Chapter 1
Introduction to the Volume

Richard Jessor

The first volume in the series of my Collected Works (Jessor, 2016) provided a perspective on the origins and development of Problem Behavior Theory; this second volume provides a panoptical view of the application of that theory in a wide range of studies having implications for adolescent and young adult health. The research selected for inclusion spans an array of behaviors, most of which can compromise healthy development in this critical segment of the life course and some of which can enhance it. The chapters report research that ranges across alcohol use and problem drinking, involvement with marijuana and other illicit drugs, cigarette smoking, early initiation of sexual intercourse experience, delinquent behavior, and risky driving—all of them behaviors that, for adolescents, represent departures from social or legal norms—as well as other behaviors such as unhealthy diet and limited exercise that, while not necessarily transgressing social or legal norms, nevertheless can also impair adolescent health and development. The chapters also include reports of pro-social or health-enhancing behaviors—school involvement, church attendance, and adequate sleep hours—that can have a positive impact on adolescent health and well-being. Overall, then, this volume constitutes a sourcebook for the contribution that Problem Behavior Theory research has made across recent decades to an understanding of adolescent health.

Toward a Broader Concept of Health

Although traditionally the province of medicine with its focus on the body, the concept of *health* has come to be seen as a more problematic notion, one that requires reexamination and extension. Until recently, the concept of health has rested on an

R. Jessor, Ph.D., Sc.D. (✉)
Institute of Behavioral Science, University of Colorado Boulder, Boulder, CO 80309, USA
e-mail: jessor@Colorado.edu

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almost exclusive concern with biological parameters of physical health, and health status itself has largely been considered a residual—simply the absence of disease or disability. The limitations of this "medical model" of health—for example, its inability to account for the increasing prevalence of chronic diseases such as type 2 diabetes, or for the emergence of new epidemics such as HIV/AIDS—have become more evident as understanding of the *causes* of variation in health and illness has begun to require a grasp on the role of the social environment and of the behaviors that people engage in.

The newer paradigm that has emerged in regard to health has entailed a move toward encompassing *behavior*—what people do in their everyday lives—and the *social context* in which their everyday lives are played out, that is, it has been a move beyond a sole focus on biology toward engaging a social and psychological perspective on the meaning of health as well.

There have been various antecedents that have influenced this radical shift in thinking about the concept of health. Among them have been the explorations of the new field of social epidemiology (e.g., Berkman & Kawachi, 2000) with its articulation of the social determinants of health; the burgeoning of concern for health *promotion* (e.g., the Lalonde Report, 1974) to supplement, or provide an alternative to, the traditional preoccupation of medicine with disease prevention; and a very early influence of the challenge presented by the remarkably expansive definition of health adopted by the World Health Organization: "… a state of complete physical, mental, or social well-being and not merely the absence of disease or infirmity" (World Health Organization, 1946).

An additional sign of the shift was remarks made by the renowned epidemiologist, Milton Terris (1983), who chastised his fellow health workers for largely ignoring "… the whole complex of social and other environmental factors …" that can impact health. And there has been a growing awareness that a large portion of the so-called global burden of illness and disease, both communicable and noncommunicable—from HIV/AIDS to cardiovascular disease, to diabetes, to cancer, etc.—is due to the vicissitudes of human behavior (World Health Organization, 2009). This newer way of thinking about health, in short, emphasizes its embeddedness in the socially organized context of everyday life and the behavioral adaptations that are made to that everyday life. It is of historical interest that such a modern perspective on health was actually anticipated by the great nineteenth-century German physician/scientist, Rudolph Virchow, whose remarkably prescient assertion in his book, *Disease, Life, and Man*, was that: "Medicine is a social science in its very bone marrow" (1958).

It has been this contemporary orientation about health—its engagement with behavior in social context—that has made Problem Behavior Theory apposite for achieving a fuller understanding of adolescent health. From its earliest formulation (Jessor, Graves, Hanson, & Jessor, 1968), Problem Behavior Theory has focused on accounting for problem behaviors, most of which are health-compromising behaviors as well, behaviors that can jeopardize not only physical health (e.g., heavy alcohol use, cigarette smoking, violence), but also social, personal, and developmental health. In this expanded way of thinking about adolescent health, engaging in early sexual intercourse, disengaging from school, or excessive involvement with drugs can all put adolescent health at risk. Such behaviors can compromise health

and development by impeding an adolescent's fulfillment of the developmental tasks that are expected at the adolescent life stage: occupying appropriate social roles, e.g., that of student; acquiring essential academic and social skills; achieving a personal sense of adequacy and competence; and gaining the human capital for successful transition to young adulthood, among others.

The Emergence of the Concept of Behavioral Health

It was in 1977 that Lee Jessor and I published a book reporting the findings from our 4-year longitudinal study of adolescent cohorts starting in middle school and of a cohort of freshmen starting college. The book, *Problem Behavior and Psychosocial Development: A Longitudinal Study of Youth* (Jessor, R. and Jessor, S. L.), received very positive reviews, e.g., "… the study should become a classic, not only for causation-relevant data and results but also as a rare and beautiful illustration of theoretically based, longitudinal-correlational research framed so as to contribute greatly to personality and social development models" (Huba, 1978, p. 631).

When a fortuitous invitation arrived from Dr. David Hamburg, then President of the Institute of Medicine, National Academy of Sciences, to participate in a Conference on Adolescent Behavior and Health in the summer of 1978, I felt primed by the findings in our book to make an initial explanatory foray into the domain of adolescent health. I tried in my presentation at the conference (see Institute of Medicine, Report of Conference, 1978) to distill from those research findings implications that might inform thinking about health from a psychosocial and developmental perspective. The overriding implication that was apparent from our research was that, beyond the traditional medical focus on infectious agents and chronic disease processes, it was the *behaviors* of adolescents—what they were doing—that were determinative in large part of their health and developmental status.

That conclusion reflected and was part of the emergence of the now widely employed notion of *behavioral health* (Matarazzo, et al., 1984), a notion that captures the pervasive role that behavior plays in regard to health—whether it is overeating, or sedentariness, or unsanitary habits, or unprotected sex, or smoking, or violence, on the one hand, or school involvement, civic participation, or church attendance, on the other—and that incorporates consequences not only for the body but also for an adolescent's place on the trajectory of normal or successful or, indeed, healthy development. In Chap. 22 in this volume, this behavioral health perspective is elaborated.

The Meanings or Functions of Health-Compromising Behavior

Several other important implications for adolescent health derive from the problem behavior research in our 1977 book and from our decades of inquiry on health-related behavior that followed. First, all of the problem behaviors we have studied

can also be seen, given the modern broadening of the concept of health, as health-compromising behaviors. For example, early sexual experience or excessive involvement with alcohol, behaviors that were of initial interest to us as violations of social or legal norms for adolescents, were, at the same time, of interest to workers in the health field as risk factors for compromising adolescent health and development. Second, health-compromising behaviors—like all social behavior—are best understood as socially learned and personally functional or goal directed for the adolescent. Despite being normative transgressions, problem behaviors such as illicit drug use or early sexual intercourse are behaviors that have important meanings and serve important functions for the adolescent, and those meanings and functions are essential to grasp if one hopes to understand or influence adolescent health. The behavior of alcohol use, for example, can be a socially learned way for the adolescent to cope with frustration, failure, or fear of failure; the behavior of marijuana use can represent for an adolescent a way of expressing opposition to conventional society; the behavior of cigarette smoking can be a way of demonstrating solidarity and identification with peers; the behavior of early sex can constitute the making of a claim on a more mature status or represent an attempt to transition to young adulthood. All of these possible functions of health-compromising behaviors involve goals, e.g., independence or autonomy and acceptance by peers, that play a key part in *normal* adolescent development. It follows that efforts to prevent their occurrence, or to promote less health-compromising behaviors, can be successful only if they provide alternative ways to achieve those very same goals.

The Covariation of Health-Compromising Behavior

Third, Problem Behavior Theory research has advanced the understanding of behavioral health by showing that health-compromising problem behaviors tend to co-occur or covary in the adolescent's repertoire and to constitute what we termed, in our 1977 book, a *problem behavior syndrome*. Decades of research since then, by other scholars as well as by our own group (see Chaps. 6 and 7 in Jessor, 2016), have not only validated the syndrome notion for problem behaviors but have shown that *pro-social and health-enhancing behaviors also covary* and that, indeed, the latter relate inversely to problem behaviors, as theoretically expected (see Chap. 11 in Jessor, 2016). That body of research called into question the convention among health workers of specializing in individual health-related behaviors— drinking, or smoking, or early sex, or delinquency, or unhealthy diet, or sedentariness, or risky driving—and led to the recognition that there is *organization* or coherence among the diverse behaviors that an adolescent engages in. To capture the covariation initially revealed by the problem behavior syndrome findings, we brought to bear the concept of *lifestyle* (Sobel, 1981), a notion that reflects the organized behavioral diversity of an adolescent's overall way of being in the world. The important implication of the *health lifestyle* notion for behavioral health research, as well as for the design of prevention/intervention programs, is that understanding of an adolescent's health, or attempts to influence it, cannot be accomplished one behavior at a time.

The chapters in this volume, although organized by particular problem or health-compromising behaviors, e.g., drinking and problem drinking, marijuana use, early sexual experience, and risky driving, all report the covariation of that particular behavior with other health-related behaviors, and emphasize the importance of engaging the organization of the behavior *system* as a whole.

Unfortunately, nearly four decades later this emphasis is still not the tradition in the health field as was lamented recently at a conference sponsored by the National Cancer Institute (Klein, Grenen, O'Connell, et al., 2016): "Health behaviors often co-occur and have common determinants … Nevertheless, research programs often examine single health behaviors without a systematic attempt to integrate knowledge across behaviors." (p. 1). And, "Integrating knowledge across behavioral domains is a public health imperative" (p. 6).

The Contribution of Psychosocial Theory to Adolescent Health

A fourth contribution of Problem Behavior Theory research to the health field has been the demonstration that *theory* can play an irreplaceable role in efforts to account for variation in adolescent health-related behavior. The exposition in our 1977 book of the three explanatory systems of Problem Behavior Theory—personality, perceived environment, and behavior—and of the significant explanatory contribution that each system made provided an exemplar for health professionals to emulate in their research on adolescent health. Engaging Problem Behavior Theory, a "theory of the middle range" (Merton, 1957), enabled the derivation of construct-valid questionnaire measures and the logical specification of testable hypotheses. Reliance on theory to guide social-psychological measurement and research was not the dominant style of inquiry at that time, and it is unfortunate that theory continues to be only sparsely engaged, even today. Indeed, in an insightful commentary on contemporary research on adolescent development, Michael Lamb laments the fact that "… the majority of studies are effectively atheoretical, with the occasional theoretical gloss added to provide a patina of respectability rather than to articulate an explicit framework in which the research was grounded" (2015, p. 117).

By contrast, Problem Behavior Theory has been essential as the guiding framework for our developmental research for the past half-century. The version of the theory that was described in our 1977 book, with its three explanatory systems of personality, perceived environment, and behavior, can also be found in Volume I of this series (Jessor, R., 2016; Chap. 2, p. 24). That chapter describes the evolution of the theory from its inception in the late 1960s through its various reformulations to the latest version. The current formulation of Problem Behavior Theory is presented in Fig. 1.1.

The theory's predictor constructs are now expressed in risk factor and protective factor terminology to facilitate communication with workers in the health field who are more familiar with and rely on those terms. The predictor variables that were in the three explanatory systems of the earlier formulations of the theory were con-

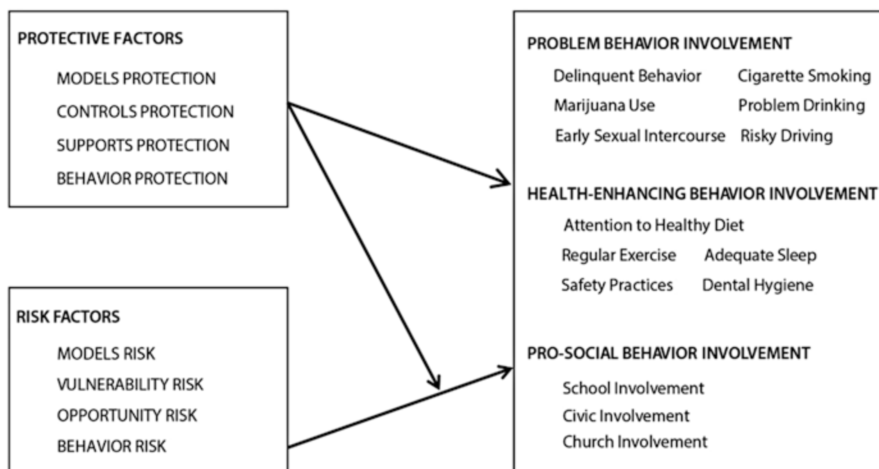

Fig. 1.1 Problem Behavior Theory explanatory model for adolescent risk behavior

served and translated into the protective factor and risk factor constructs that are shown in the two left-hand boxes in Fig. 1.1. The key dialectic between protection and risk, and the moderator effect of protection on risk (see the directional arrows), remains the central dynamics of the theory. For each of the health-compromising behavior topics in this volume, e.g., alcohol use, the studies reported in the earlier chapters on that topic all employed the 1977 formulation of the theory, engaging the variables articulated in the three explanatory systems, whereas the chapters reporting our later studies on that same topic have all employed the protective factor/risk factor version shown here in Fig. 1.1.

The illustrative variables in the right-hand box in Fig. 1.1 are all health-related behaviors, some of them health compromising and some health enhancing, but all of them constituting either protective factors or risk factors for adolescent health and development outcomes. In this current formulation of the theoretical framework, then, it is those behaviors on the right side that are behavioral protective factors or risk factors for adolescent health and development. It is the psychosocial theoretical constructs on the left-hand side that serve as determinants, i.e., as protective factors and risk factors for the behavioral protective factors and risk factors on the right-hand side.

Understanding Behavioral Health Development

Finally, the research presented in our 1977 book introduced a *developmental* approach to the understanding of problem behaviors and provided, thereby, a developmental template for health-related behavior research that was longitudinal or time extended in design. The theoretical constructs in the three explanatory

systems of Problem Behavior Theory were shown in that work to provide a substantial account not only of cross-sectional variation in problem behavior involvement, but also for *developmental variation* over significant intervals of subsequent time. For example, measures of the variables in the three explanatory systems that were collected in Wave I for the middle-school cohorts were predictive of variation in later problem behavior involvement in high school; measures collected in Wave I for the college freshmen were predictive of problem behavior involvement in later college years. As another developmental example, the Wave I theoretical measures for those adolescents who had not yet engaged in a particular problem behavior, i.e., had not had their first drink, had not yet used marijuana, or had not yet had sexual intercourse experience, were shown to predict the *variation in timing* of subsequent onset or initiation of those behaviors over the later years of the longitudinal study.

These latter findings led us to introduce a new *developmental* concept, *transition proneness,* to complement the *cross-sectional* concept in the theory of *problem behavior proneness.* Transition proneness is a construct that represents a theoretically specified, differential adolescent *readiness to initiate new behaviors*, behaviors that can mark a change in developmental status: from abstainer to drinker, from nonuser of marijuana to user, from virgin to nonvirgin. This contribution of a *developmental* perspective on adolescent and young adult behavioral health is evident in several of the studies of the various health-compromising behaviors reported in the chapters in this volume.

Continuity of Health-Related Psychosocial and Behavioral Development

Among our important developmental findings relevant for adolescent health, in addition to the establishment of a psychosocial *readiness* to initiate new health-related behaviors (i.e., transition proneness), two other findings warrant mention. First, the longitudinal design of several of our studies revealed a significant degree of *continuity* in health-related behavior involvement and in its psychosocial determinants, both within the adolescent life stage and between adolescence and young adulthood (Jessor, R. & Jessor, S. L., 1977; Jessor, Donovan, & Costa, 1991). Although considerable developmental change in involvement in these behaviors and in their psychosocial determinants occurs across those life stages, the correlations between the measures collected in early adolescence and the later measures collected in young adulthood are substantial, meaning that, despite considerable developmental change, an adolescent's position relative to the distribution is largely conserved. An adolescent who was drinking more heavily than others may have reduced his or her drinking by young adulthood, but he or she will still be drinking more than others in young adulthood. That same adolescent with perhaps a high value on independence in adolescence may have come to place less importance on

independence by young adulthood, but he or she will still consider it as a more important personal value than others do. This continuity in personality, perceived environment, and behavior across the adolescence/young adulthood portion of the developmental trajectory—this *stability of change* (Jessor, 1983)—has implications for what to focus on and when to do so in efforts to prevent health-compromising behavior or to moderate involvement in it. Such continuity speaks again to the role played by the relative stability of a lifestyle—an adolescent's organized way of being in the world—and the importance, in designing intervention programs, of dealing with the adolescent as a whole rather than behavior by behavior.

The Direction of Psychosocial and Behavioral Development: From Unconventionality Within Adolescence Toward Conventionality in Young Adulthood

The other important developmental research finding that warrants mention is that the *direction of psychosocial and behavioral development* from early to later adolescence was shown to be *toward greater unconventionality*, that is, toward greater involvement in problem or health-compromising behavior and in their psychosocial determinants. By contrast, the direction of development from early to later young adulthood was shown to be the opposite, that is, *toward greater conventionality*, lesser involvement in problem or health-compromising behavior, and lesser commitment to its psychosocial determinants (see Chaps. 24 and 25). As an example, there was a general increase in alcohol use from early to later adolescence as well as a theoretically consonant increase in value on independence in the personality system, an increase in models for drinking in the perceived environment system, an increase in cigarette smoking, and a decrease in church attendance in the behavior system. This theoretically coherent pattern across adolescence is then reversed across young adulthood, with a general decrease in alcohol use, a decrease in value on independence, a decrease in models for drinking, a decrease in cigarette smoking, and an increase in church attendance and other conventional behaviors.

There is a parallel in these important health-related developmental findings to what has become known in the criminal justice field as the "maturing out" of involvement with delinquency and crime, that is, desistance from it, with entry into young adulthood and with having to assume the adult roles of work, family, and child-rearing (Laub and Sampson, 1993). As a general direction of normal development from adolescence into young adulthood, a moving away from health-compromising problem behavior involvement, this is a salutary finding in its own right, and it also suggests caution about radical, early interventions for what are, for the most part, merely behavioral explorations. Such interventions may not only be unwise, but also be unwarranted.

Some Final Comments

The chapters in this volume constitute a sampling of our studies applying Problem Behavior Theory to account for variation in aspects of adolescent health. The original concern of the theory with adolescent behaviors that represented departures from social or legal norms was enlarged when it became apparent that those same behaviors were also health related and could compromise adolescent health and development. Enlargement of the scope of application of the theory contributed to the emergence of the concept of *behavioral health*, a concept that refers to the substantial role that behavior-in-social context plays in health and illness. It also was accompanied by an awareness that the notion of health could not be exhausted by recourse to biological parameters alone, but that it implicated a wider social-psychological perspective, one that includes the sense of well-being, feelings of adequacy and competence, acquisition of human capital appropriate to the adolescent life stage, and occupying a position of being developmentally "on track," rather than having dropped out of school, gotten pregnant, or been involved with the criminal justice system.

What has been most salient across our decades of health-related inquiry is the indispensable role that *theory* has played in what has been accomplished. Problem Behavior Theory has been able to illuminate the contribution made by all three of the explanatory systems it engages—personality, perceived environment, and behavior—and has made evident the insufficiency of any less comprehensive approach. It has also revealed that adolescent behaviors represent an organized *system* rather than a congeries of separate behaviors, and that led us to the concept of a *problem behavior syndrome* and, in turn, to that of a *health lifestyle*. The theory has also shown that the very same pattern of theoretical explanatory variables, a pattern summarized as *problem behavior proneness*, can account for variation in the diverse array of topographically different problem behaviors that it has addressed. That common theoretical etiology across such diverse behaviors is what underlies, at least in part, the covariation observed among them.

Finally, the theory was shown to account for *development and change* in health-related behaviors from adolescence into young adulthood, development that, within adolescence, is toward an *increase in unconventionality* and, within young adulthood, becomes the reverse, an *increase in conventionality*. In the language of the current formulation of Problem Behavior Theory shown in Fig. 1.1, developmental change toward greater conventionality entails, among the protective factors: an increase in models for pro-social behavior; an increase in personal and social controls; an increase in social support for pro-social behavior; and an increase in pro-social behavior involvement. Among the risk factors, developmental change toward greater conventionality in young adulthood entails: a decrease in models for problem or risk behavior; a decrease in personal vulnerability; a decrease in opportunity for engaging in problem or risk behaviors; and a decrease in problem or risk behavior involvement.

Overall, as a social-psychological framework engaging the fundamental processes of behavior acquisition and change, i.e., models, controls, and supports in its most recent formulation, Problem Behavior Theory has been shown to have explanatory generality across such widely divergent societies as The Peoples' Republic of China and the USA (see Chaps. 28 and 29; also Jessor, R. 2008). It has brought illumination to an important social problem, *adolescent health*, for both developed and developing societies across the globe. Much more remains to be learned, of course, but reliance on the theory appears already to have substantially advanced psychosocial understanding of adolescent health. That advanced understanding is evident in the chapters that follow.

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