (Sundquist et al., 2015). Neighborhoods can have an effect on adolescent brain development in the frontal lobe (Whittle et al., 2017).

Neighborhoods can, however, represent a source of protection. Although neighborhood peers may exert negative influences on such behaviors as drug and alcohol use and criminal activity, some studies have found that adult neighbors who offer structure and monitoring can be an important source of support for children experiencing risks in their own families (Werner & Smith, 2001). In addition to providing informal social control and social cohesion, neighbors involved in local organizations help to sustain the mental health of children who live in neighborhoods marked by disadvantages (Xue, Leventhal, & Brooks-Gunn, 2005). Studies have also shown that middle-class and affluent neighborhoods have generally positive effects on educational attainment and achievement

for adolescents, and neighbors of high SES contribute to younger children's verbal ability, IQ, and academic achievement.

Finally, frequent changes in residences while growing up are associated with poor outcomes in youth in terms of both attempted and completed suicide (Qin, Mortensen, & Pedersen, 2009). Repeated separations from peers and familiar activities, the stress of facing a new environment, and the potential unavailability of parents due to their own stress may overwhelm a youngster's ability to cope.

Social Support Networks

Social support is a multidimensional concept, commonly defined as the availability of a network of people on whom a person can rely in times of need (Hankin & Abela, 2005). Different types of social support include emotional, financial, informational, or enacted support. Social support networks can provide risk or protective influences. Positive social support acts as a buffer against the development of many disorders, such as depression (Gariepy, Honkaniemi, & Quesnel-Vallee, 2016). It also plays a strong role in adjustment and recovery from many of the disorders discussed in this book.

The number and variety of social supports (extended family, friends, neighbors, coworkers, and church members) appear to be important (Henggeler et al., 2009). For youths, such supports encourage involvement in a peer group that is engaged in prosocial activities, hobbies, and interests.

A particular type of social network involving church or religious participation has been associated with positive physical and mental health, as well as with buffering the effects of neighborhood risks (Taylor, Ellison, Chatters, Levin, & Lincoln, 2000; Werner & Smith, 2001). Religious attendance and religiosity have been significantly associated with a decreased likelihood of drug use among adolescents, and may buffer the impact of neighborhood risk on criminal offending (Miller, Davies, & Greenwald, 2000; Johnson, Jang, Li, & Larson, 2000). Research further indicates a positive relationship between religious involvement and adult health outcomes and coping with stress (McCullough, Larson, Hoyt, & Koenig, 2000).

More formal support systems may also enhance protection. Research has shown that participation in out-of-school activities and availability of community supports has positive outcomes for children in terms of educational attainment and health status. Empirically validated programs, such as Big Brothers and Big Sisters (Thompson & Kelly-Vance, 2001) and other youth organizations present substantial protective factors (Werner, 2000).

SOCIETAL CONDITIONS

The United States has "overarching social, political, legal, economic, and value patterns" (Greene & Livingston, 2002, p. 79) that can both contribute to individual problem situations and provide protection against risk. These macro-level influences, however, do not occur in isolation from risk and protective mechanisms at the other levels. For example, employment may open opportunities for interactions with others and expansion of social support networks, which in turn may help the family provide a safe and secure home. Remember, the nature of systems is that the processes within each system influence one another.

On the protective side, social policies can have positive effects on the income and employment of individuals. For example, Social Security payments to older adults have a significant effect on reducing the percentage of those who are poor, while Medicare covers many of their major health care costs. For the working poor, economic supports include such programs as the earned income tax credit and food stamps, which help them meet household expenses. (For a review of income

evidence-based practice, there is a shortage of research on treatment outcomes for the major mental disorders among people from different ethnic groups (DHHS, 2001). Further, there has been a call for "cultural competence," which involves sensitivity to culture and the development of "skills, knowledge, and policies to deliver effective treatments" (DHHS, 2001, p. 36). Models of culturally sensitive services have been developed and tested, with results showing they can be effective for various populations and problems, such as substance use disorders in youth (Steinka-Fry, Tanner-Smith, Dakof, & Henderson, 2017), depressive disorders in adults (Chowdhary, Jotheeswaran, Nadkarni, & Hollon, 2014), and schizophrenia (Degnan, Baker, Edge, Nottidge et al., 2018).

Sexual Minorities

People from sexual minority groups—gay, lesbian, bisexual, transgender, questioning —have elevated risk for mental disorders. A systematic review of community-based surveys indicates that 20% of sexual minority adults have attempted suicide (Hottes, Bogaert, Rhodes, Brennan, & Gesink, 2016) and are at increased risk for anxiety, depression, and substance use disorders in both adolescence and adulthood (Plöderl & Tremblay, 2015). The hypothesis is that stress due to having a hidden lifestyle, coming out, discrimination, and lack of social support may overwhelm an individual's ability to cope. For substance use disorders, additionally, there may be limited social venues where alcohol is not a feature of the environment and, until recently, limited access to societal institutions that provide protection against substance use (i.e., marriage) (Beatty et al., 1999).

The Mental Health Care System

In the United States, the system of mental health care consists of a patchwork of ad hoc services (DHHS, 2001). There are four chief sectors for mental health care:

- *Specialty mental health sector.* This sector includes mental hospitals, residential treatment facilities, psychiatric units of general hospitals, and specialized community agencies and programs (e.g., community mental health centers, day treatment programs, and rehabilitation programs). In their survey of child and adolescent mental health disorders, Merikangas, He, Brody, Fisher et al. (2010a) found that overall, 55% of those with a disorder had consulted with a mental health professional, which is seen as an improvement in treatment seeking from the past.
- *General medical and primary care sector.* This sector is responsible for regular prenatal care, childhood immunizations, and routine developmental screenings that protect against the development of disorders, such as intellectual disability, and for the early detection of others, such as autism spectrum disorder. General practitioners are responsible for a great deal of medication care for people with certain disorders, such as ADHD, depression, and anxiety. Often this means that people receive substandard care. For example, ethnic disparities in the diagnosis and treatment of depression are present in the primary care system, where many people from ethnic minority groups are served for their mental health needs (Stockdale, Lagomasino, Siddique, McGuire, & Miranda, 2008).
- *Human services sector.* This sector comprises social welfare (housing, transportation, and employment), criminal justice, educational, religious, and charitable services. It is not until some adolescents reach the juvenile justice system that they are identified as having a mental illness (Fazel et al., 2008).
- *Voluntary support network.* This sector includes self-help groups and organizations devoted to education, communication, and support. An annual average of 2.4 million adults aged 18 or older (1.1% of the population) received support from a mental health self-help group in a year (Goldstrom et al., 2006).

Unfortunately, there is no systematic way for people to obtain needed mental health services. Often those with the greatest and most complex needs, and the fewest resources, are underserved. The lack of access to health care and health insurance is a principal factor in limiting adequate treatment for serious and chronic conditions (Tondo, Albert, & Baldessarini, 2006). For example, among people who made an effort to get treatment for substance use disorders, 42.5% reported cost or insurance barriers (SAMHSA, 2006).

Typically, people do not receive timely treatment for mental disorders. The median delay across disorders for receiving treatment is nearly a decade (Wang et al., 2005). If people are left untreated, they may be more vulnerable to future episodes that may be even more severe in nature and more resistant to treatment.

Several factors have been associated with treatment delay (Wang et al., 2005). Early onset of a disorder, defined as child or adolescent onset, is of particular concern, because untreated early-onset disorders can result in school and subsequent occupational failure, early childbearing and marriage, and marital problems. Other factors associated with treatment delay include being of the male gender, having minority status, attaining a lower education level (except for substance use disorders), being married, and having social support (presumably because of lesser need for support from formal sources).

CONCLUSION

The social work profession is distinguished by its holistic attention to the biological, psychological, and social influences on the functioning of all people. With this broad perspective, social work practitioners can complete comprehensive assessments to determine the nature of their clients' problems, which may include the mental disorders described in this book. Additionally, the social worker's knowledge of the risk and resilience influences associated with mental disorders helps focus his or her intervention onto the relevant areas of the client's life. Finally, the strengths perspective encourages social workers to build on the client's areas of real or potential resilience in recovering from, or adapting to, mental disorders, and in so doing helps the client develop a greater sense of self-efficacy. All of these themes will be incorporated into the subsequent chapters of this book.