

Editorial

## Description Versus Explanation in Cross-National Research on Adolescence

The last couple of decades have seen a burgeoning of comparative studies of the behavior, health, and development of adolescents living in societies, cultures, or settings outside the United States. These studies have often been carried out by local researchers with collaborators from the U.S., or they sometimes represent the local application, in distant lands, of theories and models and measures many of which were developed in the U.S. Together, they have provided a growing corpus of comparative research findings that has enabled the field of adolescent health and development to complement its usual focus with a much more panoptical perspective on its essential subject matter.

The topic of adolescent problem behavior exemplifies this extra-U.S. or cross-national trend in adolescent research. The countries in which theory or models about adolescent problem behavior, initially developed in the U.S., have been applied represent varying degrees of contrast with American society—from Canada and Italy early on, for example, to China, Korea, and Slovenia more recently, and currently, Turkey, Bolivia, and Iran. What are we to make of these studies when they repeatedly reveal underlying similarities in developmental processes or relationships despite such often radical differences in social context, social organization, and normative climate? And why do such findings seem often to generate a sense of surprise?

Part of the surprise at finding cross-national similarities stems, perhaps, from a deeply imbued orientation, in our own scientific work, toward seeking out *differences*, and testing whether those differences are unlikely to be due to chance alone. Part may be due to our awareness of entire disciplines, such as anthropology, that have long taught us about the uniqueness of different cultures and societies and that have brought their sometimes exotic practices to our attention. However, surprise notwithstanding, there is something much more fundamental involved. The challenge is to reconcile the repeated emergence of similarity of outcome findings across contexts and settings that are, in most cases, markedly disparate from each other or from our own. That challenge is what is illuminated by the Vazsonyi and colleagues article. [1] in the current issue of the *Journal*.

Vazsonyi and colleagues examine whether a particular explanatory framework developed some decades ago in the U.S., namely, Problem Behavior Theory (PBT), can provide a significant account of variation in adolescent problem behavior when applied to non-U.S. samples of adolescents in two countries, specifically, Switzerland in Western Europe and Georgia in Eurasia, each markedly different from the other on multiple dimensions, and both different from the U.S. Using large national probability samples and sophisticated analytic methods, the investigators found that their reduced PBT theoretical model fit both country data sets well, and they conclude that, despite the macro societal differences and the more micro differences in actual levels of risk factors, protective factors, and problem behaviors, “PBT has applicability across developmental contexts or societies” [1].

Their conclusion accords with a large body of other cross-national studies of adolescent problem behavior, some of which use the full PBT framework [2] and others of which rely on explanatory concepts similar to those in PBT but do not represent an explicit test of that particular theory [3]. What all have in common, however, is the establishment of similarity of findings about problem behavior when very different national contexts are engaged in comparative inquiry.

Such findings constitute a sharp and sometimes startling reminder that *description and explanation are two very different ways of looking at the world or of undertaking adolescent research*. The descriptive approach, focused as it is on outward, observable appearances, or on what Kurt Lewin [4] (borrowing an analogy from genetics) termed the phenotypic level, lends itself to taking note of and codifying obvious differences. In descriptive research, the preoccupation is often with differences in means or prevalence levels; for example, in the study by Vazsonyi and colleagues, it was noted that the crime rate in Georgia is twice that in Switzerland, and, in another cross-national study [2], it was noted that Chinese adolescents were less involved in problem behavior than were adolescents in the U.S. Valuable as such knowledge can be, it does not provide an *understanding* of the variation observed in the different national contexts.

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The explanatory approach, on the other hand, seeks precisely to provide understanding; its focus is on the underlying, causal level of relations among theoretically specified determinants, the genotypic level in Lewin's terminology. In explanatory research, the preoccupation is with the structures of relations among theoretical constructs or variables, structures that make logical (and ultimately, empirical) sense out of the variation observed at the descriptive level. Because those relations among variables are specified by a theory, they should prevail in any context or setting to which the theory can be applied, and the findings they yield should be similar or invariant across contexts, no matter how disparate. In their article, Vazsonyi and colleagues documented major descriptive differences between Switzerland and Georgia, but their explanatory approach (using a reduced PBT model) yielded major similarities if not, indeed, invariances.

The full PBT explanatory model includes three types of protective factors (i.e., models protection, controls protection, and support protection) and three types of risk factors (i.e., models risk, opportunity risk, and vulnerability risk), and such theoretical constructs should have general applicability to adolescents growing up anywhere. Although the source or magnitude of support protection, to take one example, may vary in different societies, coming from, say, a single mother in a U.S. family or from an extended-kin group in a Chinese family, the theoretically specified relation of support protection to problem behavior should be the same in both settings.

Theoretical or explanatory approaches have played a substantial role in other cross-national studies of adolescent problem behavior than those cited by Vazsonyi and colleagues in their article, and the finding of similarities at the explanatory level has been widespread. Three are worth noting. Dimitrieva and colleagues [3] conclude the following from their study of adolescents in the U.S., China, Korea, and the Czech Republic: "Our results revealed substantial similarities across four cultures in the role that family factors play in ... problem behaviors" [3]. Greenberger and colleagues report, from their study of 11<sup>th</sup> graders in the U.S., Korea, and China, that there were "striking similarities across the three samples in the relations between adolescent misconduct and the perceived sanctions of parents and friends" [5]. In addition, Link's comparative study of U.S. and German drinking behavior emphasizes "the cross-cultural generalizability of these particular criminological theories of adolescent substance use" [6]. In sum, despite marked phenotypic differences in developmental settings, genotypic relationships underlying adolescent problem behavior have been shown to have considerable cross-national generality.

It would be remiss to end this commentary on cross-national research without drawing its collateral implications for comparative research on adolescents *within* a society or country, comparisons so frequently made by adolescent researchers across racial/ethnic groups, or socioeconomic statuses, or gender. The same dialectic applies—descriptive differences between groups in prevalence or means do not necessarily entail differences in relationships among variables at

the underlying, causal, or explanatory level. Indeed, in nearly all of our own applications of PBT over decades of inquiry, we have consistently found similar relations among theoretical predictors for both genders and for the different U.S. racial/ethnic groups. Most compellingly, an extensive investigation by Rowe and colleagues offers powerful support for ethnic/racial similarity in what the authors refer to as "developmental process" (meaning the relations among explanatory variables), in accounting for variation in delinquency and school achievement. Noting that "many researchers fail to distinguish between group average levels and developmental processes (correlations)" [7], the authors used six independent data sources and used structural equation modeling to compare covariance matrices for the different U.S. racial/ethnic groups (black, Hispanic, Asian, and white). The investigators' key finding was that "developmental processes in different ethnic and racial groups were statistically indistinguishable," and they concluded that "developmental processes are indeed invariant across U.S. racial and ethnic groups" [7].

The findings by Vazsonyi and colleagues on the applicability of PBT, developed in the U.S., to adolescent problem behavior in both Switzerland and Georgia, should not, therefore, elicit surprise. After all, when astrophysicists seek to account for the movements of planets in our solar system, they do not invent different theories for different planets just because they differ in appearance; when neuroscientists seek to account for the functioning of neurons, they do not invent different theories for different model animals just because they differ in appearance. For studies of adolescent behavior, health, and development, descriptive differences do not preclude underlying similarity in causal relations or invariance in the explanatory account.

Richard Jessor, Ph.D.  
*Institute of Behavioral Science*  
*University of Colorado*  
*Boulder, Colorado*

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