

COMMENT ON ZEKERI (2007)¹

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Summary.—Zekeri's comments (2007) on Bridges and Kunselman's work (2005) were not sufficiently grounded in sociological theory, the calculation of the "rates of potential years of life lost" (PYLL) was modified but unreported, and the use of PYLL, despite limitations as a measure of premature mortality "was not justified." The theoretical framework, however, consisted of "environmental" and "social group" statements which gave a specific means for grounding "premature mortality" in sociological theory, and findings were consistent with Lester's social deviancy theory of suicide (1989). How the "rates of PYLL" were calculated, i.e., by the Canadian government is misinterpreted, although Allard, *et al.* (2004) provided justification for the use of age-standardized rates of PYLL in their 2005 study.

Zekeri (2007), commenting on Bridges and Kunselman (2005), noted that their work was not sufficiently grounded in sociological theory, that the calculation for the "rates of PYLL" was modified but not reported, and that the PYLL has limitations as a measure (of premature mortality), but that the authors did not justify its use. Using a broad definition of social suicide, Durkheim's "only sociological" explanation (1897/1951), which is then further conceptualized using "environment" and "social group" statements independently and then collectively. Consider the theoretical framework thus provided, give a specific means of grounding "premature mortality" in sociological theory and more specifically in social group and social deviance theories. Trovato and Jarvis (1986) and Kirmayer (1994) provided additional emphasis on this theoretical framework in their studies of immigrant groups and Aboriginal peoples in Canada. For example, the former found that immigrant groups' rates of suicide varied inversely with the extent of their social integration, while the latter connected prevalence of suicide with "widespread social problems" among the Aboriginal peoples. Lastly, "theory testing" was addressed (p. 748); "the present findings seem to be consistent with Lester's social deviancy theory of suicide" (1989) that "in regions where a particular social group was relatively less common, deviant behavior, including suicide, should be more common in that group" (1991, p. 24).

Quantifying health status in human populations has traditionally been by mortality rates, including age-specific and age-adjusted rates (Centers for

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Disease Control and Prevention, 1986; Lee, 1997). "However, the mortality rate does not fully address the issue of premature mortality, the impact of disease or death, and its cost to society" (Lee, 1997, p. 1456). The Centers for Disease Control and Prevention (1986) has used "potential years of life lost" or PYLL interchangeably with "years of potential life lost" or YPLL. McDonnell, Vossberg, Hopkins, & Mittan (1998) reported that "the advantage of YPLL over the more familiar health measure, *crude mortality*, is that the crude mortality rate will be weighted by the large number of deaths occurring in older people" (p. 56; cf. also Allard, Wilkins, & Berthelot, 2004). YPLL can be used to identify causes of mortality in younger age groups (Allard, *et al.*, 2004). "The other advantage of YPLL over age-specific mortality rates is that it is a summary statistic and is easier to display. Age-specific mortality will require selecting age groups for analysis and displaying longer tables of data that may be confusing for less sophisticated reader" (McDonnell, *et al.*, 1998; pp. 59-60).

Bridges and Kunselman (2005, p. 741) stated "the methods of other researchers who used PYLL (potential years of life lost before age 75) were modified to quantify premature mortality by sex and selected causes of death among Status Indians and other residents living in 16 health service delivery areas (including provincial total) in British Columbia, Canada." Zekeri may have misinterpreted this statement to mean modifications had been made to the way the (rate of) PYLL was calculated but then not reported. However, the "rate of PYLL" reported by the Canadian government (British Columbia Vital Statistics Agency & First Nations and Inuit Health Branch, Annual, 2002) were used. Note, however, that Allard, *et al.* (2004) and Romeder and McWhinnie (1977) modified PYLL to quantify premature mortality but did not, as Zekeri suggested, calculate (rate of) PYLL. There are several ways rate of PYLL can be used as a measure of premature mortality, e.g., statistically testing significance of the PYLL rate differences and PYLL rate ratios, comparing Status Indians with all other residents (Romeder & McWhinnie, 1977, p. 149; Allard, *et al.*, p. 54). Using the pre-existing rate of PYLL, one author calculated both measures for the Status Indians and other for residents. In their method the source, characteristics, and uses of "rate of PYLL" are discussed as well as how PYLL rate ratios and PYLL rate differences were used. Such errors may reflect lack of understanding of the differences between the terms (cf. another illustration on page 641) in Zekeri's comment that F. Stephen Bridges calculated PYLL.

Zekeri, on page 642, stated "that PYLL has limitations as a measure [and the authors] should explain how it is justified for their study despite these limitations." This is an inappropriate conclusion because measures of mortality, such as potential years of life lost (PYLL), have both advantages and disadvantages (or limitations). Rates of age-standardized PYLL are the

best descriptive indicators of population health which places more weight on deaths of young people. For example, Allard, *et al.* (2004) wrote that "Potential years of life lost (PYLL) is a measure of premature mortality that gives greater weight to deaths at younger ages compared with other summary indices of mortality, which are dominated by deaths of the elderly." Also, it may be argued that the loss of an elder (which contributes less to PYLL) is of equal importance, in that the death represents shrinkage of a community's cultural repository. However, the value of PYLL is the focus on premature and often "preventable, deaths, whereas deaths among the elderly are a normal part of the life course" (Allard, *et al.*, 2004, p. 57).

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