

ANNE-MARIE AISH

CHAPTER 3

EXPLANATORY MODELS IN SUICIDE RESEARCH: EXPLAINING RELATIONSHIPS

1. INTRODUCTION

Suicidal behaviour is a major public health problem in many countries. According to information from the World Health Organisation (WHO), suicide is one of the most frequent causes of death in the world and has increased by 60% in the last 45 years. It ranks among the three leading causes of death among those aged 15–44 years. During the 1980's, WHO announced its target "Health for all in the year 2000". With respect to suicidal behaviour, it insisted on reversing the rising trends of suicides and suicide attempts (see target 12, WHO, 1985). The WHO initiative led to several other initiatives to implement target 12. One of them was the development of a coordinated multinational European research project on parasuicide, the WHO/Euro Multicentre Study on Parasuicide (Bille-Brahe et al., 1994), which began in 1986. The overall goal of the Multicentre Study, in its focus on parasuicide (an act with nonfatal outcome), is to obtain substantial information on factors contributing to suicidal attempts and thus to obtain a better aetiological picture of parasuicide in order to develop preventive strategies. The project covers two areas of research: monitoring trends in the epidemiology of parasuicide and follow-up investigations of parasuicide populations. Another initiative, SUPRE, was launched by WHO in 1999, and is a world-wide initiative for the prevention of suicide with SUPRE MISS, a Multisite Intervention Study, as one of its several activities.

Suicidal behaviour (attempted or completed) is a complex phenomenon for which there is no single cause. A prerequisite to active and efficient intervention (primary and secondary prevention) is reliable scientific information on factors contributing to suicidal behaviour and on their interrelationships.

2. MEDIATIONAL MODELS IN SUICIDE RESEARCH

2.1. Relationships

Most research on suicide focuses on *correlates or concomitants* of suicidal behaviour rather than on developing and testing mediational models which could offer an explanation for the observed relations. Many factors have been identified as being related to suicidal behaviour: gender (Kreitman, 1977), age (Kreitman, 1977;

Lester, 1982, 1988), race (Lester, 1972), residence (Lester, 1972, 1983), religion (Bankston et al., 1983; Lester, 1987; Stack, 1991; Sorri et al., 1996), education (Peck and Schrut, 1971; Li, 1972; Kitagawa and Hauser, 1973), social class (Stengel, 1964; Maris, 1967), occupational status (Tuckman et al., 1964), marital status (Kreitman, 1977), unemployment (Boor, 1980; Platt, 1984, 1986), parental discord and separation (Jacobs, 1971; Phillips, 1979; Stack, 1981), social integration (Masumura, 1977; Breault, 1986), drug abuse (Lester, 1983), alcohol consumption (Skog, 1991), self-esteem (Lester, 1983), impulsivity (Kessel, 1967; Corder et al., 1974), social support (Dean and Lin, 1977; Schaeffer et al., 1981; D'Attilio et al., 1991), depression (Silver et al., 1971; Beck et al. 1975), hopelessness (Beck et al., 1975). The majority of these studies report on empirical evidence for either confirming or rejecting presumed associations.

2.2. *Mediated relationships*

Knowledge of the correlates of suicidal behaviour is a first step towards intervention (primary and secondary prevention) programmes. However important it is to know that certain factors are related to suicidal behaviour, the success of interventions depends much more on understanding *why and how* these factors are *related* to suicidal behaviour. The question is no longer whether an antecedent produces an outcome but rather why and how it does so.

Clarifying why and how certain factors are related to suicidal behaviour is a matter of explaining the *causal mechanism* underlying such behaviour. It is an attempt to specify the *causal chain* through which an antecedent (a cause) has an influence on a outcome (effect), or, in Baron and Kenny's words (1986, p. 1173), an attempt to specify "the *generative mechanism* through which a focal independent variable is able to influence a dependent variable of interest". The causal influence of one variable on another is transmitted through other variables, referred to as mediators or intervening variables (Baron and Kenny, 1986; James and Brett, 1984). Mediators or intervening variables make the relationship between a contributing factor and an outcome indirect.

According to MacKinnon (1994; see also MacKinnon and Dwyer, 1993, MacKinnon et al., 1995, 1998), studies of *mediated relationships* are central to the design and evaluation of prevention and treatment interventions. Prevention and intervention programs are designed to change critical mediating variables thought to be causally related to the outcome variable, and thus to bring about change in the outcome. In suicide research, the recognition of causal chains is important when trying to explain suicidal behaviour and to prevent it by intervening at the most relevant nodes (mediators) in the causal chain.

Hoyle and Kenny (1999; see also Reis and Stiller, 1992; Simon, 1992), argue that "mediational hypotheses are indicative of a maturing discipline..., one that has demonstrated with reasonable confidence the direct causal connections between key variables and has turned to the challenging endeavour of explanation and theory testing regarding those connections" (p. 195).

Overall, suicide research is not explicitly mediator-oriented. There are few studies in suicide research that explicitly formulate a priori mediational research hypotheses and subsequently test them. Such hypotheses are often implied in the discussion preceding an empirical analysis; or in the discussion following an empirical analysis in which the researcher has “elaborated” (see Lazarsfeld, 1955, on this issue) on a relationship between two variables in order to understand and interpret it. For example, Minkoff and his colleagues (1973), in considering the “puzzling question of why there is a relationship between depression and suicide” (p. 455) suggested several possibilities, elaborated on the relationship by introducing an additional variable, hopelessness, and stated that “the results support that hopelessness is a causal factor linking depression and suicide” (p. 458). The study was replicated by Pokorny et al. (1975), Wetzel (1976), Wetzel et al. (1980), Beck et al. (1976), Dyer and Kreitman (1984), Harlow et al. (1986), Kinnier et al. (1994), although in some cases, with different populations and with different measurement instruments. Wetzel (1975), Wetzel et al. (1980), Beck et al. (1976), Dyer and Kreitman (1984) basically obtained the same results and concluded that hopelessness is the missing link between depression and suicidal behaviour. Pokorny et al. (1975) did not find empirical support for the hypothesis and suggested that the relationships found may depend on specific subject characteristics.

In one area, however, there has been a steady growth of studies in which mediational hypotheses (as well as alternative, competing hypotheses) have been developed and tested. They concern the role of social support in relation to mental health, an area that is directly relevant for suicide research. Hypotheses about the role of social support are mainly derived from the Durkheim’s social integration theory (Bille-Brahe et al., 1999; Vilhjalmsson, 1993; Thoits, 1982), according to which social support, as an aspect of social integration, plays a key role in society as a protective factor against disordered functioning. The mediational role of social support has been intensively investigated in the stress—psychological disorder (e.g. clinical depression) relation. Thus, several researchers have stated that social support is a mediator in the life stress—psychological disorder relation (Quittner et al., 1990). This is in contrast to other researchers who maintain that social support has a direct effect on depression regardless of the effect of stress (Lin et al., 1979). Others still argue that social support moderates i.e. modifies the stress \rightarrow psychological disorder relation (Gore, 1978).

2.3. *Mediational models*

Mediational hypotheses are formulated to help explain the process or mechanism by which one variable has an effect on another variable. This leads to the specification of a structure of causal connections, most often represented in terms of *chains*. A chain that describes the mediating mechanism or process by which the influence of one variable (antecedent x) is transmitted to another variable (outcome y) through an intervening variable (mediator m) is typically called a *mediational model*, and is graphically represented as $x \rightarrow m \rightarrow y$. For example, the mediational hypothesis assuming that hopelessness functions as a mediator between depression and suicidal

The Explanatory Power of Models
Bridging the Gap between Empirical and Theoretical
Research in the Social Sciences

Franck, R. (Ed.)

2002, X, 310 p., Hardcover

ISBN: 978-1-4020-0867-2