16

Medical Sociology in Germany

Olaf von dem Knesebeck and Johannes Siegrist

The German health care system represents an approach that is located between a national health care system like the United Kingdom at one end of the spectrum and a market system at the other end (e.g. the United States). Germany is characterized by decentralized care delivered by social security agencies, and it is influenced to a large extent by two structural features, federalism and corporatism. By federalism, we mean that competencies and regulations with regard to health care are divided between the national, state, and community levels. By corporatism, we mean that health care providers and financing institutions act as self-administrative public institutions, most importantly the sickness funds and the physicians' associations. In this system, the government has delegated important monopolies and rights to these corporate associations (Alber 1992).

Statutory sickness funds, or "Gesetzliche Krankenversicherung," are the most important financing institutions in the German health care system. Almost 90 percent of the population is covered by statutory sickness funds. Federal regulations prescribe the range and modalities of health care provision and health financing. Health care financing is regulated in a rather complicated way. Its main contribution comes from economically active insured members and their employers (50% each). The amount of social security deduction depends on the income level of the legally insured members. Prices and modalities of health care provision in ambulatory and hospital care are negotiated between statutory sickness funds and physicians' associations.

In Germany, the Association of the Free Practicing Physicians ("Kassenärztliche Vereinigungen") was successful in establishing a treatment monopoly as early as 1955. Hospital admissions largely depend on free practicing physicians' decisions as to which patients released from hospitals have to return for continued treatment. Thus, there is a clear-cut cleavage between the ambulatory and the hospital health care sector that produces many dysfunctional, cost-expanding

consequences. While half of free practicing physicians are general practitioners, the other half are specialists. It is probably unique for a health care system to provide two categories of specialist physicians, with one category exclusively in the ambulatory sector, and the other category exclusively in hospital services.

The health care industry in Germany represents a strong economic force. More than two million employees total are involved in health care. The direct costs of the German health care system were about 380 billion DEM in 1998, which is equal to 10.4 percent of the gross domestic product. The hospital sector is still the largest cost-producing sector since Germany has an unusually high number of hospital beds and, in international comparisons, also has a rather high mean duration of hospital stay (Schneider et al. 1998). In addition, health care expenditure for drugs is high in Germany, a fact that recently motivated the government to introduce a highly restrictive legal regulation on drug administration.

Despite high economic significance, the German health care system has little information available on the efficacy of its performance. Quality assurance and control, health economic evaluations, and the application of evidence-based medicine are still in beginning stages. Because there is no consensus on prioritization of health goals or on long-term strategies, and because of the lack of coordination (OECD 1997), the health care system in Germany in its current shape must be considered ready for far-reaching reformation. In the discussion about strategies to rationalize health care, especially in the ambulatory sector, elements of the managed care models often play an important role (Kongstvedt 1996; Arnold et al. 1997). Hopefully, medical sociology will make a more substantial contribution to the reformation process of the health care system than it did in the past.

Health Status of the German Population

As part of the reformation process, and as a measure for a rational health policy in Germany, efforts increase to improve health reporting. Recently Germany published its first health report that includes information about the health status and health-related behavior of the population, as well as about prevalence of diseases and risk factors, and the utilization of health care services (Statistisches Bundesamt 1998). To provide an overview of the health status of the German population, we present some basic data on life expectancy, causes of mortality, and absence from work.

Like all other industrial nations, the life expectancy in Germany has increased considerably this century. Life expectancy at the beginning of this century for men was 44.8 years, and it was 48.3 years for women. By 1995, it had reached 73.3 years for men and 79.8 years for women. The main reasons for this development are the decline of infant mortality and infectious diseases due to improved medical care and standard of living. There is still a remarkable difference in life expectancy between East and West Germany: almost 3 years for men and about 1.5 years for women in favor of West Germany (Schneider et

al. 1998). The smaller difference in women's life expectancy indicates that East German women have come closer to West German standards since the reunification than have East German men. This is largely due to an increased number of young East German men who were killed in road accidents right after the reunification in 1990 and 1991. From a comparative perspective, Germany still has one year below the mean life expectancy in the European Union (77.3 years).

The main causes of death are cardiovascular disease and cancer, with a proportion of almost 75 percent in 1995. Although mortality caused by cardiovascular diseases has decreased since 1980, it is still the most important single cause of death. Almost 50 percent of all deaths were caused by cardiovascular disease (43.5% in men and 52.9% in women with the mean standardized age of death being 76.9 and 80.2 years respectively). The higher mortality in East Germany is mainly due to a higher prevalence of ischemic heart diseases (Statistisches Bundesamt 1998).

Interestingly in 1991, one year after reunification, the number of working days lost through absenteeism in East Germany was very low, like in the times of the former GDR (9.8 days per member of the statutory sickness funds). Within four years, absence from work for health reasons increased dramatically to 19.4 days in 1995, which is about the same number as it was in West Germany. This development indicates that absence from work should always be interpreted in the light of the political and economical frame of reference. Musculoskeletal diseases or symptoms are most significant causes of people's inability to work.

Medical Sociology in Germany – Its Contribution to Teaching and Research

Teaching

Before 1970 "medical sociology" as a distinct discipline was nonexistent in Germany. While a few scholarly studies on the sociology of hospitals (Rohde 1962) and on the social role of physicians (Kaupen-Haas 1969) were published in the sixties, the major writings were critical appraisals of the role of medicine in capitalist societies (Haug 1973). The professional expansion of academic sociology at that time by-passed medicine, unlike the situation in other European countries such as the United Kingdom (Claus 1982). In fact, in 1970 the first decisive step was taken to develop medical sociology as a teaching activity and, later, as a research activity within medical faculties of German universities. This was a major reform of the medical curriculum, in which medical sociology, together with medical psychology, became part of a new centralized, written medical examination system in the pre-clinical term of medical education. Unfortunately, medical sociology was not accorded a mandatory course within this new curriculum, unlike medical psychology. Therefore, there was no real pressure to establish new professorships and departments for this discipline within medical faculties (Pflanz and Siegrist 1978). As a consequence, only

about one-third of all medical faculties opened positions for a professor of medical sociology and offered a small, modest department to this aim. In a way, this was appropriate because academic sociology at that time did not provide a substantial number of well-trained specialists in this field. During the early years, no more than half of the 14 newly-created posts were occupied by trained sociologists whereas physicians took the other half. This situation persisted until recently. Some years ago, schools developed a new medical curriculum that accords much more weight and significance to the content of medical sociology. However, although approved by the medical faculties, this innovation has not yet passed federal legislation, due to financial and political constraints.

In summary, the institutional basis of medical sociology within medical faculties has been – and continues to be – rather weak. Moreover, academic sociology has not supported this special discipline nor has it created any significant development within its own faculties. Despite this critical structural basis, medical sociologists have accomplished some remarkable activities in teaching and research. For instance, one widely-used medical sociology textbook, first published in 1974, is currently in its fifth edition (Siegrist 1995). Teaching activities have also been expanded beyond the basic medical curriculum to include postgraduate training programs in medicine and nursing education.

During the early nineties a new initiative was started in Germany that aimed at establishing public health research and teaching within universities. A substantial federal research grant was made available to this end. Some five or six research networks evolved subsequently, all of them related to a new postgraduate training program in public health (Schwartz et al. 1998). Medical or "health" sociology became part of this new curriculum and plays a central role in this research program, along with epidemiology and health economics. Programs established a few new chairs with a specific sociological orientation. The next section briefly describes some major research contributions of medical sociologists in the past ten or fifteen years.

Research

German medical sociology's major research activities focused on what are internationally recognized as core topics of medical sociology. In particular, these researchers contributed over the past two decades to the following areas: (1) the social determinants of health and health-related behavior; (2) chronic illness, patient–physician interaction, and evaluation of treatment; (3) analyses of health care and health systems research.

Social Determinants of Health and Health-Related Behavior

Social inequalities in health define one of the most urgent concerns of the discipline. One might argue that the German health care system prevents the development of substantial health inequalities because it offers almost equal

provision of medical care to the whole population. However, this view greatly overemphasizes the contribution of medical care to population health. It is not surprising, therefore, that the first large-scale epidemiologic studies that explored socioeconomic variations in health confirmed the internationally established trends. The so-called German Cardiovascular Prevention Study documented elevated odds by two- to four-fold in the ratio of important cardiovascular risk factors in members of the lowest as compared to the highest socioeconomic status group (Helmert et al. 1990, 1995). Moreover, researchers observed a decline in cardiovascular risk over time among higher, but not lower status groups (Forschungsverbund DHP 1998; von Troschke et al. 1991). In another large investigation, the so-called MONICA study of the World Health Organization, found that men and women with a lower educational level exhibited higher cardiovascular risks (Härtel et al. 1993).

The social gradient in health is not restricted to cardiovascular diseases. Additional studies revealed similar effects with respect to smoking and smoking-related diseases (Brenner et al. 1997), colorectal cancer (Brenner et al. 1991), severity of disease in Type I diabetes patients (Mühlhauser et al. 1998) and all cause-mortality (Geyer and Peter 1999). Recently, some researchers attempted to compare the magnitude of differences in health inequalities between several European countries including Germany. Due to selective data available from German health statistics this comparison had to be restricted to chronic illness and long-standing handicaps. Again, a clear social gradient was evident, leaving those at the bottom with the highest burden of illness (Mackenbach et al. 1997; Cavelaars et al. 1998).

Three further lines of research are of interest in this context. First, the issue of excess morbidity and mortality of groups that are exposed to social deprivation has been explored (Mielck 1994). Among these studies are ones that explore unemployment (Elkeles and Seifert 1993), immigration (Elkeles and Seifert 1996), poverty (Helmert et al. 1997), and people suffering from severe chronic illness such as schizophrenia (Müller et al. 1998). A second, rapidly expanding line of research is devoted to health-related lifestyles, their measurement and the study of their sociocultural and socioeconomic determinants (Abel 1991; Lüschen et al. 1995; Abel et al. 1999). Interestingly, distinct patterns of health-related lifestyles can be identified that vary with the availability of social resources, as expected in a Weberian perspective (Cockerham et al. 1997). Finally, while research on social determinants of health in the past was largely restricted to men, more recent investigations explored gender differences in illness susceptibility with particular emphasis on psychosocial and sociocultural influences (Härtel 1996; Maschewsky-Schneider et al. 1998).

Additional contributions to medical sociological research on social determinants of health and illness aimed at explaining the documented variations in terms of sociogenic models. As transdisciplinary stress research witnessed rapid progress during the seventies and eighties the sociological study of psycho–biological bases of physical and mental diseases gained considerable attraction (Weiner 1992). One area of research concerns sociogenic models as related to the working life. One such model, effort–reward imbalance at work, was developed and widely tested at the Universities of Marburg and, later, Düsseldorf (Siegrist

1996, see also chapter "Work stress and health"). A second area to which several studies made a relevant contribution was research on social support and social isolation (Siegrist 1986; Pfaff 1989; Waltz 1994). A third area, life event research, largely followed the pioneering approach of British medical sociologist George W. Brown (Brown and Harris 1989), and found evidence of a socially patterned prevalence of severe life events (Geyer 1999). A further study along these lines documented indirect effects of lower social status on poor subjective health that were mediated by increased levels of stressful experience and decreased coping resources, at least among elderly males (Knesebeck 1998).

Chronic Illness, Patient–Physician Interaction, and Evaluation of Treatment

Two further prominent contributions of German medical sociology are related to the sick role and the psycho-social sequelae of chronic illness. Uta Gerhardt reanalyzed Parsons' seminal concept of the sick role (Gerhardt 1989, 1990a) and tested a series of hypotheses related to the social construction of chronic illness and the re-normalization processes in patients and their partners (Gerhardt 1990c). In particular, it was shown that "dual career"-couples where both the chronically ill and the healthy partner had employment experience were best suited to cope with the burden of illness. These studies also contributed to qualitative research methodology (Gerhardt 1990b). A second investigation by Bernhard Badura and his group consisted of a longitudinal study on some 1,000 cardiac patients to be followed over a mean 5.5 years (Badura et al. 1987; Waltz 1994). Of the many findings the following two deserve special attention: first, it was shown that a return to work was of crucial importance to well-being and adjustment to chronic illness; secondly, the two types of provision of medical rehabilitation care available in Germany, inpatient care in special rehabilitation clinics and outpatient ambulatory care by local teams, showed no significant differences in treatment outcomes (Badura et al. 1995). Additional research focused on predictors of early retirement and rehabilitation (Biefang et al. 1998), on the sociological analysis of communication and information between physicians and chronic patients in hospitals (Siegrist 1978; Raspe 1983; Trojan and Nickel 1999), and on the contribution of lay-people to health care and coping (von Ferber 1987).

Special attention was focused on a problem of growing concern in psychiatric sociology, which is the social discrimination and stigmatization of psychiatric patients, and schizophrenics in particular. Matthias Angermeyer and his group conducted several studies on this topic showing that stereotypes against and social distance from mentally ill people are still rather high among the general public in Germany. This was especially the case following selective media reporting of violent attacks conducted by schizophrenic patients against prominent personalities (Angermeyer and Matschinger 1996).

More recently, the international movement of outcome research influenced medical sociology. This research proved to be valuable to physicians, health administrators, and health policy makers. A number of clinical trials and more

comprehensive intervention studies were conducted with emphasis on psychosocial parameters (e.g. measures of functioning, of health-related quality of life). In at least two of the newly established public health research networks, evaluation research became an explicit focus (Badura and Siegrist 1999; Manz and Kirch 1999). Distinct prevention programs, in particular work-site health promotion programs, further substantiate this trend toward applied medical sociological research where sociological researchers play an active role (Slesina et al. 1988; Müller and Rosenbrock 1998; Slesina et al. 1998; Aust 1999).

Health Care and Health Systems Research

From a comparative perspective German medical sociological research, until recently, has been biased toward a "sociology in medicine" approach (Claus 1982). This bias is largely due to the researcher's institutional base within medical faculties and available resources of research funding. Due to a lack of independent inquiries from outside (i.e. due to a lack of genuine sociological research as applied to medicine and health care) these latter topics have not received adequate attention. This is particularly troublesome in a country whose health care system is characterized by overregulation and corporatism, by resistance against structural innovations, and by poorly developed information on treatment efficacy and health gain. Only a few research teams contributed to a sociological analysis of the current German health care system, its roots and dynamics. Hans Ulrich Deppe has probably been one of the most active researchers in this regard (Deppe 1987, 1989). After the re-unification process in 1990, there were some contributions that addressed the differences between and integration of the former eastern and western German health care systems (Deppe et al. 1993; Lüschen et al. 1997). Besides a few other works by Deppe and colleagues (Deppe and Oreskovic 1996; Iliffe and Deppe 1996), the field of comparative health systems research has been left to health economists almost exclusively (as an exception see Lüschen et al. 1989, 1995). This tends to leave the theoretical and methodological opportunities and challenges of comparative sociology to professional colleagues in other countries.

Conclusion

This chapter has documented some strong and weak points of the development of medical sociology in Germany. Its strong points are (1) the development and diffusion of a sociological curriculum for health professions, most importantly medical students, nursing students, and, more recently, public health students at the postgraduate level; (2) distinct advances in basic and applied research on social determinants of health and on chronic illness, including client–professional exchange; (3) a strengthening of the outcome research movement in terms of content and measurement, both with regard to health care delivery and, more recently, with regard to public health activities. The weak points are (1) the still-fragile institutional basis of the profession within medicine and the

almost nonexisting structural and intellectual support from academic mainstream sociology; (2) the poor development of health care research and of comparative health systems research; (3) the lack of professional impact on health policy at the regional and at the national level. This latter point is particularly troublesome as sociological expertise could be helpful in a health care system that needs innovation and rational decision-making. It is to be hoped that medical sociology in concert with the newly established public health movement will be allowed to contribute to future medicine and health care in a more visible and influential way.

References

Abel, Thomas. 1991. "Measuring Health Lifestyles in a Comparative Analysis: Theoretical Issues and Empirical Findings." *Social Science and Medicine* 32: 899–908.

Abel, Thomas., E. Walter, S. Niemann, and R. Weitkunat 1999. "The Berne-Munich Lifestyle Panel. Background and Baseline Results from a Longitudinal Health Lifestyle Survey." *Sozial- und Präventivmedizin* 44: 91–106.

Alber, J. 1992. *Das Gesundheitswesen in der Bundesrepublik Deutschland*. [The German Health Care System]. Frankfurt am Main: Campus.

Angermeyer, M. C. and H. Matschinger. 1996. "The Effects of Violent Attacks by Schizophrenic Persons on the Attitude of the Public towards Mentally Ill." *Social Science and Medicine* 43: 1721–8.

Arnold, M., K. W. Lauterbach, and K. J. Preua. 1997. *Managed Care*. Stuttgart: Schattauer.

Aust, B. 1999. *Gesundheitsförderung in der Arbeitswelt*. [Health Promotion at the Work Place]. Ph.D. Thesis, University of Bielefeld.

Badura, B., G. Kaufhold, H. Lehmann, H. Pfaff, T. Schott, and M. Waltz. 1987. *Leben mit dem Herzinfarkt. Eine sozialepidemiologische Studie*. [Life with Heart Attacks. A Social Epidemiological Study]. Berlin: Springer.

Badura, B., G. Grande, H. Janaen, and T. Schott. 1995. *Qualitätsforschung im Gesundheitswesen. Ein Vergleich ambulanter und stationärer kardiologischer Rehabilitation*. [Quality Research in the Health Care System. A Comparison between In-Patient and Out-Patient Cardiological Rehabilation Care]. Weinheim: Juventa.

Badura, B. and J. Siegrist (eds.). 1999. *Evaluation im Gesundheitswesen*. [Evaluating the Health Care System]. Weinheim: Juventa.

Biefang, S., P. Potthoff, B. M. Bellach, and R. Buschmann-Steinhage. 1998. "Predictors of Early Retirement and Rehabilitation for Use in a Screening to Detect Workers in Need of Rehabilitation." *International Journal of Rehabilitation Research* 21: 13–27.

Brenner, H., A. Mielck, R. Klein, and H. Zeigler. 1991. "The Role of Socioeconomic Factors in Survival of Patients with Colorectal Cancer in Saarland/ W-Germany." *Journal of Clinical Epidemiology* 44: 807–15.

Brenner, H., J. Born, P. Novak, and V. Wanek. 1997. "Smoking Behavior and Attitude Towards Smoking Regulations and Passive Smoking in the Workplan." *Preventive Medicine* 26: 138–43.

Brown, G. and T. Harris (eds.). 1989. *Life Events and Illness*. London: Unwin Hyman.

Cavelaars, A., A. E. Kunst, J. J. Geurts, U. Helmert, O. Lundberg, A. Mielck, J. Matheson, A. Mizrahi, N. Rasmussen, T. Spuhler, and J. P. Mackenbach. 1998. "Morbidity Differences by Occupational Class Among Men in Seven European Countries." *International Journal of Epidemiology* 27: 222–30.

Claus, L. M. 1982. *The Growth of a Sociological Discipline. On the Development of Medical Sociology in Europe*, 2 vols. Leuven: Sociological Research Institute.

Cockerham, William C., A. Rütten, and T. Abel. 1997. "Conceptualizing Contemporary Health Lifestyles: Moving beyond Weber." *Sociological Quarterly* 38: 321–42.

Deppe, H.-U. 1987. *Krankheit ist ohne Politik nicht heilbar.* [Illness is not Curable without Politics]. Frankfurt am Main : Suhrkamp.

——. 1989. "State and Health." *Social Science and Medicine* 28: 1159–64.

Deppe, H.-U., H. Friedrich, and R. Müller (eds.). 1993. *Gesundheitssystem im Umbruch: Von der DDR zur BRD*. [Health Care System in Transformation: From GDR to FRG]. Frankfurt am Main: Campus.

Deppe, H.-U. and S. Oreskovic. 1996. "Back to Europe – Back to Bismarck?" *International Journal of Health Services* 26: 777–802.

Elkeles, T. and W. Seifert. 1993. "Unemployment and Health- Impairments: Longitudinal Analyses from the Federal Republic of Germany." *European Journal of Public Health* 3: 28–37.

——. 1996. "Immigrants and Health". *Social Science and Medicine* 43: 1035–47.

Forschungsverbund DHP (ed.).1998. *Die deutsche Herz-Kreislauf- Präventionsstudie*. [The German Cardiovascular Prevention Study]. Bern: Huber.

Gerhardt, U. 1989. *Ideas About Illness. An Intellectual and Political History of Medical Sociology.* London: Macmillan.

——. 1990a. "Models of Illness and the Theory of Society: Parsons' Contribution to the Early History of Medical Sociology." *International Sociology* 5: 337–55.

——. 1990b. "Qualitative Research on Chronic Illness." *Social Science and Medicine* 30 (Special Issue).

——. 1990c. "Patient Careers in End-Stage Renal Failure." *Social Science and Medicine* 30: 1211–24.

Geyer, S. 1999. *Macht Unglück krank? Lebenskrisen und die Entwicklung von Krankheiten*. [Does Misfortune Lead to Disease? Life Crises and the Development of Diseases]. Weinheim: Juventa.

Geyer, S. and R. Peter. 1999. "Occupational Status and All-Cause Mortality: A Study with Health Insurance Data from Nordrhein-Westfalen, Germany." *European Journal of Public Health* 9: 115–21.

Härtel, U. 1996. "Frauen und Herz-Kreislauf-Erkrankungen" [Women and Cardiovascular Diseases]. Pp. 112–24 in G. Kaiser, J. Siegrist, E. Rosenfeld, and K. Wetzel-Vandai (eds.), *Die Zukunft der Medizin* [The Future of Medicine]. Frankfurt: Campus.

Härtel, U., U. Keil, U. Helmert, E. Greiser, S. Dai, F. Gutzwiller, A. R. Folsom, M. Szklo, A. D. White, J. Schreinber, and H. A. Tyroler. 1993. "The Association of Coronary Risk Factors with Educational Achievement. Results of the ARIC-MONICA Collaborative Studies." *Annals of Epidemiology* 3 (Supplement): S55–S61.

Haug, W. F. 1973. "Argumente für eine soziale Medizin IV." [Arguments for a Social Medicine IV]. *Das Argument 78* 15 (1–3).

Helmert, U., S. Shea, B. Herman, and E. Greiser. 1990. "Relationship of Social Class Characteristics and Risk Factors for Coronary Heart Disease in West Germany." *Public Health* 104: 399–416.

Helmert, U., A. Mielck, and S. Shea. 1997. "Poverty and Health in West Germany." *Sozial-und Präventivmedizin* 42: 276–85.

Helmert, U., S. Shea, and U. Maschewsky-Schneider 1995. "Social Class and Cardiovascular Disease Risk Factor Changes in West-Germany from 1984 to 1991." *European Journal of Public Health* 2: 103–8.

Iliffe, S. and H.-U. Deppe 1996. *Health Care in Europe: Competition or Solidarity?* Frankfurt am Main: Campus.

Kaupen-Haas, H. 1969. *Stabilität und Wandel ärztlicher Autorität* [Stability and Change of Medical Authority]. Stuttgart: Enke.

Knesebeck, O.v.d. 1998. *Subjektive Gesundheit im Alter. Soziale, psychische und somatische Einflüsse* [Subjective Health Among the Aged. The Impact of Social, Psychological, and Somatic Factors]. Münster: LIT.

Kongstvedt, P. R. 1996. *The Managed Health Care Handbook*. Gaithersburg/Maryland: Aspen.

Lüschen, Guenther, William C. Cockerham, and Gerhard Kunz (eds.). 1989. *Health and Illness in America and Germany.* München: Oldenbourg.

Lüschen, Guenther, William C. Cockerham, J. van der Zee, F. Stevens, J. Diedericks, M. Ferrando, A. d'Houtaud, R. Peters, T. Abel, and S. Niemann (eds.). 1995. *Health Systems in the European Union: Diversity, Convergence and Integration*. München: Oldenbourg.

Lüschen, Guenther, S. Niemann, and P. Apelt 1997. "The Integration of Two Health Systems: Social Stratification, Work and Health in East and West Germany." *Social Science and Medicine* 44: 883–99.

Mackenbach, J. P., A. E. Kunst, A. E. Cavelaars, F. Groenhof, and J. J. Geurts 1997. "Socioeconomic Inequalities in Morbidity and Mortality in Western Europe." *Lancet* 349: 1655–9.

Manz, R. and W. Kirch (eds.). 1999. *Public Health Research and Practice: Report of the Public Health Research Association Saxony 1993–1998*. Regensburg: Roderer.

Maschewsky-Schneider, U., B. Babitsch, and A. Ducki. 1998. "Geschlecht und Gesundheit." ["Gender and Health"]. Pp. 357–70 in K. Hurrelmann and U. Laaser (eds.), *Handbuch Gesundheitswissenschaften* [Handbook of Public Health]. Weinheim: Juventa.

Mielck, A. (ed.). 1994. *Krankheit und soziale Ungleichheit. Ergebnisse der sozialepidemio-logischen Forschung in Deutschland*. [Illness and Social Inequality: Results of Research in Social Epidemiology in Germany]. Opladen: Leske & Budrich.

Mühlhauser, I., H. Overmann, R. Bender, U. Bott, V. Jörgens, C. Trautner, J. Siegrist, and M. Berger. 1998. "Social Status and the Quality of Care for Adult People with Type 1 Diabetes – A Population Based Study." *Diabetologia* 41: 1139–50.

Müller, P., W. Gaebal, B. Bandelow, W. Kopcke, M. Linden, F. Müller-Spahn, A. Pietzcker, and J. Tegeler 1998. "Zur sozialen Situation schizophrener Patienten." ["The Social Status of Schizophrenic Patients"]. *Nervenarzt* 69: 204–9.

Müller, R. and R. Rosenbrock (eds.). 1998. *Betriebliches Gesundheitsmanagement, Arbeitsschutz und Gesundheitsförderung – Bilanz und Perspektiven*. [Occupational Health Management, Worker Protection, and Health Promotion]. St.Augustin: Asgard.

Organisation for Economic Cooperation and Development (OECD) (ed.). 1997. *Länderberichte. Deutschland*. Paris: OECD-Publications.

Pfaff, H. 1989. *Streabewältigung und soziale Unterstützung. Zur sozialen Regulierung individuellen Wohlbefindens*. [Coping and Social Support]. Weinheim: Deutscher Studien Verlag.

Pflanz, M. and J. Siegrist 1978. "Basic Assumptions in Teaching Medical Sociology in Medical Schools. The Case of West- Germany." Pp. 107–17 in Y. Nuyens and J. Vansteekiste (eds.), *Teaching Medical Sociology.* Leiden: Nijhoff, Social Science Division.

Raspe, H. H. 1983. *Aufklärung und Information im Krankenhaus*. [Information and Communication in Hospitals]. Göttingen: Vandenhoek & Ruprecht.

Rohde, J. J. 1962. *Soziologie des Krankenhauses*. [Sociology of Hospitals]. Stuttgart: Enke.

Schneider, M. 1998. *Gesundheitssysteme im internationalen Vergleich*. [International Comparison of Health Care Systems]. Augsburg: BASYS.

Schwartz, F. W., Badura, R. Leidl, H. Raspe, and J. Siegrist (eds.). 1998. *Das Public Health Buch*. [The Public Health Book]. München: Urban & Schwarzenberg.

Siegrist, J. 1978. *Arbeit und Interaktion im Krankenhaus*. [Work and Interaction in the Hospital]. Stuttgart: Enke.

——. 1995. *Medizinische Soziologie*. [Medical Sociology]. München: Urban & Schwarzenberg.

——. 1996. *Soziale Krisen und Gesundheit*. [Social Crises and Health]. Göttingen: Hogrefe.

Siegrist, K. 1986. *Sozialer Rückhalt und kardiovaskuläres Risiko*. [Social Support and Cardiovascular Risk]. München: Minerva.

Slesina, W., A. Schroer, and C. von Ferber. 1988. "Soziologie und menschengerechte Arbeits gestaltung." ["Sociology and Human Working Conditions"]. *Soziale Welt* 39: 205–23.

Slesina, W., F. R. Beuels, and R. Sochert. 1998. *Betriebliche Gesundheitsförderung*. [Occupational Health Promotion]. Weinheim: Juventa.

Statistisches Bundesamt (ed.). 1998. *Gesundheitsbericht für Deutschland*. [Health Report on Germany]. Stuttgart: Metzler-Poeschel.

Trojan, A. and S. Nickel. 1999. "Wiederholte Patientenbefragungen als Instrument zur Evaluation von qualitätsverbessernden Interventionen im Krankenhaus" ["Patients' Surveys as a Measure to Evaluate Interventions in Hospitals"]. In R. Buck and H. Raspe (eds.), *Patienten zufriedenheit in stationären Einrichtungen* [Patient Satisfaction in Patient Facilities], (in print).

von Ferber, C. (ed.). 1987. *Forschungsverbund: Laienpotential, Patientenaktivierung, Gesundheitsselbsthilfe und professionelle Dienstleistungen* [Research Network: Lay Potential, Activating Patients, Self-Help and Professional Services]. Berlin. Springer.

von Troschke, J., L. Klaes, and U. Maschewsky-Schneider (eds.). 1991. *Erfolge gemeindebezogener Prävention*. [Success of Prevention Measures at the Community Level]. St. Augustin: Asgard.

Waltz, M. 1994. *Social Isolation and Social Mediators of Stress and Illness*. Münster: LIT.

Weiner, H. 1992. *Perturbing the Organism. The Biology of Stressful Experience*. Chicago: University of Chicago Press.