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EDITORIAL FOREWORD

University of Liverpool Editorial Team

Editorial

We have been busy since the last Med Soc conference (and see the link for MedSoc 2010 <http://www.britsoc.co.uk/events/medsoc.htm>), preparing this issue to include the thought-provoking plenary given by Evan Willis, La Trobe University, entitled *Climate Change and Medical Sociology*. In this article for MSo, Evan draws attention to the current lack of engagement by sociologists in this pressing global issue, emphasising the scope for medical sociologists to become involved, and setting out a possible research agenda for the foreseeable future. One of the theoretical contributions that sociologists have made to understanding social and cultural responses to climate change has been the development of ideas around risk. In his article *Knowledge, substance use and gender differences associated with HIV infection risk among youth in a South African township* William DeJanes uses a quantitative methodology to explore understandings of risk and 'risky behavioural practices' with adolescents living in a large Black/African township in the Western Cape, South Africa. Despite the high potential for young people to become infected with the HIV virus, DeJanes found evidence of relatively high rates of sexual activity with multiple partners, linked to a low to moderate knowledge about HIV infection. Other findings include potentially socio-culturally specific gender disparities, with more girls reporting symptoms of sexually transmitted infections, linked to reported pressures to have sex and having sex in exchange for gifts. The picture DeJanes presents strongly suggests that current efforts to prevent the spread of HIV infection among some of the poorest people are largely ineffective, although the potential to use schools and parents/guardians to do more could provide the way forward.

Two papers explore aspects of medical education, both highlighting the need for more social scientific research in this important area. In his article, *the Changing Medical Regulatory Context: Focusing on Doctors' Educational Practices*, Martin Chamberlain reviews the potential for sociologists to explore how the recent changes designed to regulate medical practice in the UK have impacted on the actual behaviour of doctors. He presents the historical context to the current changes, to which practising clinicians have to adhere. Chamberlain argues that agencies of the state and the medical profession have enrolled rationalistic-bureaucratic systems in response to recent examples of professional abuse of patients, such as the Shipman case. From a sociological perspective, the introduction of these systems are interesting as they open up questions about how professions retain their dominance and, crucially, critique self-regulation. In *Exploring the Role of Discourse in Undergraduate Medical Training*, Subhashis Basu and Christopher Roberts report on a research study in which they used a discourse analytic approach to examine how undergraduate medical students experience their medical education in practice. They contrast these experiences with the formal 'mission statement' for undergraduate medical education contained in the General Medical Council's document 'Tomorrow's Doctors'. They conclude that new models of medical education are needed, based on the development of shared understandings and goals rather than the 'top-down' approach that currently prevails, but that for these to be developed more attention needs to be paid to the operation of power and ideology in the medical education system.

The Opinion Piece by Carl May and response by Bie Nio Ong make us think big, make us think about the point of what we do. Carl's paper discusses the challenges and the uses and misuses of Grounded Theory and the territorial issues between medical sociology and science and technology studies. But most importantly the Opinion Piece raises the question of how it is that theory is developed. How do we as sociologists working in health and illness make our studies

contribute to something bigger than themselves?

If you have any comments about this edition or would like to contribute to the publication, please email the editorial team on MSo@liverpool.ac.uk. If you would like to submit an article for peer-review to Medical Sociology online, please use the link:

<http://www.medicalsociologyonline.org/submissions.html>

The University of Liverpool Editorial Team

Helen Bromley, Paul Harrison (Web Editor), Julia Hiscock, Suzanne Hodge (Edition Co-ordinator), Paula Byrne, Mona Killey (Book Review Editor), Jude Robinson (Editor) and Sara Wheeler.

Knowledge, substance use, and gender differences associated with HIV infection risk among youth in a South African township

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ABSTRACT

Adolescents and young people account for the majority of new HIV infections in South Africa and those living in townships and informal settlements appear to be most affected. The present study examined the extent to which school-attending adolescents living in a large Black/African township engage in behaviour that places them at risk of HIV transmission, and identifies factors associated with these practices in this community. One hundred and two gender balanced, Xhosa-speaking 9th grade student volunteers (M=15.88 years, range=13-19 years) from 5 randomly selected secondary schools participated in an anonymous survey of HIV-related knowledge, attitudes, beliefs, and practices. Seventy-one percent of the participants reported being sexually active. Of those who reported vaginal sex in the last 12 months, 47% had had multiple sexual partners within this period. Seventy-nine percent of sexually active participants reported unprotected sex during their lifetime and 52% had used condoms during fewer than half of their sexual encounters. Thirty-four percent of participants reported symptoms of an STI in the last 12 months. HIV knowledge was generally low with participants correctly answering an average of 54% of the items. Additionally, participants exhibited a lack of knowledge in a number of areas related to the mythical cure/prevention of HIV/AIDS. No association was found between overall HIV knowledge and being sexually active, having multiple sexual partners in the last 12 months, or frequent condom use. Factors associated with the tendency to engage in HIV risk behaviours included gender, substance use, having been tested for HIV, and having discussed HIV with parents.

Key words

HIV/AIDS, South Africa, adolescent, risk factors, township, prevention

Introduction

South Africa is facing a devastating HIV/AIDS epidemic with nearly 20% of the population aged 15-49 HIV-positive (UNAIDS, undated). It is currently estimated that 5,500,000 South Africans are HIV positive (ibid.). In 2006, 346,000 adults and children died from AIDS in South Africa and by mid 2005 it was estimated that between 1.5 and 2.8 million South Africans had lost their lives to AIDS (Dorrington et al., 2006). In 2006, 71% of all deaths among 15-49 year olds in South Africa were believed to be AIDS-related (ibid.). These statistics do not account for the millions of South Africans affected indirectly by HIV/AIDS through the loss of loved ones, social stigmatisation, and an economy ill-equipped to address the financial burden catalysed by excessive health costs and high rates of unemployment (Benatar, 2001). In order to more closely approximate desired behavioural outcomes, HIV prevention interventions should address factors associated with risky sexual behaviour unique to the members of the community in which this behaviour occurs (Hoppe et al., 2004; Pelzer and Promtussananon, 2005). This study examines risk and protective factors associated with HIV transmission among school-attending adolescents living in Khayelitsha, the largest township in the Western Cape.

Young People and HIV Risk Behaviours

There is a pressing need for HIV prevention interventions to reduce incidence among young South Africans as they represent a primary means for altering the trajectory of the course of HIV (SANAC, 2007). Young people have also been reported to account for the majority of new HIV infections in South Africa (Abt. Associates Inc. South Africa, 2000). Additionally, this is a period in which sexual attitudes and behaviours have generally not yet been firmly established and may offer an opportunity to intervene in groups with more malleable patterns of HIV-related behaviour.

Marston and King (2006) conducted a systematic review of 268 qualitative studies of factors that shape adolescent sexuality. Interestingly, they found that not only is adolescent sexual behaviour strongly influenced by social forces, but that worldwide those forces appeared to vary by degree rather than type. They were able to identify 7 key themes that emerged from the literature: young people assess potential sexual partners as 'clean' or 'unclean'; sexual partners have an important influence on behaviour in general; condoms are stigmatising and associated with lack of trust; gender stereotypes are crucial in determining social expectations and, in turn, behaviour; there are penalties and rewards for sex from society; reputations and social displays of sexual activity or inactivity are important; and social expectations hamper communication about sex (1581).

While many of these can be considered extra-individual factors (i.e. factors beyond individual control that exert influence over individual behaviours), it should be noted that each of these forces interacts with the others in numerous and complex ways leading to the manifestation of a single individual behaviour. Thus, while the authors found cross-cultural commonality in arising themes, it remains essential to conduct in-depth assessments of the immediate needs of a given population and for interventionists to compare the assets and deficits identified within a specific context with the themes posited to be the fundamental forces that shape behaviours within this context. A recent study reported that 60% of new HIV infections in South Africa occur among 15-24 year olds (Abt. Associates Inc. South Africa, 2000). Eaton et al. (2003) conducted a literature review of unsafe sexual behaviour among youth and concluded that by the age of 16 at least 50% of South Africans are sexually active. By the age of 18, generally 80% are sexually active. Perhaps most importantly, 50-60% of sexually active youth reported never using condoms. Pettifor, Rees et al.'s (2004) nationwide study of 11,904 South Africans aged 15-24 years old reported that 69% were sexually active. A total of 65% of sexually active participants reported multiple sexual partners during their lifetime. Of those who reported sexual activity in the last 12 months, 66% reported having had unprotected sex. However, while relevant, broad statements regarding sexuality such as these should be viewed with caution, as rates of sexual activity have been shown to vary widely between settlement type and race.

These data indicate that South African young people are placing themselves at high risk of contracting and transmitting HIV and, alarmingly, this behaviour occurs within the context of relatively high HIV/AIDS-related knowledge (Campbell and MacPhail, 2002; Hoppe et al., 2004; Mabunda, 2004). South Africans under the age of 25 appear to be engaging in high rates of unprotected sex, and many report having multiple sexual partners. The bleak outlook for South Africans in general, and young South Africans in particular, in the context of HIV/AIDS reinforces the need for continued and more advanced prevention and treatment services.

Townships and urban informal settlements

At the aggregate level, South Africa is considered a middle-income country. However, according to the United Nations Development Programme (2003), South Africa has the 8th most unequal income distribution in the world, and 34.1% of the population lives on less than \$2USD per day (UNAIDS, undated). It is well established that there is an inverse relationship between socio-

economic status (SES) and health risks (see Farmer, 2001; Gilbert & Soskolne, 2003). For approximately one quarter of the world's population, poverty continues to be the primary determinant of their overall health status, exposure to infectious diseases such as HIV/AIDS, and high levels of fertility (Gilbert & Walker, 2002).

In South Africa, urban informal settlement and township residents experience the highest risk of contracting HIV infection (Pettifor et al., 2004; SANAC, 2007; Shisana & Simbayi, 2002; Shisana et al., 2005). These areas are often characterized by informal property rights, crowded living conditions, makeshift (shack) housing, and are often the refuge of the urban and rural poor. Most formal townships in South Africa contain large sections of informal settlements as rural-urban shift creates a demand for increased housing space (Constas & Colyn, 1996). In fact, there is evidence that the HIV epidemic in South Africa has created a need for the disposal of assets, which in turn has forced some families to relocate into these resource-poor settings in order to meet their basic subsistence needs (Thomas & Howard, 1998).

A number of studies have been conducted highlighting the differential distribution of HIV prevalence relative to settlement type. Shisana and Simbayi (2002) studied 8,804 individuals and found that HIV prevalence among the 15-24 age group in informal urban areas was 20.2%, compared to 9.3% in formal urban areas, 8.6% in formal rural areas (farms), and 7.0% in tribal areas. In a study of 11,904 South Africans, Pettifor et al. (2004) found that HIV prevalence among 15-24 year olds was highest among residents of informal urban areas (17.4%), followed by formal rural areas (13.5%), formal urban (9.8%), and informal rural areas (8.7%). Shisana et al.'s (2005) study of 15,851 individuals reported that prevalence among 15-24 year olds in informal urban areas was 17.8%, compared to 16.7% in rural formal areas, 11.1% in rural informal areas, and 6.9% in urban formal areas¹. This is in sharp contrast to Shisana et al.'s (2005) estimate of overall HIV prevalence at 10.3% for South Africans aged 15-24, and should caution against generalizing national HIV prevalence findings to unique subgroups of the population.

Gender and HIV

Factors Increasing Female Infectivity

While gender-stratified analysis often suggests that young males place themselves at greater risk than young females, it is important to analyse factors that may accord females a higher risk for HIV contraction than their male counterparts. In South Africa, female gender is a primary risk factor for HIV infection among young people. For example, among 15-19 year-olds, males and females experience a prevalence of 3.2% vs. 9.4%, respectively. This disparity increases in the 20-24 age group, with males and females reaching a respective prevalence of 6.0% vs. 23.9% (Shisana et al., 2005; see fig. 1). In order to understand these disparities it is necessary to explore both biological and socio-behavioural factors that may be responsible.

¹ Informal urban areas include squatter camps with informal property rights, many of which make up large sections of townships; rural formal areas include large commercial farms and small rural settlements; rural informal areas are generally tribal areas; and urban formal areas would be larger cities.

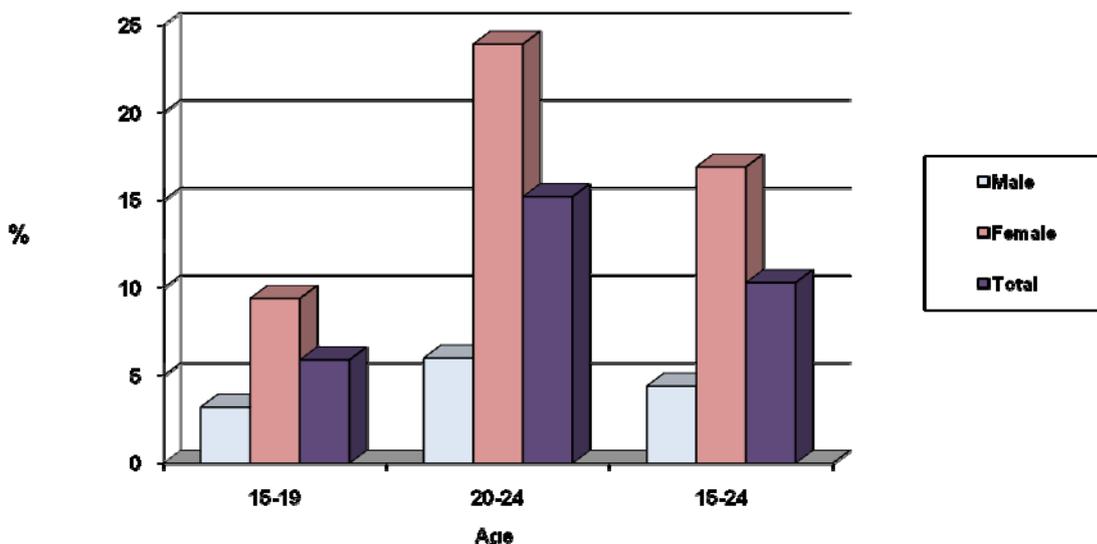


Figure 1 HIV Prevalence among 15-24 year olds by Sex (Shisana et al. 2005)

Inherent biological differences place women at greater risk of transmission per coital act. Semen carries a significantly higher viral load than vaginal secretions. The genital mucosal exposure area is also larger in females allowing a greater number of entry points for the virus. Additionally, the vaginal area acts as a receptacle for infected semen for a longer time than the penis is exposed to the less highly concentrated vaginal secretions (Campbell, 1999; Jackson, 2002). These differences create an increase in probability of contraction per coital act of 2-3 times that of males (UNICEF, undated; World Bank, undated.), but this ratio can significantly increase depending on the state of male infection and the presence of STIs. The biological disadvantage faced by females in the context of HIV transmission suggests that a particular emphasis in HIV prevention should be placed on the unique prevention needs of females.

Gender socialisation and coercive sexual practices

The socialisation of males and females to occupy specific roles and perform specific tasks occurs from the earliest stages of childhood, producing rigid expectations of appropriate behaviour which do not easily lend themselves to change. According to Firestone (1972), sexual oppression and labour inequality are pervasive and are the products of inherent biological differences, which in turn have laid the foundation for all types of inequality and social stratification. In South Africa, labour inequality, and subsequent inequality in economic production has placed men in the role of bread-winners and females often in the role of managing the children or, in the context of AIDS, caring for infected family members – further exacerbating their inability to contribute financially to the household and increasing dependence on their male counterparts.

Similarly, Connell (1987) developed the Theory of Gender and Power to explain gender-related inequities in the division of labour, power, and affective attachments and social norms. These three components exist on two levels – the greater society and the institutional, each of which is susceptible to only gradual change or modification. The *sexual division of power* appears to be particularly relevant to women's ability dictate the nature of sexual relationships. This construct specifies that many heterosexual relationships are characterised by imbalances in control (often based on economic dependence), patriarchy, authority, and coercion (Wingwood and DiClemente, 1999), generally at the expense of female liberty. These characteristics are often deeply embedded in societal norms and institutions and would therefore appear to be difficult to

modify solely at the individual level, thus requiring a more social epidemiological approach encompassing modification at the structural, community, family, dyadic, and individual levels.

Gender inequalities in the expression of sexual power are being increasingly recognised as pivotal agents in the HIV epidemic in South Africa. In traditional South African culture, females' subordinate social and economic status relative to their male counterparts places them at risk for sexual exploitation on multiple levels. Sexual negotiation regarding condom use, faithfulness, and the nature and terms of sexual activity are absent in many heterosexual relationships in South Africa (Eaton, et al., 2003).

Economically disadvantaged females have been reported to engage in transactional sex as a means of acquiring necessary or desired goods or gaining financial security (Eaton et al., 2003; MacPhail and Campbell, 2001). Highlighting this, a study of young people living in a township outside of Cape Town reported that 21% of sexually active females had given sex in exchange for money or goods (Simbayi et al., 2005). Transactional sex appears to be most prevalent in poor townships and rural areas, and may reduce a woman's ability to negotiate condom use during sex and put her at risk of physical abuse (Jewkes and Abrahams, 2002). Gender inequalities also place women at risk of intimate partner violence. Dunkle et al. (2004) recently conducted a study involving 1366 women presenting at antenatal clinics in Soweto and found that intimate partner violence and high levels of male control in a relationship predicted HIV seropositivity. Additionally, young South African women tend to have older sexual partners and South African men tend to have younger sexual partners (Jackson, 2002; Pettifor, Rees et al., 2004). This is problematic as it may expose young women to men who are more likely to be HIV positive as a result of more extensive sexual experience. These male partners are likely to enjoy a superordinate status due to their age and general social constructions of male power, thus limiting the sexual bargaining power of young South African women within these relationships.

HIV prevalence can be viewed as a social barometer as reflected by its disproportionate distribution between race, gender, and socio-economic status (Farmer, 2001). Young South Africans experience high rates of HIV infection, and account for the majority of new HIV infections. Specifically, young South Africans living in townships and informal settlements appear to be at the highest risk of contracting HIV (Pettifor, Rees et al., 2004; Shisana and Simbayi, 2002; Simbayi et al., 2005). Additionally, females and males may experience different risk levels due, in part, to biological and sociocultural influences.

Khayelitsha is the largest township in the Western Cape province with an unofficial estimated population of between 500,000 and 750,000 or more. Although antenatal surveillance estimates reveal that the Western Cape has the lowest rate of HIV/AIDS infection at 15.7%, Khayelitsha has a much higher rate of 33% (SANAC, 2007). This community contains large sections of makeshift housing and much of the population lives in extreme poverty.

In order to reduce the burden of HIV among young people in poverty-stricken areas like Khayelitsha, programme developers and intervention specialists must be well acquainted with the specific needs of the population in which an intervention is being implemented. Furthermore, many large-scale national surveys fail to fully measure dependent variables, provide an adequate racial/geotypical breakdown on key dependent variables, or do not employ statistical analysis sufficient to elucidate the relationship between independent and dependent variables (see Pettifor, Rees et al., 2004; SANAC, 2007; Shisana and Simbayi, 2002; Simbayi et al., 2005).

The present study examines risk and protective factors associated with HIV transmission among Black/African adolescents attending secondary schools located throughout Khayelitsha in order to inform the development of interventions tailored to the needs of young people in this and similar communities. This is of importance as this demographic remains understudied in the South African population and it represents an opportunity to efficiently reach groups at high risk of HIV infection. The following analysis should be viewed within the context of a social epidemiological approach to health and illness in which multiple influences beyond personal

agency are examined.

Method

Design

This was a cross-sectional, school-based survey of HIV-related knowledge, attitudes, beliefs, and practices (KABP) among adolescents living in a large South African township. The target community contained 19 secondary schools at the time of the study. One school was selected for piloting of the study instruments. After modifying the questionnaires based on participant feedback, five secondary schools were randomly selected using a computer-based random numbers generator. A convenience sample of 25 student volunteers was selected from each of the five schools for participation in the study. Key dependent variables included HIV/AIDS-related knowledge, sexual experience, number of sexual partners, condom usage, and substance use.

Participants

The study involved 125 South African adolescents aged 13-19, with a mean age of 15.88 years (SD =1.40). All participants attended secondary school in Khayelitsha, a Black/African township in the Western Cape province. Participants were members of the 9th grade and the schools from which they were selected were located throughout the community. The sample was 49% male and 51% female. All participants were Black/African and 97% spoke Xhosa as a first language, followed by Zulu and Tswana at 2% and 1%, respectively. Thirty-one percent of the participants stated that one or both parents had died.

Research Instrument

This study utilised the Xhosa version of Pettifor, Rees et al.'s (2004) questionnaire which served as the basis for their National Survey of HIV and Sexual Behaviour among 15-24 year olds in South Africa. Written items were presented in English and Xhosa. This measure was used to assess sexual attitudes and behaviour, socioeconomic indicators, cognitive variables and substance use among participants. The survey was verbally administered in Xhosa in group settings of between 19 and 23 participants per group.

A modified form of Carey and Schroeder's (2002) Brief HIV Knowledge Questionnaire (HIV-KQ-18) was used to assess levels of HIV-related knowledge. Six items were added drawing from research conducted by Peltzer and Promtussanon (2005) with a sample of 3,150 junior secondary school students in South Africa. After consulting with students, teachers and other community members, an additional four culturally-relevant items were added. This yielded a 28-item HIV knowledge questionnaire. Items were translated from English into Xhosa and back-translated to ensure comprehension by the participants. Cronbach's alpha for this scale within this sample was .74, which is considered an acceptable level of reliability according to Nunnally (1978) and DeVellis (1991), among others.

Procedure

The questionnaire was administered in Xhosa by a trained facilitator. The primary investigator was present during administration to maintain quality assurance. Questionnaires were completed during school hours over a period of two visits per site. Due to the sensitive nature of the information being elicited, a number of precautions were taken to minimise potential response (social desirability) bias. Teachers and members of the study team explained to participants that the questionnaire was part of a University study, highlighting the importance of accurate responses and reminding them that all answers were anonymous and confidential. Participants

were evenly spaced, where possible, so that none sat directly next to each other and all were encouraged to cover their answers during completion of the questionnaire. Teachers were not present during the administration of the questionnaire, nor did they handle completed questionnaires at any point. Student names were not present on any collected data

The study protocol and instruments were reviewed and approved by the Ethics Committee of the Department of Social Policy and Social Work of the University of Oxford, as well as the Western Cape Education Department. After a verbal description of the study in both English and Xhosa, a translated informed consent form providing further information about the study was given to each of the potential participants to be signed by themselves, a parent/guardian, and the principal investigator.

Statistical Analysis

An alpha level of .05 was used for all statistical tests. Analysis of key sexual behaviour and HIV/AIDS knowledge variables was conducted at the aggregate level, and subsequently stratified by sex. One-way analysis of variance tests were used to measure potential differences between schools on continuous dependent variables. Pearson chi-square tests were used to analyse between-group differences on categorical dependent variables, and independent samples *t*-tests were used to measure between group differences on continuous dependent variables. Pearson correlations were conducted to analyse bivariate associations between continuous sociodemographic variables, sexual behaviour variables, and HIV-related knowledge.

Results

Sample characteristics

Of the 125 students given informed consent forms, the response rate was 82% (N=102); 4 students stated that they had forgotten to return the completed forms, and 19 students were absent on the day of the study. Eight students who had completed the first section of the questionnaire were absent on the second visit, thus reducing the total number of participants responding to some items to 94.

There were no significant differences between schools in age of participants ($f=.41$, $df=4$, $p=.80$), HIV knowledge ($f=2.39$, $df=4$, $p=.06$), whether or not they had had sex ($X^2=.535$, $p=.91$) number of sexual partners in the last 12 months ($f=.76$, $df=4$, $p=.56$), frequency of lifetime condom use ($f=1.01$, $df=4$, $p=.41$), age of sexual debut ($f=1.00$, $df=4$, $p=.41$), age of first sexual partner ($f=.285$, $df=4$, $p=.89$), frequency of alcohol use in the last month ($f=.344$, $df=4$, $p=.85$), or frequency of drug use in the last month ($f=.2.024$, $df=4$, $p=.12$).

At a mean age of 15.88 years (SD=1.40), over two-thirds (71%) of the sample reported being sexually active, and of these 11% reported having had anal sex. Of those who reported having had vaginal sex, 37% were sexually active by the age of 14. Of those who reported vaginal sex in the last 12 months, 47% had had multiple sexual partners within this period. Regarding average lifetime condom use, 21% of sexually active participants reported always using condoms, 18% reported using condoms more than half of the time, 9% reported using condoms half of the time, 32% reported using condoms less than half of the time, and 20% reported never using condoms.

Regarding coercive sexual practices, 21% reported having had sex as a result of being threatened, 14% in exchange for gifts or goods, and 10% as a result of physical force. Thirty-four percent of the sample reported experiencing symptoms of a sexually transmitted infection (STI) within the last 12 months. Eighty percent of those who reported having sex as a result of being threatened also reported symptoms of an STI in the last 12 months, sixty-seven percent who reported having sex in exchange for gifts or goods experienced symptoms of an STI in the last 12 months, and fifty-seven percent of those who reported having had sex as a result of physical force

also reported symptoms of an STI as defined by the presence of abnormal/smelly urinary discharge, or genital ulcer/sore in the last 12 months.

Of those reporting a current main partner (boyfriend/girlfriend), 38% believed that their partner was faithful. Twenty-four percent of the participants reported having been tested for HIV. Regarding the presence of HIV/AIDS in the community, 73% indicated that they personally knew someone with HIV/AIDS and 67% indicated that they personally knew someone who had died from AIDS. Twenty-eight percent of females believed teenage pregnancy to be the most important issue facing South African youth compared to two percent of males. Additional sample characteristics and prevalence of risk behaviours can be found in Table 1.

Regarding the most important issue facing youth in their community, 30% responded crime, 28% teenage pregnancy, 21% drug and alcohol abuse, 15% HIV/AIDS, and unemployment, poor education, and poverty at 3%, 2%, and 1% respectively. Sixty-five percent of the participants reported having had an alcoholic drink other than for religious purposes. Of these, 37% indicated that they had been drunk in the last month, and 47% reported either that they could not use a condom or probably could not use a condom during sex after drinking or taking drugs. Thirty percent of the sexually active participants reported having had sex under the influence of drugs or alcohol. Twenty-nine percent of the participants reported having used a drug to feel high. Fifteen percent of those who reported drug use also reported having injected a drug.

Table 1: Sample characteristics

Variable		%	N
Age (mean 15.88)	13-15	39	(40)
	17-19	61	(62)
Sex	Male	49	(50)
	Female	51	(52)
Language spoken at home	Xhosa	97	(91)
	Zulu	2	(2)
	Tswana	1	(1)
Ever had vaginal sex	Yes	71	(71)
	No	29	(29)
Ever had anal sex	Yes	11	(11)
	No	89	(89)
Number of sexual partners in last 12 months ^a	0	34	(34)
	1	35	(35)
	2	20	(20)
	3-5	8	(8)
	6-8	3	(3)
Number of sexual partners in entire life	0	28	(28)
	1	17	(17)
	2-3	25	(25)
	4-6	21	(21)
	7-11	9	(9)
Condom used at first sex	Yes	47	(34)
	No	53	(38)

Variable		%	N
Average condom use with first sexual partner	Always	28	(20)
	More than half of the time	17	(12)
	Half of the time	1	(1)
	Less than half of the time	12	(9)
	Never	42	(30)
Average condom use entire life	Always	21	(14)
	More than half of the time	18	(12)
	Half of the time	9	(6)
	Less than half of the time	32	(21)
	Never	20	(13)
Experienced symptoms of an STI in last 12 months ^b	Yes	34	(35)
	No	66	(67)

NOTE: Some variables do not sum to 102 due to missing values.

a. 'Number of sexual partners' refers to both vaginal and anal sex.

b. 'Symptoms of an STI' refers to presence of abnormal/smelly urinary discharge, or genital ulcer/sore.

HIV/AIDS knowledge

Table 2 presents the distribution of responses to 28 HIV/AIDS-related items. The mean HIV knowledge score was 15.24 correct responses (SD=3.80), with a range of 8 to 23. The mean score on culture-specific² HIV knowledge items was 4.84 correct responses (SD=1.90) out of a possible 9, with a range from 0 to 8.

One-way analysis of variance revealed that those who endorsed the statement 'Showering, or washing one's genitals/private parts after sex keeps a person from getting HIV' reported a significantly greater number of sexual partners in the last 12 months than those who disagreed or did not know ($f=4.45$, $p=.01$); those who believed that 'Pulling out the penis before a man climaxes/cums keeps a woman from getting HIV during sex' reported a significantly greater number of sexual partners in the last 12 months ($f=8.45$, $p<.001$); and those who agreed that 'Men from the Bush cannot get HIV/AIDS (male circumcision ceremony)' reported a significantly greater number of sexual partners in the last 12 months ($f=5.37$, $p=.01$).

There was a trend for males to score higher than females ($M=15.95$, $SD=3.52$ vs. $M=14.56$, $SD=3.97$) on overall HIV knowledge items ($t=1.80$, $p=.08$). There was no association between age and overall HIV knowledge ($r=.06$, $p=.56$). There were no significant differences in HIV knowledge between participants who were sexually active ($M=15.40$, $SD=3.64$) and those who had not had sex ($M=14.92$, $SD=4.32$) ($t=.532$, $p=.60$); between participants who reported multiple sexual partners in the last 12 months ($M=16.00$, $SD=4.07$) and those who reported only one sexual partner ($M=15.09$, $SD=3.44$) ($t=.953$, $p=.34$); between those who reported any unprotected sex ($M=15.55$, $SD=3.81$) and those who reported no unprotected sex ($M=14.95$, $SD=3.99$) ($t=.726$, $p=.47$); or between participants reporting frequent condom use³ during their lifetime ($M=15.04$, $SD=4.23$) and those reporting infrequent or no condom use ($M=15.70$, $SD=3.37$) ($t=-.692$, $p=.49$).

² These items are marked with an asterisk in Table 2.

³ Defined as always or more than half of the time.

Table 2: Responses to HIV Knowledge Measure (correct response in boldface)

Item Statement	Participants' Response		
	True (%)	False (%)	Don't know (%)
Coughing and sneezing DO NOT spread HIV	45.7	35.1	19.1
A person can get HIV by sharing a glass of water with someone who has HIV	3.3%	93.5	3.3
Pulling out the penis before a man climaxes/cums keeps a woman from getting HIV during sex	23.4%	39.4	37.2
A woman can get HIV if she has anal sex with a man	29.3	16.3	54.3
Showering, or washing one's genitals/private parts, after sex keeps a person from getting HIV	5.4	66.7	28
There is a medicine that can cure you of HIV/AIDS*	17.6	63.7	18.7
All pregnant women infected with HIV will have babies born with AIDS	51.1	29.8	19.1
People who have been infected with HIV quickly show serious signs of being infected	20.4	51.6	28
There is a vaccine that can stop adults from getting HIV*	32.6	29.3	38
People are likely to get HIV by deep kissing, putting their tongue in their partner's mouth, if there partner has HIV	8.5	81.9	9.6
A woman cannot get HIV if she has sex during her period	2.1	53.2	44.7
There is a female condom that can help decrease a woman's chance of getting HIV	73.9	7.6	18.5
A natural skin condom works better against HIV than does a latex condom	9.6	39.4	51.1
A person will not get HIV while taking antibiotics (medicine)*	37.2	22.3	40.4
Having sex with more than one partner can increase a person's chance of being infected with HIV	76.6	11.7	11.7
Taking a test for HIV one week after having sex will tell a person if he or she has HIV	57.4	17.0	25.5
A person can get HIV by sitting in a hot tub or a swimming pool with a person who has HIV	8.5	83.0	8.5
A person can get HIV from oral sex (kissing licking the private parts of a man or woman).	30.9	16.0	53.2
Using Vaseline or baby oil with condoms lowers the chance of getting HIV	5.3	29.8	64.9
You can get HIV through an open cut or wound	83.9	9.7	6.5
One can get HIV through witchcraft*	31.5	28.3	40.2

Item Statement	Participants' Response		
	True (%)	False (%)	Don't know (%)
Only Blacks can get HIV*	0.0	97.8	2.2
Having sex with a virgin can cure HIV/AIDS*	10.6	66.0	23.4
Having sex with a disabled or old woman can cure HIV/AIDS*	7.6	59.8	32.6
One can get HIV by sitting next to a person with HIV	4.3	94.7	1.1
HIV can be spread by mosquitoes	23.4	42.6	34.0
HIV was introduced by Whites in order to infect Blacks*	10.8	66.7	22.6
Men from the Bush cannot get HIV/AIDS (male circumcision ceremony)*	9.0	53.7	37.3

Gender differences

Table 3 presents gender differences on selected sexual behaviours. A greater number of males reported being sexually active, but this was not statistically significant (76.0% vs. 66.7%; $X^2=1.07$, $p=.30$). Males were significantly younger ($M=14.51$ yrs, $SD=1.79$) than females ($M=15.42$ yrs, $SD=1.30$) at sexual debut ($t=-2.41$, $p=.02$). The first sexual partner's age was significantly higher for females (17.12 yrs, $SD=1.39$) than males (13.21 yrs, $SD=1.39$) ($t=-12.69$, $p<.001$). Females reported more frequent lifetime condom use ($M=2.35$, $SD=1.47$) than males ($M=1.51$, $SD=1.38$) ($t=-2.39$, $p=.02$). Males and females did not differ significantly on reported condom use at last sex (63.2% vs. 58.8%; $X^2=.142$, $p=.71$). Males were more likely than females to believe that using condoms is a sign of not trusting your partner (69.6% vs. 41.3%, $X^2=7.44$, $p=.01$). Significantly more females had experienced symptoms of an STI in the last 12 months (46.2% vs. 22.0%, $X^2=6.60$, $p=.01$).

Males reported greater pressure from friends to have sex ($M=2.54$, $SD=1.13$) than females ($M=2.09$, $SD=1.09$) ($t=1.97$, $p=.05$). Females reported significantly less desire to have sex at sexual debut ($M=2.69$, $SD=.86$) than males ($M=3.15$, $SD=.66$) ($t=2.45$, $p=.02$). The number of females who reported having had sex as a result of being threatened did not differ significantly from males (29.4% vs. 13.9%, $X^2=2.50$, $p=.10$), however, females were significantly more likely to report having had sex as a result of physical force (21.2% vs. 0.0%, $X^2=8.50$, $p=.00$), and in exchange for gifts/goods (27.3% vs. 0.0%, $X^2=10.13$, $p=.00$).

Although a greater number of males reported alcohol consumption other than for religious purposes (71.7% vs. 58.3%), this difference was not statistically significant ($X^2=1.85$, $p=.17$). Males consumed alcohol significantly more frequently in the last month than females ($t=2.71$, $p=.01$) and were more likely to report having been drunk in the last month (53% vs. 18%, $X^2=8.00$, $p=.01$). Males were significantly more likely than females to have used a drug to feel high (41.3% vs. 17.4%, $X^2=6.34$, $p=.01$), however, males and females did not differ significantly in the frequency of drug use in the last month ($t=-.163$, $p=.87$). Of those who had consumed alcohol, more males reported having engaged in sex under the influence of alcohol (33% vs. 18%), however, this was not statistically significant ($X^2=2.22$, $p=.33$). Of those who had consumed drugs, significantly more females stated that they had engaged in sex under the influence of drugs (75.0% vs. 26.3%, $X^2=5.93$, $p=.05$).

Table 3: Gender differences in sexual matters

Variable	Total	Male	Female	X ² P-value	t-test P-value
Ever had vaginal sex	71.3%	76.0%	66.7%	.30	
Ever had anal sex	11.0%	8.2%	13.7%	.37	
Age of sexual debut, years	14.94	14.51	15.42		.02
Age of first sexual partner, years	15.02	13.21	17.12		<.000
Number of sexual partners in last 12 months ^a	1.24	1.54	.94		.06
Number of sexual partners in entire life	3.49	4.34	2.59		.00
Condom used at first sex	47.2%	31.6%	64.7%	.01	
Average condom use with first sexual partner ^b		1.37	2.21		.04
Condom used at last sex	61.1%	63.2%	58.8%	.71	
Average condom use in entire life ^b	1.91	1.51	2.35		.02
Experienced symptoms of an STI in last 12 months ^c	34.3%	22.0%	46.2%	.01	
Pressure from friends to have sex ^d	2.32	2.54	2.09		.05
Circumstances of first sexual experience ^e	1.58	1.43	1.75		.18

a. 'Sexual partner' refers to both vaginal and anal sex

b. 'Average condom use' coded as 0=never, 1=less than half of the time, 2=half of the time, 3=more than half of the time, 4=always

c. 'Symptoms of an STI' refers to presence of abnormal/smelly urinary discharge, or genital ulcer/sore.

d. 'Pressure from friends to have sex' codes as 1=no pressure, 2=not much pressure, 3=some pressure, 4=a lot of pressure

e. 'Circumstances of first sexual experience' coded as 1=willing, 2=persuaded, 3=tricked, 4=physically forced, 5=raped

Correlates of Three HIV Risk Outcomes

Heterosexual activity is the primary mode of HIV transmission in sub-Saharan Africa (Caldwell and Caldwell, 2003; UNAIDS, 2008). Having multiple sexual partners increases one's probability of exposure to HIV by engaging in activities likely to promote fluid/blood exchange with partners of variable or unknown HIV status. This is also problematic as it can promote HIV transmission through multiple channels in a given population. One of the most effective and easily available means of protecting against HIV transmission is the use of male condoms. Although not 100% effective, condoms have been shown to significantly reduce the risk of transmitting HIV. A review of 25 published studies of serodiscordant heterosexual couples conducted by Weller and Davis (1999) revealed a range of condom effectiveness between 60% and 96% depending on incidence among condom nonusers, with the average level of protection approximating 87%. For these reasons, the present study utilises the categories of *being sexually active*, *having multiple*

sexual partners, and the frequent use of condoms as the primary dependent variables for bivariate analysis.

Table 4: Correlates of three HIV risk outcomes—Sexually active, multiple sex partners, and frequent condom use.

		Sexually active		Multiple sex partners in last 12 months ^{a,b}		Frequent condom use ^c	
		% Yes	P-value	% Yes	P-value	% Yes	P- value
Total		71		31		41	
Age group	13-15	62	.09	21	.08	39	.97
	16-19	77		37		40	
HIV knowledge	Above average	72	.86	30	.69	39	.92
	Below average	74		26		41	
Ever been tested for HIV	Yes	91	.04	55	.01	39	.94
	No	69		24		40	
Ever spoken to parents about HIV	Yes	66	.03	25	.04	45	.43
	No	89		46		35	
Been drunk in the last month	Yes	86	.10	64	.00	29	.27
	No	69		26		45	
Regular alcohol use ^d	Yes	82	.20	57	.00	24	.05
	No	69		21		50	
Ever used a drug to feel high	Yes	85	.08	70	<.001	29	.15
	No	67		16		48	
Regular drug use ^e	Yes	94	.03	77	<.001	43	.81
	No	68		21		39	

Note. All P values are associated with Chi-square tests.

a. Includes those who have not had sex

b. "Multiple sex partners" defined as 2 or more sexual partners

c. "Frequent condom use" defined as always or more than half of the time

d. "Regular use" defined as several times per week or daily in the last month – analysis includes those who have not had alcohol

e. "Regular drug use" defined as several times per week or daily in the last month – analysis includes those who have not used drugs

Sexually Active

Table 4 reports bivariate associations between selected variables and three HIV risk outcomes. Being sexually active was more commonly reported among those who had been tested for HIV (90.8% vs. 68.7%, $X^2=4.28$, $p=.04$), those who had consumed alcohol other than for religious purposes (80.3% vs. 59.4%, $X^2=4.69$, $p=.03$), and those who had regularly used drugs in the last month (94.1% vs. 68.4%, $X^2=4.67$, $p=.03$). Sexual activity was less commonly reported by those who had ever spoken to their parents about HIV (66.2% vs. 88.5%, $X^2=4.28$, $p=.03$).

Multiple Sex Partners

Having had multiple sexual partners was more common among those who had been tested for HIV (54.5% vs. 23.9%, $X^2=7.22$, $p=.01$), had consumed alcohol other than for religious purposes (41.0% vs. 12.5%, $X^2=7.94$, $p=.01$), those who had been drunk in the last month (63.6% vs. 26.3%, $X^2=8.09$, $p=.00$), those who had regularly consumed alcohol in the last month (57.1% vs. 21.0%, $X^2=11.56$, $p=.00$), those who had ever used a drug to feel high (70.4% vs. 15.6%, $X^2=26.21$, $p<.001$), and those who had regularly used a drug in the last month (76.5% vs. 21.1%, $X^2=19.88$, $p<.001$). Having had multiple sexual partners in the last 12 months was significantly less common among those who reported ever having discussed HIV with parents (24.6% vs. 46.2% , $X^2=4.04$, $p=.04$).

Frequent Condom Use⁴

Frequent condom use was more common among those who had discussed condoms with their first sexual partner (59.0% vs. 14.8%, $X^2=12.87$, $p<.001$). Frequent condom use was less common among those who had consumed alcohol other than for religious purposes (32.6% vs. 63.2%, $X^2=5.17$, $p=.02$) and those who had regularly consumed alcohol in the last month (23.8% vs. 50.0%, $X^2=3.96$, $p=.05$). Frequent condom use was also significantly associated with degree of pressure from friends to have sex ($X^2=9.86$, $p=.02$), and degree of perceived risk of contracting HIV ($X^2=11.51$, $p=.01$).

Discussion

Social Epidemiology

Many currently employed psychosocial theoretical models of HIV prevention focus primarily on the determinants of individual-level behaviour and behaviour change. This has often been referred to as a 'rational decision-maker approach' and neglects to account for behavioural influences that lie outside the realm of individual control. For example, personal agency is constrained through numerous and complex mechanisms that exist at the individual, dyadic, family, community, and structural levels (Farmer, 2001). It has become increasingly clear to social and biological scientists alike, that a more comprehensive, social epidemiological approach should be taken to more effectively address the spread of adverse health conditions. Cwikel (2006) defines social epidemiology as:

...the systematic and comprehensive study of health, well-being, social conditions or problems, and diseases and their determinants, using epidemiology and social science methods to develop interventions, programmes, policies, and institutions that may reduce the extent, adverse impact, or incidence of a health or social problem and promote health. (4)

According to this definition, successful disease intervention will require the cooperation of medical scientists, social and behavioural scientists, programme implementers, and policy makers to ensure that change conducive to health and well-being occurs at multiple levels within society. Thus, relying solely on individual-level mechanisms of change may be an unrealistic option in areas suffering from poverty, gender imbalances in sexual power and decision-making, poor healthcare infrastructure, political dysfunction, and high rates of infection. Without an integration of multiple levels of behavioural influence, it may be increasingly difficult to alter the

⁴ 'Frequent condom use' defined as always or more than half of the time

distribution and trajectories of adverse health outcomes such as HIV, other STIs, and AIDS-related opportunistic infections such as TB and pneumonia, among others.

HIV Knowledge

The extent to which knowledge alone is an effective mediator of sexual behaviour has been debated, and there is a general consensus that knowledge is necessary but insufficient by itself to effect a widespread change in HIV-related behavioural outcomes (Fisher and Fisher, 2000; Peltzer and Promtussanon, 2005). HIV/AIDS related knowledge in this sample was generally low with respondents correctly answering an average of 54% of the items. The study found no significant association between overall HIV knowledge and age, gender, being sexually active, having multiple sexual partners, regularly using condoms, or ever having had any unprotected sex. This study supports the position that general HIV-related knowledge may be a necessary but insufficient prerequisite to the adoption of safer sex behaviours and suggests that additional mediators will likely need to be targeted in order to effect positive behavioural change in this community.

The HIV knowledge questionnaire used in this study included a number of prevention/cure-related items. These items consistently elicited incorrect responses and suggest that deficiencies exist among these youth in a potentially hazardous domain of HIV-related knowledge.

Encouragingly, most of these items were not related to frequency of condom use or having multiple sexual partners in the last 12 months. Optimism should be cautioned, however, as participants who believed that pulling out the penis before a man ejaculates prevents a woman from contracting HIV, showering or washing one's genitals/private parts after sex keeps a person from contracting HIV, or men who have attended a traditional circumcision ceremony cannot contract HIV were statistically significantly more likely to have had multiple sexual partners in the last 12 months in comparison to participants who disagreed or did not know the answer to these items.

It has been hypothesised that the belief that having sex with a virgin will cure one of HIV/AIDS may be the impetus for HIV positive males to rape younger South African women. While this study revealed that 11% of the participants endorsed this item (23% responded 'Don't Know'), it was not possible to examine this belief as it relates to male-female rape. As suggested by Jewkes and Abrahams (2002), it may be more likely that young South African females will be pursued by older males as a result of male perceptions that females with limited or no sexual experience are less likely to be HIV positive. However, this dynamic has dire consequences for females engaging in these relationships as they will likely be exposed to more sexually experienced males who are, as a result, more likely to be HIV positive.

Of additional note, the majority responded incorrectly to the item 'One can get HIV through witchcraft.' This is of importance for two reasons: individuals endorsing this belief may be less likely to equate HIV infection with risky sexual behaviour, and those who believe that HIV can be transmitted through witchcraft may perhaps believe the opposite – namely that HIV can be cured through witchcraft or traditional healing.

The results of this study indicate that whilst overall HIV knowledge was not related to risky behaviour, deficiencies exist in potentially hazardous domains of HIV-related knowledge. Despite large-scale governmental and non-governmental efforts to increase HIV-related knowledge among young people, further efforts are clearly needed to reduce the tendency for youth in this community to endorse false beliefs relating to the mythical cure and/or prevention of HIV/AIDS.

Gender Differences

This study found that males were significantly younger than females at sexual debut. This is in

accordance with much of the published literature which suggests that males tend to become sexually active earlier than females (Eaton et al., 2003; Peltzer and Promtussanon, 2005; Pettifor, Rees et al., 2004). The age of sexual debut reported in this sample is very low, particularly among those aged 14 or younger as compared to previous South African studies (see Health Systems Trust, undated; Shisana et al., 2005). The age of sexual debut in this sample has potentially important implications for HIV transmission as well as intervention efforts. A recent study of women in Zimbabwe reported that early sexual debut (15 years or younger) predicted HIV infection, as well as risk profile including number of lifetime partners and not completing school. It is unclear whether the act of early sexual debut in itself increases risk, or whether it may lead to a risk profile more conducive to HIV transmission. However, as with many sub-Saharan African cultures, a woman's ability to negotiate the circumstances of sexual intercourse (i.e. condom use or sexual aggression) is often limited by pervading norms of male-dominance and it would seem that this disparity would be even more pronounced among younger girls (Pettifor, van der Straten et al., 2004).

Sexual activity within this sample occurs within the context of high levels of unprotected sex and, frequently, multiple sexual partners. This suggests that participants are placing themselves at risk of HIV infection at a very early age. This study also found that females tend to seek significantly older partners at sexual debut than males. Previous research has highlighted the tendency for females to have older sexual partners whereas males tend to have younger partners (Aggleton and Rivers, 1999; Jackson, 2002; Pettifor, Rees et al., 2004). This has important consequences as it may expose young females to males who are at elevated risk of HIV as a result of more extensive sexual experience.

Potential risk of HIV infection increases with the number of sexual partners one has. This study found that 76% of sexually active participants reported having two or more sexual partners in their lifetime. Sexually active males reported significantly more lifetime sexual partners than females. Previous South African literature has reported similar gender differences in number of sexual partners (Peltzer and Promtussanon, 2005; Pettifor, Rees et al., 2004; Shisana and Simbayi, 2002). Additionally, males reported significantly less frequent lifetime condom use than females. Regarding recent sexual activity, however, condom use at last sexual encounter did not significantly vary by gender.

It should be noted that these findings regarding condom use are not in accordance with much of the South African literature. Larger studies of sexual behaviour and practices in South Africa have reported that males more frequently use condoms than females (Pettifor, Rees et al., 2004; Shisana and Simbayi, 2002). However, not all studies have produced similar results. For example Peltzer and Promtussanon's (2005) study of 3150 junior secondary school students found that females were significantly more likely to report condom use at first and last sex. Additionally, Auvert et al. (2001) found that a greater number of females reported condom use at first sex. It is likely that the cultural climate in which the individual operates, including dyadic and community-level influences, will affect the decision to use condoms and that unique cultural factors should be explored to identify which may be associated with condom use.

It may be the case that possible impregnation acted as a stronger motivator for condom use among females in this sample. Indeed, 28% of the females in this sample believed that teenage pregnancy was the most important issue facing South African youth compared to only 2% of male participants. Additionally, this study revealed that participants who had consumed alcohol other than for religious purposes and participants who had regularly consumed alcohol in the last month were significantly less likely to frequently use condoms. A greater proportion of males in this study had consumed alcohol and males consumed alcohol significantly more frequently in the last month which may also partially explain some of the gender differences in condom use. A third possible explanation for these findings is that males underreported the consistency of their condom use. It has been reported that male South Africans experience frequent peer pressure

discouraging the use of condoms (MacPhail and Campbell, 2001). In this study, male reporting of condom use may have been influenced by a social desirability bias. Although self-report data is always subject to potential response bias, considerable care was taken to reduce the likelihood that social desirability would bias reporting (see *Method*).

Young South African women are often objects of coerced sexual encounters in which their behaviour is constrained by unequal social constructions of gender roles in the expression of sexual power (Jewkes and Abrahams, 2002; Jewkes, Levin, and Penn-Kekana, 2003). Female participants in this study were significantly more likely than males to report having had sex as a result of being forced and in exchange for gifts/goods. The ability of females to successfully negotiate condom use under coercive circumstances is likely to be compromised, and thus exposes them to increased risk of HIV infection. It is widely acknowledged that efforts to reduce the incidence of HIV infection in Sub-Saharan Africa should focus on reformulating the extent to which males endorse and act upon unequal gender roles in sexual relationships (Jackson, 2002; Jewkes and Abrahams, 2002; Eaton et al., 2003). The results of this study support this and suggest that the modification of gender roles as a potential mediator of HIV infection warrants further study among school-attending adolescents in this and similar communities.

It is well documented that the presence of an STI significantly increases one's probability of contracting HIV per coital exposure. Furthermore, HIV-positive individuals suffering from a co-occurring STI are significantly more likely to transmit HIV infection to others (Auvert et al., 2001; Dallabetta, Serwadda, and Mugrditchian, 1999; Gray et al., 2001; Jackson, 2002). Overall, 34% of participants reported symptoms of an STI in the last 12 months. Females were significantly more likely than males to experience these symptoms. This high prevalence of recent STI symptoms within the context of infrequent condom use suggests that attempts to reduce HIV transmission within this community should include early detection and treatment of STIs.

The disproportionate number of females reporting symptoms of an STI is an interesting finding given that females reported more frequent lifetime condom use and reports of condom use at last sexual encounter did not differ significantly between genders. As a biological explanation for this, it has been reported that many STIs are more efficiently transmitted from males to females during sex with an infected partner (Wong et al., 2004). This may account for the differential distribution of STI symptoms, but this difference may also be related to circumstances of sexual activity. For example, a greater number of females in this sample reported having sex in exchange for gifts/goods, as a result of being threatened, and as a result of physical force. Females engaging in sex under these circumstances may be unable to successfully negotiate the use of condoms or the physical nature of the sexual experience (Eaton et al., 2003; Jewkes and Abrahams, 2002). This may increase the possibility of fluid/blood exposure through unprotected sex and possible rupturing of the vaginal lining if the sex act were to occur under physically adverse conditions.

Prevalence and Correlates of Risky Sexual Behaviour

Seventy-one percent of the adolescents participating in this study were sexually active. This proportion is higher than has been previously reported in much of the South African literature (Peltzer and Promtussanon, 2005; Pettifor, Rees et al., 2004; Shisana and Simbayi, 2002), but is similar to Auvert et al.'s (2001) study of township youth in which 68% of participants aged 15-19 were sexually active. As previously stated, early sexual debut is a significant predictor of HIV risk, as well as an increased risk profile such as more lifetime partners and less frequent school completion. This suggests that efforts to delay sexual initiation should receive a prominent focus in HIV prevention interventions.

Forty-seven percent of the sexually active participants reported two or more sexual partners in

the last 12 months. This is especially dangerous as sexual activity in this sample occurs within the context of infrequent condom use. A recent study suggested that concurrent sexual partnerships vs. serial monogamy, as is generally found in the West, was partially responsible for the disproportionate prevalence of HIV in sub-Saharan Africa (Halperin and Epstein, 2004). It was hypothesised that if an individual is involved in a network of sexual relationships and becomes infected with HIV, he/she will also be more likely to infect others within this network due to increased infectivity resulting from a higher viral load during the initial weeks of infection.

It has been reported that South African young people are unlikely to have been tested for HIV (Pettifor, Rees et al., 2004). Only 24% of this sample had ever been tested for HIV. This suggests that adolescents in this study may be engaging in unprotected sex with multiple sex partners without knowing their (and likely their partners') HIV status, thus placing them at particularly high risk of HIV transmission.

Bivariate analyses (see table 4) revealed that participants who had been tested for HIV were significantly more likely to be sexually active and to have multiple sexual partners in the last 12 months. This is a point of some encouragement as it seems to suggest that some participants may have internalised the link between sexual behaviour and possible HIV transmission. Unfortunately, however, there is no indication that this has translated into safer sexual practices (e.g. frequent condom use).

Participants reporting that they had discussed HIV with their parents or guardians were significantly less likely to have been sexually active or to have had multiple sexual partners in the last 12 months in comparison to those who had not. Previous research has reported positive outcomes associated with parent-child communication about sexual issues, including HIV. In a recent literature review, Miller and Benson (2001) reported that open communication about sexual activity was associated with not having sex, the delay of sexual debut, and having fewer sexual partners. The relationship between parent-child communication and the use of contraceptives appears to be less robust, and studies reviewed by Miller and Benson presented mixed results. This may explain why this study found no relationship between having discussed HIV with parents and the regular use of condoms. These results suggest that HIV prevention programmes may need to consider the context of parent-child communication as a potential mediator of risky sexual behaviour.

It is widely believed that perceived risk of contracting HIV is inversely related to the tendency to engage in risky sexual behaviour. A number of theoretical models applied to HIV risk reduction incorporate the construct of perceived risk/susceptibility, to varying degrees, as a key component of positive behavioural change, including the Health Belief Model (Rosenstock et al., 1994), Social Cognitive Theory (Bandura, 1994), the AIDS Risk Reduction Model (Catania et al., 1990), and the IMB model (Fisher and Fisher, 1992). Participants in this study who reported high perceived risk of HIV contraction were significantly more likely to frequently use condoms than those who reported moderate or low risk. This appears to support the hypothesis that perceived risk is inversely related to at least some forms of risky sexual behaviour. However, those who perceived themselves to be at high risk of contracting HIV were significantly less likely to frequently use condoms than those who perceived themselves to be at no risk at all. At first glance this latter finding may seem counterintuitive; however it may be that those who frequently used condoms were more likely to perceive themselves as experiencing no risk of contracting HIV as a result of this behaviour. Again, this provides some encouragement, as it suggests the possibility that some of the participants in this study may have successfully internalised the link between unprotected sexual intercourse and HIV transmission, and that this internalisation has translated into the adoption of safer sexual practices.

Previous South African studies have revealed that young South Africans are exposed to pervasive social pressures influencing their sexual behaviour (MacPhail and Campbell, 2001; Wood et al., 1996). Fisher et al. (1992) suggest that adolescent peer pressure and norms generally

encourage risky sexual behaviour and discourage concerns about sexual health. This study found that participants reporting high levels of peer pressure to have sex were significantly less likely to frequently use condoms than those reporting some, little or no pressure. Although this item did not directly refer to condom use, it seems unlikely that sustained pressure from peers to have sex would occur within a context that was supportive of safer sexual behaviour. This is especially the case in South Africa where peer norms discouraging condom use are especially pervasive (MacPhail and Cambell, 2001). Efforts to combat the spread of HIV within this community would likely benefit from an analysis and reformulation of dominant peer norms and pressures regarding sex and healthy sexual practices.

Participants who reported discussing condoms with their first sexual partner were significantly more likely to report frequent lifetime condom use. Discussion of condom use with one's partner has been shown to predict actual condom use with that partner (Adetunji and Meekers, 2001). Individuals who discuss condoms with sexual partners are likely to be more concerned about sexual health risks and motivated to engage in behaviour that may serve to protect them against those risks. Factors hindering condom use in South Africa have been well studied. These are often related to peer pressure and gender imbalances in the expression of sexual power (MacPhail and Campbell, 2001). This study suggests that those individuals who are motivated to discuss condom use at the time of sexual debut may be able to maintain this motivation in the presence of persistent countervailing peer pressures and gender norms.

This study identified a number of statistically significant associations between substance use variables and HIV risk variables. These data indicate that alcohol consumption and drug use are strongly associated with the tendency to engage in high-risk sexual behaviour in this sample. These findings are supported by previous studies indicating that drug and alcohol use are positively associated with risky sexual behaviour (Graves and Leigh, 1995; Lowry et al. 1994; Thompson et al., 2005). Indeed, 47% of the participants in this study who had consumed alcohol other than for religious purposes reported either that they believed that they could not or probably could not use a condom during sex after drinking or taking drugs.

However, rather than interpreting these findings in the context of substance use as a causal factor, it is plausible that some substance use and forms of risky sexual behaviour are linked to common personality traits. For example, Zuckerman (1994) defined *sensation-seeking* as a biosocial personality trait manifesting itself as:

...the seeking of varied, novel, complex, and intense sensations and experiences and the willingness to take physical, social, legal, and financial risks for the sake of such experience. (27)

It is possible that the tendency to engage in risky sexual behaviour is at least partially the product of the disinhibitive effects associated with substance use (Seloilwe, 2005), as well as other factors including sensation-seeking and risk-taking behavioural tendencies (Leigh and Morrison, 1991). This dynamic has not been explored among school-attending adolescents in South African townships and warrants further attention to identify potential discrete and interactional associations with HIV-related risk behaviours among youth in this community.

Limitations

The present study provides new information relating to the HIV-related knowledge, attitudes, beliefs, and practices of school-attending adolescents in Khayelitsha. However, there are a number of important limitations that should be considered when interpreting these results. This was a cross-sectional study design and does not allow causal or temporal inferences to be made when interpreting the findings. This study was based on self-report data which introduces the possibility that participants responded in a socially desirable manner. However, a substantial number of precautions were taken to minimise potential response bias. This was a study of

school-attending adolescents and certain high-risk groups may have been excluded from analysis. Whilst this is a shortcoming, this population was selected as the school setting offers a promising avenue of promoting HIV-preventive practices among large groups of high-risk adolescents. The relatively small sample size was also a limitation as it could compromise external validity. As this was a small pilot study, the purpose of which was to provide initial data on a unique population which would likely be followed by a much larger randomised cluster study, only basic statistical analyses were employed. This introduces the possibility that some findings may have been confounded by other variables not controlled for through more sophisticated statistical analyses, thus findings should be interpreted with caution. Additionally, although schools were randomly selected, participants were members of a convenience sample. This limits the generalisability of the findings as the sample was not entirely representative. For example, students who chose not to volunteer, or who were absent during the days of the study may have been systematically different from those who took part. However, the impact of this may be of lesser consequence in this study for two reasons: the number of participants in each class represented the majority of potential participants based on class number, and no significant differences were found on key variables between schools, indicating a lack of systematic difference in response patterns between independent samples. Despite these limitations, this study highlights the elevated risk of HIV infection among participants and could serve to inform the development and implementation of HIV prevention interventions in this community.

Conclusion

This study reveals many things: important deficiencies in HIV-related knowledge; frequent unprotected sex with multiple sexual partners; high prevalence of STIs; significant gender differences in HIV-related risk; and risk and protective factors among school-attending adolescents in a South African township. Many of the risk behaviours reported in this study appear to occur more frequently in this sample than among youth participating in larger-scale studies encompassing multiple localities. This suggests caution against the over-reliance on data relating to socioculturally dissimilar groups in South Africa. Given the frequency of risk behaviours in an area with antenatal HIV prevalence of 33% (SANAC, 2007), culturally appropriate HIV prevention interventions are urgently needed to help reduce the incidence of HIV infection in this and similar communities. There have been few studies of HIV risk and protective factors among school-attending adolescents in townships in the Western Cape. This study adds to the knowledge base pertaining to the specific needs of this demographic and is of particular relevance to the field of behavioural HIV prevention as the school context provides an already intact infrastructure capable of supporting the delivery of interventions to large groups of young people at risk of HIV transmission.

It is necessary that these findings be viewed within a social epidemiological framework. This paper has highlighted the importance of extra-individual factors that may affect individual behaviour in the context of HIV. For example, the reformulation of sociosexual norms in South Africa is of paramount importance in reducing the disparity of HIV prevalence between sexes. Empowering females to contribute financially or remain self-sufficient through microeconomic finance or entrepreneurship programmes may help reduce gender oppression and patriarchal views towards sexual relationships. On a more structural level, the role of poverty in perpetuating the HIV pandemic for both males and females has been established, and should suggest the need for multiple levels of intervention in areas that have been historically disadvantaged in order to attenuate the negative health outcomes associated with poverty and underdevelopment. A more prominent focus on substance use should be incorporated into interventions, as well as more critical study of the underlying mechanisms that may lead to substance use. Finally, this study should lay the foundation for more robust tests of risk and protective factors in South African townships which could potentially lead to randomised controlled trials more capable of achieving

their intended results.

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The Changing Medical Regulatory Context: Focusing on Doctor's Educational Practices

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ABSTRACT

This paper outlines contemporary developments in the regulation of the medical profession in the United Kingdom. It discusses how recent reforms in medical regulation illustrate that the state has responded to calls to reform medical governance so it is more open, transparent and publicly accountable by subjecting rank and file doctors and their elite governing institutions to a rationalistic-bureaucratic discourse of standard setting and performance appraisal. It argues for the need for social scientists to assess the impact of this development by conducting research into how doctors keep themselves up to date and 'fit to practice' in their chosen medical specialty.

Key words

Governmentality, medical profession, medical regulation, revalidation

Introduction

With two hundred and fifteen known victims the general practitioner from Hyde in Manchester, Dr Harold Shipman, was one of the most prolific serial killers the United Kingdom has produced. Without a doubt the Shipman case possesses a great deal of notoriety precisely because he was a doctor and so a member of a profession which has publicly avowed to use its not inconsiderable expertise to do what it can to preserve life and promote public health (Gladstone, 2000).

In her subsequent independent public review of the Shipman case Dame Janet Smith (2005) was highly critical of current institutional arrangements designed to ensure doctors remain 'fit to practice' in their chosen specialty, as well as what she considered to be an elitist and 'closed shop' mentality concerning the regulation of doctors. Her report made it clear that something needed to be done to change the organisation and culture surrounding medical governance in the United Kingdom. This paper documents governmental reforms which have been introduced in light of the Shipman case to ensure that the general public is protected from underperforming and errant doctors. In doing so it highlights a currently under-researched area for empirical inquiry on behalf of social scientists.

Regulating medicine: the impact of the political re-emergence of liberalism

Before outlining current developments in the regulation of doctors it would be useful to begin by tracing the historical development of medical governance in the United Kingdom. Until relatively recently the medical profession in the United Kingdom was regulated by a single institution - the General Medical Council (GMC). The GMC was established by the 1858 Medical Act. Historically it has been dominated by a mixture of elected 'in house' members of the medical profession (Gray and Harrison, 2004). It is only in the last three decades that non-medical GMC 'lay members' have begun to make their presence felt, and even then they have remained in the minority (Elston, 2004).

The GMC's responsibilities are essentially twofold: to maintain a register of qualified medical practitioners and to define the nature of the qualifications necessary to obtain registration. The 1858 Medical Act is often held to be a landmark in the governance of medical training and regulation in the United Kingdom as its enactment entered medicine into a regulatory agreement with the state (Stacey, 1992). Medicine and its practitioners gained the privilege of professional

self-regulation in return for promising the public they could trust the competence of registered medical practitioners (Allsop and Saks, 2002).

Through its control of the GMC for 150 years the medical profession possessed an occupational monopoly over its members' training, discipline and practice. Other professions such as law have similar monopolistic control over entry into and exit from state registers of qualified practitioners (Gladstone, 2000). But the governance of professional forms of expertise has gradually changed over the last three decades (Freidson, 2001). The 1970s saw the renewal of liberalism as an economic and political ideology, with its emphasis on enterprise and individualism, advocacy of 'rolling back the state', and belief in the ability of the discipline of the market to promote consumer choice, improve service quality and minimise risk (Clarke, 2004). The neo-liberalism of Margaret Thatcher's conservative government of 1979 possessed an ideological allegiance to the 'invisible hand' of eighteenth century 'free market' classical liberalism, which in turn led it to possess an overriding concern for the '3 Es' - economy, efficiency and effectiveness (Rhodes, 1994).

Nikolas Rose (1996) argues that during the nineteenth and twentieth centuries the increasingly rational, experimental and scientific basis of modern forms of expertise led to them becoming integral to the exercise of political authority. So much so that experts such as doctors gained:

...the capacity to generate 'enclosures', relatively bounded locales or fields of judgement within which their authority [was] concentrated, intensified and rendered difficult to countermand (Rose, 1996: 50).

However, as a result of the re-emergence of liberalism, these enclosures have been 'penetrated by a range of new techniques for exercising critical scrutiny over authority – budget disciplines, accountancy and audit being the three most salient' (ibid.: 54).

Rose (1996, 1999) emphasises the enormous impact of the trend in all spheres of contemporary social life towards audit in all its guises, but particularly for judging the activities of experts. The promotion of the enterprise culture of neo-liberalism involves the creation of processes where subjects and their activities are 'reconceptualised along economic lines' (Rose, 1999: 141). Similarly, Gordon (1991: 43) argues that entrepreneurial forms of governance rely on contractualisation as they seek 'the progressive enlargement of the territory of economic theory by a series of redefinitions of its object'. That is, entrepreneurial forms of governance 're-imagine' the social sphere as a form of economic activity by contractually: reducing individual and institutional relationships, functions and activities to distinct units; assigning clear standards and lines of accountability for the efficient performance of these units; demanding individual actors assume active responsibility for meeting performance goals, primarily by using tools such as audit, performance appraisal and performance-related pay (du Guy, 1996).

Under liberal 'mentalities of rule' judgements and calculations are increasingly undertaken in economic cost-benefit terms, and in doing so give rise to what Lyotard (1984: 46) terms 'the performativity principle', whereby the performances of individual subjects and organisations serve as measures of productivity or output, or displays of 'quality' and the ability to successfully minimise risk, so 'an equation between wealth, efficacy and truth is thus established' (Lyotard 1984: 46). For example, Osborne (1993) discusses how, since the re-emergence of liberalism, there has been a gradual reformulation of health care policy and practice, so that 'the field of medicine' is more than ever before simultaneously both governed and self-governing. A key part of this process is the subjection of the activities of medical practitioners to an additional layer of management and new formal 'calculative regimes' (Rose and Miller, 1992), such as performance indicators, competency frameworks and indicative budget targets (Rose, 1993). Certainly, in spite of being highly critical of their conservative predecessors, New Labour has introduced a raft of reforms which have placed doctors under greater surveillance than ever before and in doing so

have challenged traditional clinical freedoms (Slater, 2007). Under the guise of treating 'patients as equal partners in the decision-making process' (Department of Health, 2000: 2) New Labour has introduced a comprehensive, management-led system of clinical governance into the NHS, designed to set and monitor standards governing health care delivery (Department of Health, 1998).

Brian Slater (2001) believes that New Labour have utilised a:

...rationalistic bureaucratic discourse of regulation which reveals itself through increasingly extensive rule systems, the scientific measurement of objective standards, and the minimisation of the scope of human error. Behind it lies a faith in the efficacy of surveillance as a directive force in human affairs. (874)

This new rationalistic-bureaucratic discourse, with its focus on the surveillance and economic management of risk through standard setting, transparent performance monitoring and appraisal, has presented a significant challenge to the principle of clinical freedom 'at the bedside' (Waring, 2007). As Stephen Harrison has argued, there seems to be a feeling of disquiet within the medical profession with what is ultimately seen to be a politically motivated and unrealistic tendency on the part of government to seek to economise and minimise clinical risk by turning medical work into a series of routine 'step by step' rules and procedures against which a clinicians' performance can be measured (Harrison, 2004). For many doctors this approach fails to recognise the importance of the tacit and personal dimensions of medical expertise and the inherent risks present in messy 'real world' clinical practice situations (Bruce, 2007). Certainly, many would argue that these situations are decidedly different from the sanitised world assumed by clinical guidelines and protocols (Black, 2002).

Yet even the most ardent supporter of a doctor's rights to clinical freedom has to acknowledge that a seemingly ever growing number of high profile medical malpractice cases have served to further legitimatise arguments for the need for state intervention to reform medical regulation (Allsop, 2006). History shows that medical elites such as the British Medical Association have until relatively recently refused to acknowledge the need to change. Additionally the medically dominated GMC has been representing doctors, not regulating them (Stacey, 2000). Consequently the GMC is perceived by many to be failing as a regulatory body in its statutory duty to protect the general public (Gladstone, 2000). For example, in the final report of her review of the Shipman case Smith (2005) echoed the opinion of many an impartial observer when she argued that although the GMC had changed in recent times it had not changed enough:

I would like to believe that the GMC's working culture would continue to change in the right direction by virtue of its own momentum. However, I do not feel confident it will do so. I am sure there are many people within the GMC, both members and staff, who want to see the regulation of the medical profession based upon the principles of 'patient centred' medicine and public protection. The problem seems to be that, when specific issues arise, opposing views are taken, and as in the past, the balance sometimes tips in the interests of doctors. (1176)

Medicine's 'new professionalism' and current reforms to medical governance

It can be argued that the last three decades have seen the emergence of a cultural shift away from emphasising 'professional autonomy' and towards 'professional accountability' (Davies, 2004). A mixture of neo-liberal market imperatives and growing calls for state intervention to minimise public exposure to clinical risk, have together led successive conservative and New Labour governments to act to 'open up' the previously 'closed shop' field of professional regulation (Kuhlmann, 2006). More than ever before there is inter-professional co-operation and managerial and lay involvement in the regulation of professional expertise within the health and social care

arena (Davies, 2004). The changing political climate surrounding the regulation of professional forms of expertise has in turn required doctors to accept the need to adopt more open, transparent and inclusive governing regimes, which furthermore rely upon a risk-focused best-evidenced approach to medical governance (Searle, 2000; Catto, 2006).

To ensure their own 'fitness for purpose' the GMC must possess clear standards that can be operationalised into performance outcomes against which the 'fitness to practice' of members of the profession can be regularly checked (Irvine, 2003). This has led to the emergence of a 'new medical professionalism', sometimes called 'professionally-led' regulation, as doctors have sought to adapt to changing circumstance whilst simultaneously seeking to maintain the principle of self-regulation, albeit in a new, more publicly accountable form (Irvine, 2006). As the ex-chairman of the GMC Sir Donald Irvine (2001: 1808) notes, 'the essence of the new professionalism is clear professional standards'. Consequently the GMC's disciplinary procedures have been overhauled and independent investigation has revealed that

...there has been a distinct shift in disciplinary proceedings towards protecting patients and a 'repudiation' of...closed ranks, self-interested regulation. Fraud, dishonesty or the abuse of a privileged position is also treated harshly (Allsop, 2006: 631).

Simultaneously the GMC has enforced a move towards a competence-focused, outcome-based approach to medical training and career progression by means of formal appraisal (Black, 2002). Such moves signal the beginning of proactive surveillance, inspection and control of the programme of delivery of medical training at undergraduate, postgraduate and continuing levels (Stacey, 2000).

The advocacy of a 'new professionalism' is undoubtedly an attempt to establish a new contractual relationship between the medical profession and the general public against the background of increasing government intervention into the field of medical regulation (Slater, 2007). But such developments should not be regarded with cynicism by critical observers. It is not simply a straightforward situation where medical elites are seeking to maintain collective self-regulatory privileges at all costs. Contemporary challenges to self-regulatory privileges have brought to the foreground the fact that the principle of medical self-regulation was first institutionalised in the form of the GMC as it provided a workable solution to the complex problem of 'how to [both] nurture and control occupations with complex, esoteric knowledge and skill...which provide us with critical personal services' (Freidson, 2001: 22). Given the specialist nature of medical expertise it can be argued that the principle of professional self-regulation is justifiable; it is particular instances where individuals have abused their position that are not. Professionals must now admit to previous errors and misdemeanours and work with patient representative groups and other health and social care professionals to make sure such abuses do not happen again (Irvine, 2006).

Furthermore, reforms which have been introduced as a result of high profile malpractice cases such as the Bristol Royal Infirmary scandal¹ have reinforced the fact that effective medical regulation, like the effective delivery of health care, requires the co-operation and proactive

¹ The Royal Bristol Infirmary case came to light in 1998, after 29 babies had died during a cardiac operation, a mortality rate far higher than expected. Three individuals were involved in the case, accused of unprofessional practice - Mr James Wisheart, Dr John Roylance and Dr Janardan Dhasmana. Following a public inquiry Wisheart and Roylance were banned by the GMC, while Dhasmana was suspended. The resulting Kennedy Report led to the establishment of Clinical Governance frameworks within the NHS. The GMC president at the time - Sir Donald Irvine - provides an insightful account of the effect of the Bristol case on medical regulation in his book *The Doctors' Tale: Professionalism and Public Trust*.

involvement of medicine's elite institutions (Gray and Harrison, 2004). Yet the reality is that cases such as Bristol and Shipman have reinforced that doctors can no longer be left alone to manage their own affairs (Stacey, 2000). For example, during his trial it was uncovered that Shipman had previously been before the GMC's disciplinary committee in 1976 for dishonestly obtaining drugs and forging NHS prescriptions. He had been dealt with leniently and essentially 'let off' with a warning. However, if he had been dealt with differently at the time he would not have been free to work unsupervised and kill so many of his patients, a reflection that led Smith (2005: 1174) to end her review of the Shipman case by stating she was 'driven to the conclusion that, for the majority of GMC members, the old culture of protecting the interests of doctors lingers on'.

In her report Smith (2005) discussed how the elected nature of medical members on the GMC made the central issue of protecting the interests of the public difficult for members. She noted that

...it seems....that one of the fundamental problems facing the GMC is the perception, shared by many doctors, that it is supposed to be 'representing' them. It is not, it is regulating them....In fact the medical profession has a very effective representative body in the BMA, it does not need – and should not have – two (1176).

Her recommendation was that the makeup of the GMC be changed so that elected members were replaced with nominated members. These were to be selected after a period of 'open competition' on the basis of a candidate's ability to serve the public interest. Smith also highlighted key lessons which needed to be taken on board by NHS management and the medical profession in relation to topics such as the checking of death certificates, scrutiny of single-handed GP practices and the monitoring of death rates and medical records within Primary Care Trusts. There can be no doubt that the Shipman case highlighted the fact that medicine's 'new professionalism' was not in itself enough to protect the general public. It was clear that measures needed to be introduced to ensure that each and every doctor in the United Kingdom is 'fit to practice' and medicine's regulatory institutions are similarly 'fit for purpose'. As the then Secretary of State Alan Milburn made it clear at the time,

...the GMC...must be truly accountable and it must be guided at all times by the welfare and safety of patients. We owe it to the relatives of Shipman's victims to prevent a repetition of what happened in Hyde (quoted in Gladstone 2000: 10).

In 2007 the Health and Social Care White Paper was announced (The Secretary of State for Health, 2007). The Health and Social Care Act came into being in 2008. This contained two key reforms in relation to the regulation of the medical profession. First, the GMC will undergo an overhaul, its current membership reduced from thirty-five to twelve, all of whom will be elected independently. Six of these twelve members will be non-medical lay members. For the first time there is the possibility of a non-medical GMC president, although it is open to debate if, in practice, the wider medical profession will accept a non-medical GMC president (Catto, 2006). Furthermore, the GMC is to lose its power to adjudicate on fitness-to-practice cases, which will now be considered by an independent body. Such cases will now be judged on a civil standard of proof - on the balance of probability. At present, they are based on the criminal standard - beyond all reasonable doubt, a situation that has frequently led sociologists to argue that the GMC's disciplinary procedures have first and foremost protected underperforming doctors instead of members of the general public (Stacey, 1992, Allsop, 2006). The GMC is then left to concentrate on investigating complaints against doctors, but will not be responsible for deciding on relevant sanctions. Additionally, what is to be known as a 'GMC affiliate' will be embedded within local NHS accountability structures. This affiliate's remit includes co-ordinating the investigation of

complaints at a local NHS trust level.

This leads to the second key part of the current reform agenda, namely that the affiliate will work with medical educators concerning the arrangements for ensuring that every doctor is 'fit to practice' in their chosen specialty. Known as revalidation, this process consists of two elements - relicensing and specialist recertification (Donaldson, 2006). Relicensing embeds medical regulation within the government's clinical governance agenda. Doctors currently have to undergo an annual check of their performance, known as annual appraisal, as part of their NHS employment contract (Black, 2002). Smith (2005: 1048) strongly felt that the current appraisal system would not have identified Shipman and does 'not offer the public protection from underperforming doctors'. Under the new proposals appraisal will still occur annually, however it will be significantly strengthened, with greater direct testing of a doctor's competence in regards to the completion of key day-to-day work tasks. All doctors will now have to pass the relicensing requirement that they have successfully completed five annual appraisals in order to stay on the medical register (The Secretary of State for Health, 2007). Specialist recertification is new and, like recertification, will occur every five years. It will involve a thorough 'hands on' assessment of a doctor's 'fitness to practice' in their chosen medical specialty (Donaldson, 2008). It is expected that a mixture of clinical audit, direct observation, simulated tests, knowledge tests, patient feedback and continuing professional development activities, will together ensure specialist recertification. Both the relicensing and specialist recertification elements of the revalidation process are now being piloted, with a view to their being formally introducing nationally from late 2010 onwards.

Highlighting new research avenues

The developments outlined in this paper make it clear that we now are witnessing the beginning of a significant and far reaching period of change in the regulation of medical expertise whose full effects will, in all likelihood, not be known for at least another generation. This provides an opportune moment for social scientists to reflect on existing sociological literature concerning medical autonomy in order to establish areas for empirical research and theoretical development.

The sociological study of medical autonomy has conceptualised recent developments in medical governance and practice under the banner of the respective proletarianisation, deprofessionalisation and restratification theses (Elston, 2004). The deprofessionalisation thesis focuses on topics that indicate that there has been a decline in the public's trust of medicine and on the threat this poses to the principle of professional self-regulation (Elston, 1991). The growth of media coverage of gross medical malpractice cases such as Shipman is a good example. The deprofessionalisation thesis focuses upon the fact that attitudes to traditional forms of authority are changing and highlights that the public increasingly expects their governing institutions to operate in a transparent and accountable manner. In contrast, the proletarianisation thesis highlights the existence of the potential for expert work in general, and medical work in particular, to become subject to rationalisation and routinisation. It focuses upon how this causes medical work to become subject to managerial bureaucratic control in the name of controlling costs, minimising risk and promoting consumer choice (Elston, 2004). Finally, the restratification thesis acknowledges that changes have occurred in medicine's relationship with the general public, and that this is probably due to medical knowledge and expertise expanding and becoming formalised into 'step by step' rules and procedures, particularly with the advent of computer technology and the information and communication revolutions. However, instead of charting the possible negative consequences of this situation in terms of doctors' individual and collective perceptions of their diminishing clinical freedoms 'at the front line', the restratification thesis focuses upon how the medical profession is becoming 'restratified' into more pronounced 'elite' and 'rank and file' roles (Freidson, 2001). Here it seeks to chart the consequences of the rise of a medical administrative elite, grouped around 'the academy' and royal colleges, and

charged with standardising the everyday clinical decisions of rank and file doctors (Kitchener, 2000). This elite uses devices such as evidence-based medicine and ‘formalised tools such as audits, clinical guidelines and protocols’ (Armstrong, 2002: 1772). Consequently the restratification thesis focuses upon developments such as the growth of co-opted medically qualified managers who are charged with controlling the surveillance and evaluation of medical work. The key question it seeks to answer is whether these new developments protect the general public whilst also maintaining collective self-regulatory privileges in a new form (Harrison 2004)?

It is undoubtedly the case that the proletarianisation, deprofessionalisation and restratification theses possess a great deal of analytical value (Elston, 1991). However, systematic supportive empirical data remains sparse (Coburn and Willis, 2000). Published academic research tends to focus upon reforms in the health care system affecting the ways in which clinical judgements are made, with too little attention given to the key role played by who controls the process and quality control of medical education in ensuring the continued legitimacy of broader occupational control over regulatory arrangements (Ahmad and Harrison, 2000, Sheaff et al., 2004). Yet the ‘shoring up’ of professional training due to the presence of external threats to occupational control over self-regulatory privileges logically forms an important part of the restratification thesis (Elston, 2004). It certainly would be reasonable to assume that elite members within professional groups will attempt to retain control of the use and interpretation of their specialist knowledge through submitting rank and file members to formalistic methods of surveillance and control within the educational as well as the everyday practice context (Waring, 2007). Consequently, current developments such as the introduction of revalidation serve to reinforce the need to undertake a dedicated research programme into doctors’ educational practices, in order to obtain a clearer and more rounded picture of the full impact of the current regulatory reform agenda. This process may have started over the last decade with social scientists increasingly being ‘invited in’ to conduct research into medical curricula as a result of recent reforms in undergraduate medical education (e.g. Gray and Harrison, 2004). However, arguably, more far-reaching and sustained access is needed to enable social scientists to make a thorough and theoretically informed evaluation of the short and long term effects of the current regulatory reform agenda upon medical autonomy.

In conclusion, recent reforms to medical governance highlight the fact that social scientists are perhaps guilty of paying too little attention to doctors’ educational activities, particularly how they keep themselves up to date and ‘fit to practice’ in their chosen specialty. Yet they also provide an opportunity to rectify this situation. There is a clear need to analyse changes in the nature and extent of the educational autonomy possessed by rank and file medical practitioners through undertaking a detailed and close examination of the implementation of revalidation and concurrent reforms to NHS appraisal. This will help to develop a clearer picture of what the future may bring in regard to how the experts who provide us with much valued public services can be regulated to ensure the welfare of the general public. Perhaps most importantly it may also mean that another Shipman will not be allowed to creep through the cracks.

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Exploring the role of discourse in undergraduate medical training

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ABSTRACT

Background

Medical education has traditionally adopted a structuralist approach towards curriculum design without considering the underlying values and discourses of its many stakeholder groups. It has been suggested by some that such underlying *discourses* may ultimately be the most influential force in driving educational development, as opposed to the way in which such a system is organised. In this study we used aspects of discourse analysis to identify the discourses operating amongst medical students regarding their training at Sheffield University. We then explored how these discourses have influenced curriculum development as well as the relationships that students have with their trainers.

Methodology

We explored and analysed the talk and text of medical students at the University of Sheffield to interpret features of the undergraduate curriculum important in shaping students' views of their training, and to explore the nature of the student-teacher relationship. Three hundred and fifteen text comments relating to curriculum issues were sampled from an online learning community and ten face-to-face interviews were conducted. These comments and interviews were then coded to identify common themes. This process allowed the researcher to explore the students' discourse regarding their training under a series of related themes, and identify how these influenced the relationship with their trainers.

Results and conclusions

Our analysis identified several themes including disempowerment through communication, preparation for practice, appraisal of performance and role modelling. The data highlighted a number of conflicting and contrasting elements that merit further in-depth study.

As part of our analysis we also explored the ways in which these themes compared and contrasted with the values and tenets of undergraduate medical training in the wider context. This was achieved through an examination of undergraduate medical education mission statements. Despite our findings being far from an in-depth analysis of the discourses that truly shape undergraduate medical training, both in terms of the breadth of stakeholders involved and the depth of analysis across different locations, they provide a useful insight into the subject. Further studies should explore these issues in more depth. Our findings may provide the beginnings of an alternative approach to educational development - one which is based upon a framework for understanding the operation of discourse and ideology as opposed to the potentially power-laden structuralist approaches of the past.

Introduction

Medical education has traditionally embraced structuralist approaches to curriculum development (Collins, 1986). In these systems, training directives are distributed in a 'top-down' fashion from governments, teaching unions and organisations, media and employers to school academic committees and faculties. It has been suggested by some, however, that the discourse of those that influence change may provide greater insight into educational development than a structural model alone (Popkewitz, 1991).

Defining discourse

Discourse analysis, in its broadest sense, is a term that encompasses a number of methodological approaches to the interpretation of language. However, discourse itself can be defined in various ways. Some authors consider discourse and text to be separate entities; with the former referring to verbal language forms and the latter to those of written language. Others, however, do away with such a distinction, considering discourse to encompass all forms of spoken and written language as social practice. Furthermore, Fairclough (1993) extends this to include other practices such as gesturing, pictorial images and body-language. Discourse has also been described by some as a 'count-noun' that brings about a set of ideological values and social practices (Wood and Kroger, 2000). Whilst in this study we consider our approach to be one which includes discourse as both written and spoken text, the reader should be aware that this is only one interpretation of a multi-dimensional concept.

Varieties of discourse analysis and key theorists

The rather varied definitions of discourse analysis very much reflect the range of disciplines that have taken up its practice. Although discourse analysis predominantly stems from work within linguistics, philosophy and discursive and cognitive psychology (Schiffrin, 1994); a number of other fields have drawn upon it. These include ethnography, media studies, communication, education, sociology, information technology, medicine, law and anthropology. Whilst a detailed description of the different varieties of discourse is beyond the remit of this paper, a brief introduction would help set the scene.

Fairclough (1993) suggests that a major distinction in discourse analysis lies between work which analyses texts in detail and that which does not. He suggests that the former often pays greater attention to the linguistic features of texts but doesn't engage with wider social issues, and the latter vice-versa. Whilst perhaps an oversimplification, this dichotomy captures the essence of the major differences between two commonly-adopted approaches to discourse analysis found within the research literature; namely conversational analysis (Schegloff, 1989) and critical discourse analysis (Van Dijk, 1997).

Conversation analysts have traditionally focussed on the dynamics of language use and interaction, and the practice has often been considered as the most micro-analytic variety of discourse analysis. It looks at the organisation of talk and how this constitutes meaningful action, such as 'turn-taking' (Schegloff, 2007). Critical discourse analysts have concentrated particularly on how discourse positions subjects in terms of social practice. A multi-dimensional approach is adopted through the analysis of spoken and written texts; analysis of processes of text creation; and analysis of discourse as social practice (Fairclough, 1995). Furthermore, it also considers how discourse creates particular forms of knowledge and may constitute identity. Various social theorists, including in particular Michel Foucault, have informed the practice of critical discourse analysis, introducing the notion of ideology as a form of power within social practice (Foucault, 1979). Whilst the above may reflect the more extreme poles of the discourse analytic spectrum, other approaches have informed the development of discourse analysis as a research practice.

Discursive psychologists such as Wetherell and Potter have introduced the concept of interpretative repertoires which explore the beliefs and values that people draw on when using language (Wetherell and Potter, 1988). Pragmatics has also informed discourse analytic practice in terms of understanding not only how elements of language (words, grammar) convey meaning, but also understanding the influence of context, location, setting and the actors involved (Grice, 1989).

Discourse analysis as a methodology has been used by health researchers previously. Examples include the interpretation of modes of communication in gendered nursing identities, the political context of talk in nursing documentation, and a poststructuralist account of language that constructs individual illness experiences (Traynor, 2006). Other work has looked at how language constructs professional practice in the primary care environment and examines the 'rhetorical duel' between patients and healthcare practitioners in primary care settings (Roberts and Sarangi, 2005). In this study, we wished to use a theme-oriented approach to analyse discourse regarding students' experience of their training and medical school; and explore the concept of 'power' in the relationship that medical students have with their trainers.

Methodology

In this study, we wished to consider the talk and text of medical students as discourse, and how this constructed their experience of medical training. Furthermore, we wished to interpret their discourse to explore the notion of power within the relationship that students had with their teachers.

By way of overview; we drew upon aspects of discourse analysis to inform various stages of our study. Firstly, we developed an approach to categorise and analyse written and spoken discourse (text) produced by the social actors within this study. We felt this would provide the most useful means by which to explore discourse within the potentially large data sets that could be derived from the study. In addition, we felt this would be the most useful technique to serve our latter study aims. These included the adoption of a critical discourse analytic stance in considering the notion of power in the relationship that medical students have with their teachers, and also exploring the intertextuality of our obtained discourse. Thus, whilst this study cannot be considered as discourse analysis in its truest sense, we have drawn upon various theoretical strands to design our study.

The analysis of discourse

We explored the written and spoken text of medical students at the University of Sheffield to identify categories of discourse relating to their perceptions of their undergraduate training experience at Sheffield Medical School. The methodology used to code and analyse the data will be described later.

From a critical discourse analytic perspective, we then explored how these discourses may influence the relationships that medical students have amongst different groups within the medical profession (Gordon, 2000), focussing particularly on notions of power within the student-teacher relationship and how these may influence medical students' education.

Setting and data collection

The study was conducted in 2005-6 at Sheffield University Medical School. The discourse of medical students was explored through two avenues. The first was through internet-based conversation recorded within the discussion boards on 'Minerva' (Roberts et al, 2005), the Medical School's online Networked Learning Environment. This is a form of 'virtual community' where students can discuss issues with their peers and their teachers via the Internet.

Such communities have previously proved a rich source in understanding professionalism in medicine (Fox and Roberts, 1999), and allowed us to sample a broad range of student discourse regarding training issues from all years of the course. The second avenue was through in-depth interviews with ten different students at Sheffield Medical School. These individuals encompassed all of the Medical School committee representatives for each year of study. It was believed, therefore, that these individuals would have much exposure to issues relating to course and curriculum design; thus providing a rich source of data for the study. In these interviews, we captured discourse regarding the students' medical training and also explored the concept of power within the relationship with their trainers.

Whilst we were aware that these two pools of data may produce very different sets of discourses, we felt this was a risk worth taking in order to maximise the number of 'voices' represented within our data set so that it was as representative as possible of the large numbers of students within Sheffield Medical School.

Three hundred and fifteen messages were logged on Minerva relating to training issues from the beginning of the academic year in September 2005 to its end in June 2006. The students who had logged these messages were based in many different hospitals in the South Yorkshire area including Sheffield, Barnsley, Rotherham, Doncaster, Worksop, Chesterfield, Hull and Grimsby. Ten face-to-face individual interviews were conducted in late 2005. These ten individuals represented all of the student-year course representatives across the Medical School years (at the time there were two representatives for each of the five medical school years). Each interview was carried out as an open discussion (Silverman, 2000), as it has been suggested that such a format is more suitable for recreating a natural environment in which to capture discourse. The dialogue was tape-recorded. Material was transcribed using standard notation (Lofland, 1995).

The analysis of discourse within the *entire* dataset (Minerva postings and interviews) was conducted using a process of coding and analysis. This involved reading through the interview transcripts and comments gathered from Minerva postings and identifying common words, phrases and sentences within the text. These were collated into categories relating to curriculum issues. Further analysis involved an examination of coded material to explore the way in which language was used and meaning implied through stressed words and phrases, as well as non-verbal cues.

Exploring power issues and intertextuality

We took a critical analytical stance to explore how each of the themes identified in the study influenced the nature of the relationships between trainees and trainers. This exploratory stage of the study, as will become apparent later, was to some extent informed by Foucauldian notions of power relationships. Furthermore, we wished to consider the intertextuality of gathered data; and, if possible, compare and contrast our findings with discourse contained within other documents that pertain to the design and delivery of the undergraduate medical curriculum (Richardson, 2002). We hoped this would provide an avenue to allow the researchers to explore the extent to which the discourses held by medical students at Sheffield University compare to those of key stakeholders involved in designing the curriculum. However, much of the medical education literature in this area often does not consider the broader objectives of undergraduate medical education on a macro-level. Captured data is not considered from a constructionist perspective, and is often considered against location-specific findings from other studies. We decided that the most appropriate texts to compare our findings against were the mission statements for undergraduate medical education as a whole. For this reason, we analysed themes within *Tomorrow's Doctors* (General Medical Council, 1993). This is the 'gold standard' document upon which undergraduate medical education is based within the United Kingdom.

Ethical issues

All interviewees provided informed consent. Students who made comments on Minerva provided written informed consent for their material to be used in this study. The analysis was carried out anonymously within an ethical framework of research, and University approval was gained (Roberts et al, 2002).

Findings

Analysis of the dataset exposed much discourse relating to students' training experiences. The themes identified were those of communication, preparation for future practice, responsibility, feedback and role modelling. Extracts from the dataset are given to illustrate the analysis and textual data collected from the interviews has been transcribed using standard notation.

Communication

Discourse relating to the importance of communication in the curriculum focused upon the accessibility of staff; for instance the availability of more senior staff for discussion, as well as the opportunity to discuss ideas and feelings with peers. Much of the discourse suggested dissatisfaction with levels of support from medical teachers and Faculty. Indeed, interview material suggests some frustration with this process since students may be aware of the need for a solid knowledge base as a pre-requisite for their roles as newly qualified doctors, yet feel that they are prevented from gaining this.

We are being constantly told that we need to know our basic sciences before starting our clinical attachments, yet we are not being provided with the teaching to back that up. (Minerva 233)

If we don't have access to notes from lectures from our teachers it has a negative impact on our learning. This is especially true of content-rich lecture notes where we cannot be expected to copy AND listen to the lecture. (Minerva 165)

Much of the time I've spent here I've had trouble being able to talk to people and get information when I've needed it. I really hope it's not like this when I leave. (Minerva 55)

Eryeah. Well like if a lecture was cancelled, no-one ever knew about it, we were never told. All they [Faculty – implied] can do is be obstructive and criticise. (Interview 6)

Nevertheless, there was discourse relating to this theme which indicates that there are aspects of medical training which may empower students:

I like these Integrated Learning Activity things. They're active and we can take charge, but there's someone around to ask questions if we need it. They're a good chance for people to get to know each other and share ideas. (Minerva 284)

Examples such as this suggest that at least some elements of a self-directed but well supported approach to training may be well-accepted by the students.

Preparation for practice

The need to prepare for the future was another prominent theme, and was evident in students' recognition of the need for self-directed learning, adequate knowledge of core principles and the ability to problem-solve. The data suggest that students felt the course was deficient in providing them with the competencies that were required for the job of a new doctor. Much discourse relates to the necessity to be able to take the initiative for one's learning, but suggests a lack of

opportunities to do this. The first extract, for example, suggests that the student has doubts regarding the capacity of the course to prepare him for this role; it is his own volition and drive that has achieved this. The second extract however, may highlight a different interpretation of this with the student contemplating whether 'finding the knowledge yourself' is a good thing. It is possible that the student believes that they should not have had to find knowledge out to this extent and that more direction should have been provided, contrary to the self-directed notions implied in the other selected examples.

Err, ummm... Yes, but that's mainly because I've put a lot more effort myself into learning how to become a house officer. (Interview 1)

You've got to take the initiative, and quite often you have to make your own opportunities to learn, but I don't really feel the course itself prepares you to learn for yourself, and you need to have that to some extent. (Interview 3)

You have to find the knowledge yourself a lot of the time,...erm... and maybe that's a good thing as they say you'll be doing that most of your career. Erm... It's hard as there are loads of us sometimes. That took me by surprise and the course doesn't give you the knowledge. (Interview 5)

I'm really worried that I won't be good enough to do the job of a doc. I don't really feel like I know enough, or how to do enough and I feel like I might be in real trouble for that. I don't feel like I've been taught the basics and I want to be able to care for my patients properly. (Minerva 5)

Appraisal of Performance

Analysis of both the interview transcripts and the Minerva postings suggests that appraisal is an important theme in the students' medical training, highlighted particularly by talk and text relating to methods of involving students in curriculum design and development.

I do understand that we have a duty to reflect and it is better to practise and struggle now than attempt to learn when situations arise as a house officer. It is a shame the emphasis lay with reflections of key events and not the whole period of training, I'm glad it's not up to me to assess us but we need to take more of a stand in it. (Minerva 76)

Too little involvement in course design. Well I suppose students are really where it's at, students are in the course. (Interview 4)

Well, I know there are students on course design committees and so on. But I suppose you've got a forum there to raise issues. It doesn't really seem like much comes out of them though. (Interview 8)

They should have a tutorial that you have to go and fill in a form for half an hour or so at the end of every module. (Minerva 33)

The data suggest that students perceive reflection to be an important part of professional development and even feel that there is scope to expand this activity within their training. Whilst it is suggested that students may be under-represented within curriculum development activities, there is acknowledgement that opportunities do exist for this to change. Nevertheless, the third extract may highlight other issues surrounding this. Perhaps, although students are involved in educational activities, their input may not be appreciated. Alternatively, for whatever reason, student representatives may not participate to the extent that is wished by their peers.

Role modelling

Role modelling was highlighted in a number of Minerva comments and also in the interview data. Discussion on this theme seemed to follow two separate strands; the influence of teachers (in particular consultants) as role models and that of senior medical students through the 'buddy scheme' set up at Sheffield Medical School in which senior students act as mentors to juniors.

Yeah, consultants were far too much, far too aggressive if we didn't know the intricacies of their specialty and this made me feel really low. (Interview 3)

I think some students pressurise other students to be the same way and that leads to the culture of partying and stuff. It sets a bad example really and I try my hardest not to fall into the trap. (Minerva 20)

Energy, enthusiasm directed at my level and not wanting to teach me everything about their specialty. (Interview 5)

Every consultant thinks that you should be just like him or her when they were at medical school. They don't realise that times change, and the breadth and depth of knowledge you need has changed. They need to pitch it at our level and make it interesting. (Interview 2)

Two different strands are seen within the discourse of the students regarding the influence of teachers. Role modelling appears to have both a positive and, in some instances, a negative impact upon the way that students perceive their trainers and their teaching. The 'positive' strand implies that 'good' role models should be able to deliver teaching in a way that enables students to learn in ways appropriate to their individual needs and abilities. This is not new information, since the importance of such role modelling behaviours within medical training has been noted previously (Wright et al, 1997). A critical discourse analytic interpretation, however, suggests that students felt behaviour patterns were imposed by their teachers in different ways; be it positive teaching experiences or detrimental instances of 'vicarious learning' in which students adopt the 'bad habits' of their teachers; for example a 'bullying' approach to teaching in which students learn by fear and intimidation (Paice et al, 2002). As we will go on to discuss in the following section, some argue that such discursive practice has profound consequences, in that the values and ideologies of those delivering teaching are adopted by those learning through the teacher-pupil relationship. In this way, teachers pass their discourses (and their discursive practices) on to their students in a self-perpetuating cycle.

Discussion

Discourse and power relationships

We adopted a critical stance towards our captured discourse to provide insight into the ways in which power and control are exercised within the relationships that students have with their trainers. Our first observation is that there is a deficit in communication between staff and students evidenced by difficulty in accessing information pertaining to the course; lack of notification regarding cancellations, and problems obtaining lecture notes. It is suggested by some that a form of 'master-pupil' relationship may develop in this way (Gagne, 1985) since students feel disempowered within such an environment. It has been argued elsewhere that this is detrimental to educational development (Tiberius et al, 2002). It could be suggested therefore that within a 'master-pupil' relationship of this nature, the voice of the student is not heard. This is irrespective of whether the student feels that there are adequate opportunities for their voice to be heard, since their message is devalued through the dominance of the master.

Much discourse relating to preparation for practice centres on the emphasis placed on self-directed learning. Whilst one student suggests this is a 'good thing', a critical perspective suggests that such practice may have impacted adversely on the relationship that students have with their teachers. Indeed, our data suggest that the students may even resent their teachers in that they feel that they have been of minimal assistance in helping develop their knowledge, skills and behavioural practices.

Our data suggest that student behaviour is shaped by both positive and negative learning experiences. The practice of vicarious learning may reinforce the boundaries of power that the master possesses over their student; reminding them 'who is boss' in colloquial terms. A Foucauldian analysis suggests that such teacher behaviours are in turn adopted by the students, who may themselves become teachers in the future. From such a standpoint, therefore, one could argue that educational doctrine cannot change without critical reflection on these underlying ideologies, beyond the more traditional evaluation of teaching styles often seen within the medical literature. The question remains, however, as to how to address this concern in practice. A 'top-down' approach has been to introduce instruction on good teaching, for example through 'Teach the Teachers' courses and education degrees. However, these approaches tend to adopt traditional, structuralist, teacher-orientated models of how students learn, often without considering how underlying discursive practices impact upon educational development. A more open interactive approach, in which stakeholders lay down their discourses on the table for discussion, may provide a more fruitful way of addressing power imbalances and exposing underlying discourses. Better understanding and indeed recognition of these discourses could allow the development of new models of educational development, based upon shared values and ideology as opposed to systematic teacher-driven tools.

Exploring intertextuality

As the purpose of our study was to explore the attitudes of medical students towards their training, we felt it would be interesting to compare our student data with the mission statement of the undergraduate curriculum in 'Tomorrow's Doctors' (GMC, 1993). A coding process identical to that applied to the student data was used to analyse this document.

As in the student data, the importance of preparing for future practice and lifelong learning are recurring themes in this document:

...we can at least strive to educate doctors capable of adapting to change, with minds that can encompass new ideas and developments... (page 4)

...the greatest educational opportunities will be afforded by that part of the course that goes beyond the limits of the core. (page 7)

Another theme in the document is the appraisal of performance. However, much of this is related to the adequacy of supervision provided by trainers:

...some undertook posts as resident house officers where they carried out surgical operations and gave anaesthetics without supervision. (page 5)

Little relates to the role of pro-active student involvement in curriculum design, implementation and evaluation which was raised in the student data. Notably, the themes of disempowerment through communication and the influence of role modelling on learning behaviours are also not addressed in this document.

Conclusions

Discourse analysis considers the underlying values and beliefs of individual agents. It could have a valuable role in helping to develop new curriculum models based upon shared ideology and common goals, as opposed to the traditional top-down teacher-driven approaches of previous years. It can demystify the relationships between particular agents and explore issues of power that help and hinder educational development.

Although in this study we have not performed discourse analysis in its purest form we have drawn upon aspects of discourse analytic approaches including critical discourse analysis to provide insight into medical student discourse relating to curriculum issues and the nature of the trainee-teacher relationship at Sheffield Medical School. The fact that our study is location-specific must be noted as a potential limitation of our findings. However, as medical students are a relatively homogenous group with generally similar outcome aims the insights generated from this study can be considered to have wider generalisability. Whilst being far from an in-depth analysis of the subject of medical education, this study provides a base from which to explore these themes further.

Perhaps the most limited aspect of our study relates to the exploration of intertextuality in our discourses. The use of 'Tomorrow's Doctors' is problematic since this document in itself is the hallmark of structuralist philosophy delivered in a top-down manner to the students it seeks 'to train'. Curriculum objectives presented in this way may not allow the researcher to fully explore the discourses that underlie them, since the raw data which created such mission statements is not available. Similar studies to our own, conducted from a constructionist perspective, are lacking.

Some of the themes we have identified, such as the need to prepare for future practice and undertake self-directed learning, are closely linked with values of professionalism in medicine such as altruism and humanity. These are of universal concern, since society places increasing pressure on students to quickly achieve the highest standards of practice and behaviour. The discursive themes we have identified, however, are not simply aspects of professionalism, they are *tenets of change* that can be integrated into educational curricula. Change can only begin to be made if we first become aware of the discourses that direct patterns of behaviour, since actions are trapped within the web of ideologies that define them. Once this is achieved, entrenched relations of power can begin to be addressed and change can begin to take place.

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OPINION PIECE

From Grounded Theory to the Practice of Theory-Building

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One of the reasons that I have always been a little suspicious of 'Grounded Theory' studies is that on closer examination they often seem not to develop or offer theory. Sometimes they seem not to be terribly well grounded, either. But lately I've been thinking about this problem more sympathetically. I've looked again at how Barney Glaser and Anselm Strauss were able to draw from their ethnographic studies of medicine and health care a set of substantive theoretical constructs about *trajectories*. Having done this, they worked them into a formal 'theory of status passage' (Glaser and Strauss, 1971). After their unfortunate personal disagreements of the late 1980s revealed the differences in the ways that they had understood their joint methodological project, Strauss continued in this vein. He made a germinal contribution to what has become 'social worlds theory' (Strauss, 1993). These are major theoretical contributions: the theory of status passage offers a middle-range theory of interactional identity that we ought to take more notice of, and social worlds theory is a substantial contribution to social theory.

However, there are all kinds of reasons why I am still not completely certain about 'Grounded Theory'. After all, many Grounded Theory studies don't actually theorise. Instead they offer a set of empirical generalisations. These are regularities in the data that call for explanation, but they are not theoretical explanations in themselves. In this context, scale matters. Empirical generalisations may be all that it is possible to achieve, inductively, in the kinds of small scale qualitative study that are most commonly performed and published by sociologists in the UK. But Grounded Theory did not come about through such studies. To build theories, Glaser, Strauss and their colleagues drew on – and wove together – comparative analyses on a large scale. *Status Passage*, for example, draws on three large studies in which Strauss was a senior investigator - *Boys in White* (Becker et al., 1961), *Psychiatric Ideologies and Institutions* (Strauss et al., 1964), and *Awareness of Dying* (Glaser and Strauss, 1965) - to develop a theory of interpersonal trajectories. These were large studies, consisting of many field researchers conducting hundreds of interviews and observations in a very intensive process of data gathering and interpretation-in-action. Individually and together, these studies made major theoretical contributions to the development of medical sociology as a field. They did so by means of cumulative and comparative theoretically informed analysis.

* * *

Although for some students and researchers Glaser and Strauss's *The Discovery of Grounded*

Theory (1967) may now primarily be of historical interest, the processes of theory-building that this history reveals are still important. One of the interesting features of sociological research around health and illness over the past decade has been the growing significance of its interactions and relationships with science and technology studies, or STS. A number of commentators - of whom Caspar Jensen (2008) is the most recent - have argued that an explicit shift to the theories and methodological perspectives of STS is necessary to secure the intellectual future of 'medical' sociology. I don't wish to argue about this here, although it is notable that STS writers have made considerable efforts to establish the wider relevance of their perspectives across a range of social science fields. These efforts have been at least partially successful. My research has certainly been influenced by STS although - it seems - not enough for Jensen.

In some ways, STS seems to have a good fit with the ways that sociologists of health and illness construe their own field of research, at least in the UK. It is constructionist in its theoretical approach; privileges contingent and relational aspects of social life; focuses on specific incidents or cases of general problems; and is largely conducted through the application of qualitative research techniques - often ethnographies, but increasingly interview-based research. Importantly, as John Law (2008) has argued in a recent position paper, there is a strong argument within the communities of practice that make up STS that it ought to concern itself primarily with case studies, description and classification, and that it should neither seek causal explanations nor attempt quantitative generalisation.

Law's position, that causality and generalisation are outside of the ambit of the STS researcher, has some congruence with the conduct of theory and research in the sociology of health and illness. After all, we collectively acknowledge that causal mechanisms are hard to disentangle, and that confounding variables are everywhere. But it seems to me that this is also a counsel of despair, and a recipe for empirical fragmentation and loss of analytic power. Small scale, qualitative case studies of contingencies and relational processes proliferate and, as they do, empirical generalisations - peculiar objects that are neither facts nor theories but something in between - also multiply in number.

If empirical fragmentation of the kind I have described above is a problem, is there a solution? It may be that it is not seen to be a problem, for such studies continue to proliferate rapidly in both medical sociology and STS. Although they are often case studies on a small scale they generally seem to aim to produce new knowledge about observed or hypothesised phenomena. There's no doubt that they often succeed, too. The question is how to bring together the results of large numbers of small scale case studies and their resulting empirical generalisations.

One way forward is methodological, and involves secondary research that seeks to synthesise the results of prior work in a field with a view to synthesising the results of studies of processes and outcomes. The problem here is not the formulation and systematisation of 'evidence' through systematic reviews and meta-analyses or meta-syntheses. The requirement is rather more serious than that. It relates to how these studies (and their authors) learn from each other, and how this interdependence of research and researchers accumulates knowledge and understanding. The problem with systematic reviews and meta-analyses is - as Tiago Moreira (2007) has observed - that the explanatory intentions of the authors of individual studies are hidden as syntheses focus on the results of studies rather than the theoretical assumptions and interpretative work that formed them.

* * *

If secondary analyses will not do the job of joining up multiple fragmented studies and making sense of their many empirical generalisations, what will? I want to return now to Glaser and Strauss's contributions to theory and method and to argue the case for theory-building work. Theoretical development in sociology tends to be seen, John Goldthorpe (2006) reminds us, as a highly specialised activity that is bracketed off from empirical research. It ought not to be. The

lesson of Glaser and Strauss is that theoretical development and empirical research are intimately linked.

I am interested in the links between research that identifies empirical generalisations (regularities that warrant explanation) and research that builds explanations, because it is both practically useful and intellectually rewarding. Some of my recent work, has been about building a theory of the implementation, embedding, and integration of material practices - Normalisation Process Theory. This is described in two recent papers (May and Finch, 2009; May, et al., 2009). This isn't the place to discuss theory-building methods in detail. Instead, I want to look briefly at the constituent parts of theories and the work that they can do for us. We can begin by thinking of theory not as a large scale and abstract body of ideas, but rather as a toolkit that enables us to do three kinds of conceptual work - describing, explaining, and forecasting some social phenomenon. In one of the papers that laid out the basis of Normalisation Process Theory, its co-authors had first to agree what a theory was supposed to do (May et al., 2007). We saw theory as *explanation*, formed through a set of tools that met four tasks:

1. *Accurate description*. A theory must provide a set of definitions that enable the identification, differentiation, and codification of the qualities and properties of cases and classes of phenomena.
2. *Systematic explanation*. A theory must provide an explanation of the form and significance of the mechanisms and processes at work in cases or classes of the phenomena, and should propose their relation to other phenomena.
3. *Knowledge claims*. A theory must lead to knowledge claims. These may take the form of analytic propositions, or experimental hypotheses. They may also map relations with other phenomena that are believed to possess similar qualities and properties.
4. *Investigation*. A theory must be testable. Such tests may be abstract (i.e. formal logical representations, simulations, or thought experiments); or concrete (empirical investigations).

This is a generic model of a theory that also alludes to the work that is necessary to develop it. This is exacting work, but is also very interesting and sometimes quite exciting. It begins with exactly what Law (2008) and other proponents of STS ask for when they claim that the job of sociology is to describe and classify social phenomena. This is a foundation, not an end in itself. The foundation can be laid in a number of ways: by meta-synthetic studies that concentrate on collecting the empirical generalisations and low-level theoretical interpretations from large numbers of existing studies; or by collaborative data-clinics in which researchers talk through the results of their work with their peers and identify core objects of their collective interests. It thus decides the scope of a theory. What follows from this must be the production of an explanatory account of *why* those objects take the form that they do and how they work. This is more than description. Lieberson and Lynn (2002) are amongst a number of recent writers about the nature of sociological theory who have argued that we should be interested in the generative principles or mechanisms through which social processes are formed and which interact with other factors to lead to different outcomes. From this stems the possibility of drawing together many different studies, identifying their core components and explaining these in terms of mechanisms. It also raises the possibility of comparative modelling the generic features of mechanisms and the processes and other effects that are derived from them. This approach to theory is about developing explanations for *action*, rather than exploring networks or interrogating discourse.

* * *

I started this brief article by pointing to my uncertainties about Grounded Theory, and ended it by noting that when I came to theory-building in practice, I ended up doing something rather similar

to it. I have also observed that the fields of sociology of health and illness and science and technology studies have some important overlaps in terms of the ways that many practitioners seem to conceive of the topics of their research, and that these overlapping topics are marked by similar problems in the organisation and outcomes of empirical research. I have pressed the case first for secondary analysis and then for theory-building as ways of working through the implications of these problems. The way is open for groups of researchers to find ways to bring the data and results of their collections of studies into interesting collaborations that explain social mechanisms and processes in new ways.

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The Power of Secondary Analysis in Building Theory and Action: A Response to Carl May

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When I was asked to respond to Carl May's piece I was pleased because his work is always thought-provoking. After reading his argument about linking empirical research and theory-building I felt that my own thinking was moving in the same direction for a number of reasons.

I am increasingly aware of the limitations of the research that I am doing with a group of colleagues in my research centre, research that can be classed in Carl's terms as small scale, qualitative case studies of contingencies and relational processes. After finishing a project we have often asked ourselves 'so what?' with regard to increasing theoretical understanding, in our case, of people's experience of living with long-term musculoskeletal conditions, and the responses of health professionals and health systems. Did we add anything to the body of knowledge on pain, chronic illness, or professional-patient relationships? And the 'so what?' question also emerged when thinking through whether anything would change in health policy and health care as a result of our research.

Does the push from many health-related funding sources to demonstrate benefit of our research to patients, mean simple utilitarian and linear relevance? Or is there a place for theory-based enquiry that moves our thinking forward? The current debate about the Research Excellence Framework (REF) parallels this when the president of the BSA, John Brewer, writes that we need

...a new narrative about impact that acknowledges the economic benefits and which also broadens the debate. This 'impact narrative' might make reference to sociology's engagement with the big issues of future industrial, scientific and economic change - sustainability, labour migration, climate change, peace processes, the link between demographic shifts and welfare demands and the like, as well as our ongoing interest in the cultural and relational dynamics of social life. (John Brewer, 2009).

I am mindful of the obligations of qualitative researchers towards the people they study. We amass large amounts of material from interviews (sometimes several interviews over time) and observations. Increasingly, we employ methods that require considerable engagement and work from research participants, such as the keeping of diaries, email or telephone conversations, photography or other visual expressions of people's experiences. How much of this material do we actually use in our analysis and writing? Most of us are constrained by time and resources,

especially as research funding is time-limited, and thus much empirical material goes unused. Anne Grinyer (2009) draws attention to people's judgement about whether participating in research is worthwhile, and the need for researchers to use all the data they have co-produced.

These different strands of thinking do come together in Carl's paper: the need to go beyond small-scale studies through theoretical development and to provide explanations for action. My additional thought about the ethical implications of qualitative research gives a further impetus to adopting secondary analysis so that we do justice to the contribution of research participants.

Carl briefly refers to other approaches for synthesising prior research. I think it is worthwhile expanding a bit on this issue. There has been a proliferation of meta-synthesis work, an umbrella term for various approaches. One of my PhD students (Watts, in progress) is carrying out a literature review on this topic and makes a number of observations that reflect what Carl states - quoting Moreira - about synthesising results, which tends to obscure original interpretations and their theoretical underpinnings. Thorne et al. (2004) report on their various qualitative meta-synthesis projects which aim to develop theory, and emphasise 'the interpretive and creative nature of any attempt to build generalisations from other people's material' using self-reflection and political conscientisation. While their paper presents an impressive account of the sheer hard work and methodological ingenuity required to build theory it does not wholly address the question of empirical generalisations in the way that Carl has posed it. His case for the role of secondary analysis in theory-building is persuasive, precisely because it rests on returning to the primary data in order to build integrative analysis across studies and groups of researchers, and exploiting the opportunities for exchange, debate and analytical transparency.

Thus far, I have been wary of calling any of our centre's work 'Grounded Theory', very much because of the reason that Carl mentions, that is, most of our findings are empirical generalisations. Moreover, fitting Grounded Theory into too tight a schedule always seemed too difficult and time-consuming. This reluctance has been somewhat overcome with the publication of Kathy Charmaz's book 'Constructing Grounded Theory' (2006) which makes the endeavour more manageable by opening the black box of theory building. Her approach to theory is particularly attractive when engaging in secondary analysis because she emphasises that

Grounded Theory leads us back to the world for a further look and deeper reflection - again and again. Our imaginative renderings of what we see and learn are interpretations, emanating from dialectics of thought and experience. (Charmaz, 2006, p.149).

I would argue that that is precisely what we do when carrying out secondary analysis with teams of researchers, optimising the collective power of thoughts and experiences, so that we build theory that is relevant and focused on making a difference.

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BSA MEDICAL SOCIOLOGY CONFERENCE PLENARY

Climate Change and Medical Sociology

Plenary Address to the Annual Conference of the British Sociological Association Medical Sociology Group, Manchester, September 2009

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Introduction

Humankind faces an environmental problem, in complexity and magnitude, the likes of which have rarely been seen before in human history. In the last few years there has grown to be widespread if not unanimous acceptance that a fundamental global environmental change is occurring, with many effects on society in general as well as human health, especially in the developing world. In a joint statement, the medical journal the Lancet and the University College London Institute for Global Health Commission argued 'Climate change is the biggest global health threat of the 21st century...the effects of climate change on health will affect most populations in the next decades and put the lives and wellbeing of billions of people at increased risk' (Costello, 2009: 373). All academic disciplines are moving to consider the implications of such changes for their areas of expertise.

This paper considers the challenges and opportunities for the specialised field of sociology known in different parts of the world as medical sociology or the sociology of health. Firstly though, there are several riders to be outlined. Firstly, it is hard to separate out distinctively health effects from other effects, and this depends as much as anything on the key sociological issue of how health is defined. Secondly, much of the literature on the health effects is predictive, so far at least, rather than focusing on actual changes. Thirdly, not all the effects of climate change on health are likely to be adverse ones. Some will be positive such as a likely decrease in cold-related morbidity and mortality.

There are five parts to this paper. After a brief consideration of the issues and the predictions, the actual health impacts thus far will be outlined. Then some ideas on the framing and conceptualising of climate change from a sociological point of view will be canvassed before posing something of a research agenda for sociologists becoming interested in this field.

The issues

Attempting to summarise the state of knowledge and understanding, there are several points that

can be made. So far there is widespread agreement (if not unanimous consensus) on several key issues. Firstly, the Earth's climate is and will change due to greenhouse gas emissions. Secondly, this climate change on a global scale has happened before but this time is the result of human activity. Thirdly, the main direction of change in global climate is towards warming of the environment. Finally, these changes will have a huge impact on humankind and their health, some of which are already being experienced.

There is disagreement between scientists over what is happening; but not that something significant is happening in the form of a fundamental global environmental change. This is impacting upon both physical and human ecosystems with many likely consequences for humankind in general as well as human health in particular. Furthermore, the weight of evidence is that this change is and will be felt disproportionately in the developing world

Yet reaction to these changes has been slow. The evidence of these far-reaching changes has been accumulating but forms of collective action have been difficult and complex to initiate. In his recent book, Anthony Giddens calls this the 'Giddens Principle':

...since the dangers posed by global warming aren't tangible, or visible in the course of day-to-day life, however awesome they appear, many will sit on their hands and do nothing of a concrete nature about them. Yet waiting till they become visible and acute before being stirred on to action will, by definition, be too late. (Giddens, 2009:2)

An alternative means of understanding this might be called the 'everywhere and nowhere problem'. Climate change discussion fills the airwaves and print media. The likely consequences are much discussed but arguably not much has happened yet in many parts of the world. This is most obviously seen in extreme climatic events where there are inevitable debates about whether each disaster is a 'normal' extreme climatic event or related to climate change.

So climate change represents a fundamental challenge for sociology in general and medical sociology in particular. Sociology came into being at a time of rapid social and economic change associated with the industrial and French revolutions. It appears likely that climate change will also result in fundamental social change. Sociology has a lot to offer in understanding and responding to these issues. As Furze (2008) argues, environmental problems have to be understood as social problems. As sociologists, some things we know and are core to our discipline. An example is that the internal solidarity of a social group is related to the degree of external threat. How can awareness of a major external threat to the whole of humankind in the form of climate change be encouraged such that a movement towards internal solidarity becomes apparent? Can countries act together to reduce carbon emissions and the other forms of mitigation that have been proposed?

The predictions for health

There are two sorts of predictions; indirect and direct effects of climate change on health. With regard to indirect effects, so far, as the debate has unfolded, the main impacts of climate change on health are expected to be political, economic and social upheavals and disruption, with resultant effects on health. But there is little actual empirical research on the indirect link between climate change and health.

In terms of more direct effects, the major work has been done by Tony McMichael and his colleagues at the Australian National University in Canberra who have been writing on this subject for more than a decade. In a recent article, McMichael (2006) argues that direct effects will be concentrated in three areas: thermal stress, extreme weather events, and infectious diseases. They argue that climate change in the form of changes in mean climatic conditions and variability have environmental effects like extreme weather events, sea level rise, ecosystem effects and environmental degradation. Each of these has adverse health effects such as thermal

stress from extreme weather events. Environmental degradation, for instance, is likely to lead to loss of livelihoods, displacement that will lead to poverty and adverse health, especially mental health, as well as infectious diseases, malnutrition and physical risks.

McMichael and colleagues go on to relate environmental and public health concerns generally to responses to climate change. Two main strategies for responding to climate change have emerged; mitigation, which relates to primary prevention (that is stopping it happening or at least getting worse); and adaptation, which they argue is a form of late primary prevention where interventions are made to attempt to reduce or lessen the adverse health effects.

But the difficulty is that there is little impact apparent now. Most of these expected health effects are predicted whereas in being able to understand the phenomenon from a medical sociology standpoint, the need is to analyse the 'here and now'. Furthermore, as McCormack (2008) has argued, while a growing body of epidemiological literature has demonstrated health impacts of climate change, the task is to understand how these illnesses are recognised, who has responsibility to prevent or treat them, and ways in which responsible agencies and institutions shift to accommodate new facts and discourses about climate change .

Actual health impacts

In this section, the concentration is upon the developed world. The argument here is that so far there at least three actual observable impacts of climate change on health. These are heat stress, especially the effects of 'brownouts', on the mental health of those most affected by global warming and the drying of the climate in some parts of the world, and the emergence of new, hitherto unseen, medical conditions; in this case 'bucket back'.

Heat stress

The clearest direct impact that is already apparent is the effect of heat stress. On this there is plenty of epidemiological evidence (e.g Parry et al, 2007). The European heat wave of 2003 is estimated to have killed more than 30,000 people, the UK's record temperature topping 100F for the first time in that year. Here it is clear the elderly are most affected. For the most part, susceptibility to the adverse effects of climate change is class-related. In the same way that wealthier residents of New Orleans were able to jump in their SUV's and escape the floods of 2005, leaving the poor to suffer the full effects, so with heat stress. As global warming occurs, we become more dependent on artificially cooling our own personal living conditions. Yet the availability of air-conditioning is related to affordability. As Klinenberg (2002) found in his study of the Chicago heatwave of 1995, most deaths from heat stress occurred amongst the poor, many of whom were elderly.

Yet as residents of the Australian state of Victoria found in the 2008-09 summer that resulted in massive firestorms and the major loss of life; the levelling factor that affected everyone was 'brownouts'. When the demand for electricity to run air-conditioning exceeds the supply, raising the potential of overload, equipment failures and blackouts, the electrical authorities instituted a series of planned 'brownouts' where areas were rotated to have no electricity (for several hours at a time), in order to reduce the level of demand to match the level of supply.

Mental health

For those countries which are experiencing a gradual drying of their climate such as South Eastern Australia, the impact on the mental health of those most affected is already apparent. South Eastern Australia is now entering its 13th year of drought, with the drought causing 'El Niño' climatic effects predicted for the summer of 2009-2010. In this sense the change on climatic conditions can no longer really be called a drought in the sense of an abnormal event.

Instead it is coming to be called the drying of the climate.

What is the impact on those most affected, in particular, farmers? In one study Miller and Burns (2008) used data from the Australian Bureau of Statistics to conduct a retrospective audit review of the files of 1033 suicides that occurred between 1997 and 2001. The average annual farm suicide rate was found to be 33.8 per 100,000 for men, 6.7 per 100,000 for women and 21.6 per 100,000 for all persons. This was much higher than the rural suicide rate for South Australia in 2001 (23.8 per 100,000 for men, 5.6 per 100,000 for women and 14.5 per 100,000 for all persons). So in the driest state on the driest continent, this rate is significantly higher than the overall rate of suicide.

The emergence of new medical conditions

McMichael and his colleagues (2003) predict the spread of tropical diseases away from tropical regions both northwards and southwards from the equator. Amongst these the spread of dengue fever is already apparent in Eastern Australia. Adaptation responses by people seem to be exacerbating this trend. The trend towards rain harvesting tanks being installed in many domestic houses creates the possibility of open water surfaces in which mosquitoes carrying dengue fever might breed.

Other health conditions are also apparent. An example is the phenomenon of 'bucket back'; the incidence being greatest amongst the elderly and amongst women. As water restrictions, especially those involving watering of gardens, tighten; alternative means of trying to save wilting gardens have become apparent. These are features of the shift towards the conservation and recycling of water. So part of the changes in the use and reuse of water, especially in societies with severe restrictions in the use of water, has been collecting shower or bath water and reusing it either to flush toilets or wash clothes, or indeed to carry out in buckets to try to keep precious plants alive. Concern about bucket back led a spokesperson from the Australian Chiropractors Association (Dr Sim) to issue a press release in 2007, stating that:

..the potential risk of bucket back can be greatly reduced by following some simple tips when out in the garden: Bend your knees when lifting buckets; never bend your back; only carry what is absolutely necessary – do not overfill your bucket; and use two smaller buckets (one in each hand) to disperse weight evenly.

Framing and conceptualising climate change

How can climate change be studied from the sociological perspective and what conceptual and theoretical tools do we have at our disposal from within our discipline?

In general, firstly, is the standard sociological question that occupies the first lesson of every medical sociology subject. How is health to be defined; and what then is illness? Arguably the challenge of climate change requires us to move beyond standard WHO-type definitions to return to some of the classical insights of early medical sociology, especially the work of Dubos (1987). He conceptualised health as a state of balance with the natural environment; what he called an ecological approach to health. This theme has been taken up more generally by McMichael,(2003:1-3), who argues:

The long-term good health of populations depends on the continued stability and functioning of the biosphere's ecological and physical systems, often referred to as life-support systems. We ignore this long-established historical truth at our peril: yet it is all too easy to overlook this dependency, particularly at a time when the human species is becoming increasingly urbanised and distanced from these natural systems.... Appreciation of this scale and type of influence on human health entails an ecological perspective. This perspective recognises that the foundations of

long term good health in populations reside in the continued stability and functioning of the biosphere's life-supporting ecological and physical systems.

Social scientists in general and sociologists in particular have been slow to come to the study of climate change. Only very recently has there begun to appear a specific social science literature such as the anthropologically-oriented contribution by Baer and Singer (2009). Constance Lever Tracey (2009) attributes this 'strange silence' in mainstream sociology to an uneasy tension in the epistemological basis of environmental sociology between and realism:

....most sociologists, outside the specialism of environmental sociology, have had surprisingly little to say about the possible future social trajectories they may portend. Wary of accepting the truth claims of natural science, but aware of our own inability to judge the validity of their claims, we have generally preferred to look the other way, although these developments can affect the very core of our discipline's concerns. (Lever Tracey, 2009:445)

In a recent paper Steve Yearly (2009) argues cogently for the 'constructedness' of climate change: indeed that this insight is a contribution social scientists can make to the debates. All the models that are being used in the debates around climate change are socially constructed – for three reasons. Firstly, they are constructed in the sense that they are based on projections about the future behaviour of an enormously complex system about which, everyone agrees, there is imperfect knowledge. By their nature, such models cannot be tested against the future since we cannot wait for the future to arrive before making decisions about whether today's models are right. Nor can they really be adequately tested against data about past climates since they are constructed precisely in the light of information about the past and thus are more likely to be accurate under past circumstances than unprecedented new ones. Accordingly, the models are inevitably to some extent conjectural.

Secondly, they depend on assumptions about what people and governments, corporations and householders will do. Just as climate models require simplified versions of the atmosphere and the oceans, climate projections demand simplified versions of societal activity. The key point here is that people's behaviour is by no means fully separable from the business of modelling. Social choices affect climate futures in complicated ways. This second aspect of construction has an additional level of complexity since the behaviours of governments, consumers and other actors will be affected by the various climate change projections produced (by the IPCC, climate sceptics, pressure groups and others) and how well publicised and persuasive the experts' views are. For this reason, the futures produced by the IPCC and other modellers are not to be regarded as forecasts of what will happen (in the way that an ordinary weather forecast is an estimate of what tomorrow's weather *will* be). They are consciously offered as estimates of what would be expected to happen given certain circumstances. Most importantly, if governments, corporations and consumers pay attention to those calculations, then the circumstances will change and the 'forecast future' will never come.

Thirdly, the design and constitution of the institutions within which the projections are developed are legitimately generated. Models in this area are not produced by lone academics; modelling capacity is highly expensive and projections are produced in relatively small numbers in a few centres worldwide. The results are agreed through an elaborate process of negotiation within the IPCC and, though academics may write up their results in numerous journals and other outlets, the most mainstream publications are the IPCC reports. These result from a hybrid process of scientific discussion and diplomatic negotiation where country representatives have a large say in writing chapter summaries. Given the interests at stake and the importance of trying to achieve an international consensus, this is no doubt sensible. However, it does mean that who gets to write the results, what is presented and how they are summarised are all things regulated in a different way from the standard academic model. The fact that climate science and

authoritative climate projections have come to be organised in this way is itself an element of its construction – a construction at the level of the sociology of the scientific community (Yearly 2009: 390-392).

As sociologists we know that the framing of ill health is a part of its social construction. As Lantz and Booth (1998), for instance, have argued; this both reflects and guides the determination of responsibility for etiology, treatment, and prevention. So how are the health effects of climate change being framed? Furthermore, the likely health consequences of climate change, and the risks to human health therein, we understand not as somehow reflections of objective reality but, as Douglas and Waldavsky (1983) have argued, rather as cultural phenomena that reflect societal and group values and that must be interpreted in the light of their broader cultural functions.

So when we as sociologists turn our attention to the health effects of climate change, what conceptual tools are at our disposal? The perhaps hegemonic tool is that of risk; an approach well established in the discipline and arising out of the prolific and sustained work of Ulrich Beck (1992, 1995, 2008). For Beck, climate change is part of a risk society, a theme also taken up in the recent book by Giddens (2009).

Yet important though the concept of risk is, it may be that other concepts need to be added to make better sociological sense of the health effects of climate change. In particular the somewhat embryonic observation being made in this paper (and on which further explication is needed) is that the concept of vulnerability may be as, if not more, useful in this task. So we can ask, in the specific instance of human health, which groups are more vulnerable than others?

For Giddens (2009: 213), the answer to this question is clear: ‘the bottom billion’ inhabitants of the planet. Vulnerability indeed follows the familiar contours of social inequality that sociologists have studied for decades. Most of the ‘bottom billion’, whose health is likely to be most affected, live in the developing world. Already there are ‘climate change refugees’ as rising sea levels take their toll on low lying Pacific Islands.

In the developed world, we can predict that the health effects of climate change will be experienced disproportionately according to the dimensions of social inequality with which we are all familiar; by class (brownouts notwithstanding), gender, age (where the elderly are most vulnerable) and ethnicity (where the indigenous inhabitants appear to be the most vulnerable).

The relationship between vulnerability and risk has been addressed by Sarewitz and colleagues (Sarewitz et al. 2003: 809- 10). They argue that:

...the relation is not commutative: reduced vulnerability always means reduced outcome risk, but reducing the outcome risk does not always reduce vulnerability. This irony ought to create a policy incentive to focus on vulnerability reduction, since it leverages more than outcome risk reduction. But, as the case of climate change demonstrates all too clearly, when thinking about the future, risk turns more heads and grabs more headlines than vulnerability. Effective planning for and response to hazards and other extreme events requires that the vulnerability associated with specific social and decision processes be understood in parallel with understandings of processes and probabilities of risk, so that judgments can be made about the appropriate balance between risk- and vulnerability-based approaches to management. A myopic focus on risk to the exclusion of vulnerability can easily enhance rather than reduce the prospects for negative outcomes.

So vulnerability may be a better means of understanding and analysing the consequences of climate change (especially damage to health), related as they are to social inequality and resilience. So while more work at the conceptual level needs to be done, it may be that the concept of vulnerability may be more capable of relating agency to structure than the concept of risk does.

In terms of framing and conceptualising the sociological issues surrounding climate change, we also need to be ready to use our sociological imagination to critique more individualist modes of framing. An example is with the concept of ‘resilience’. Whilst it is not irrelevant to debates

over climate change; there is a need at a societal and global level to increase resilience, we should learn from our studies in other fields of the problems created when the concept is applied at an individual level. An example is studies in the field of occupational health and safety. Focusing on individual adaption to dangerous work situations (ear muffs), rather than the source of the problem (installing quieter machines) can be summed up with the saying 'fix the worker not the workplace' (see Quinlan and Bohle, 1991; Willis, 1986). Consistent with the neoconservative/neoliberal ideology that dominates debates at the level of political economy; such an approach promotes individual adaptation to adverse situations, rather than dealing more structurally with the situation at the source. Adaptation is a necessary strategy but not so much at an individual level ('learning to like hotter temperatures?'). So a structural sensibility, arguably one of the hallmarks of a sociological analysis (see Willis, 2004), would focus on mitigation at one level but also adaptation at a more societal level. With regard to health, such an approach is a tricky one in the context of the dominant discourse of individualism and indeed the huge focus research-wise (including dollars) on the genetic causation of disease (e.g breast cancer). Indeed it is tempting to predict the discovery of a gene for adapting to climate change! Instead the aim needs to be to find collectivist solutions that do not increase inequality and poverty.

In their recent book, Baer and Singer (2009) argue for a return to a more ecological approach to health; but in this case a critical social ecology. They outline the systematic structures of inequality that underlie climate change and propose the concept of 'ecosyndemics' as a new paradigm for understanding the relationship between environmental change and disease. They argue:

.... health is fundamentally rooted in sociocultural and political-economic systems, and thus intertwined with the world system and with anthropogenic climate change. (Baer and Singer.2009:7-8)

A research agenda

How might sociologists contribute to the debates? What advice about possible topics might be given to eager postgraduate students keen to 'make a difference' and embark on a topic in this field? A number of possibilities are suggested below; a list that is by no means exhaustive.

The sociology of scientific knowledge

One obvious topic worthy of further study is the sociology of scientific knowledge, especially surrounding the opposition to the idea of a human link to climate change; the sceptics, agnostics and deniers. By what social processes is this declining over time? What seem to be the key issues in people changing their minds? Further than that though, studies have shown how funding and lobbying by vested interests, especially manufacturers, in other areas have served to render the scientific evidence controversial, contestable and therefore an impediment to action (legislative and otherwise). Tobacco (see Chapman, 2007) and asbestos (see McCullough and Tweedale, 2008) are two examples. To the extent that evidence is available, how have the climate change sceptics' campaign been supported and funded? What has been the role of right wing 'think tanks' (especially in the US under the Reagan/Bush administrations)? How have fossil fuel polluters' interests and lobbying affected the political process of formulating a response to climate change?

The social anatomy of climate related disasters

Klinenberg's (2002) classic study of the 1995 Chicago heat wave showed how social isolation of elderly minorities in crime-ridden areas with poorly ventilated housing and inadequate social services, as well as an uncoordinated response among health, fire, and police departments, were

interacting factors that caused the disproportionate number of deaths. Many of the victims of the 1995 heat wave left no family or were indigent. Of the 68 unclaimed bodies, 41 died of heat-related causes.

Another study, this time in the developing world, is the analysis by Cannon (2002) of the floods in Bangladesh in 1997-8. His particular focus is upon gendered effects and the ways in which social structural factors resulted in a much higher mortality rate amongst women than amongst men. Amongst the factors he found that led to this were: the women wearing bulky clothing that made it harder to swim; not many women having been taught to swim; as well as the requirement that women only leave their houses in the company of men, so that many perished waiting for their men folk to take them to safety.

Certainly, now that almost a year has passed, a social anatomy of the 2009 Victorian bushfires would constitute an ideal topic for sociological research. This was the largest natural disaster in Australian history with 173 deaths, 500 injured, more than 400 individual fires and 2,200 houses destroyed. The focus could be, in classic sociological style, to relate the personal troubles to the sort of public issues of a social and structural kind (analysing the lead up and the events themselves as well as the response) that the ongoing Royal Commission in Melbourne is uncovering day by day in their hearings.

State responses to climate change

How has the state responded to the threat of adverse health effects of climate change? What adaptive strategies have been developed that are conducive to health? Giddens (2009:69) argues for the ensuring and enabling state whose 'prime role today is to help energise a diversity of groups to reach solutions to collective problems... the state is responsible for monitoring public goals and for trying to make sure they are realised in a visible and acceptable fashion'.

Gender and climate change

How does the experience of climate change differ by gender? We have already seen the Cannon example in the developing world. In the developed world, a potential area of study is the role and indeed importance of gardens, especially to older women, and the impact on them of the drying climate. While we are not quite at the stage of 'learning to love cactus' in many parts of the developed world, nonetheless the importance of keeping gardens alive and adapting to a drying climate in the era of (often severe) water restrictions can be seen in the emergence of 'bucket back'.

In relation to masculinity, what has been the impact of climate change on the social construction of masculinity for those men whose lives are significantly affected; such as the South Australian farmers referred to earlier? (see Alston and Kent, 2008). To what extent is what Campbell et al. (2006: 9) call 'the hypermasculine swagger of rural masculinity' acting as an impediment to men seeking assistance. Such normative masculinity socially constructs help-seeking as a sign of weakness (see Connell, 1995). As they argue:

The dominant masculinity in rural areas is so normalised it is usually invisible, and all other positions relate to this norm. This position has given many rural men influence in rural communities and agriculture, allowing them to receive benefits in terms of status, wealth and political power. While this hegemonic position has benefited men in good times, it also locks them into fairly rigid subject positions, typified by a stoic resistance to adversity and a rugged individualism that prevents help-seeking behaviour. The very stoicism that is its hallmark tends to prevent men addressing their health needs. (Campbell et al: 2006:9)

The Cultural aspects of Climate change

The final area for research, as Douglas and Waldavsky (1983) alert us, is the cultural dimension of climate change. The major change here would seem to be the much greater cultural valuing of water and the beginning of an understanding of its relationship to health where, in many parts of the world, water is and has come to be regarded as a scarce commodity and precious resource. The cultural change is to two-fold. Firstly, there is the recognition of the need to minimise its use through water restrictions, dual flush toilets, water efficient shower heads and personal hygiene practices (e.g. tap off while brushing teeth) waterless public urinals and composting toilets. In Victorian schools the adage for children in relation to toilet flushing is 'if it's yellow let it mellow; if it's brown flush it down'!

The second aspect of the cultural change relating to water-use is the shift towards the recycling and reuse of water; separation into grey water that can be used again and black water that cannot. Attempts to introduce a portion of recycled water into domestic water supplies (as happens in many parts of the world) are perhaps slower to be accepted. In 2006, the residents of the Queensland regional city of Toowoomba rejected a plan to introduce a portion of recycled water into the town supply with a vote of 62% against.

Conclusion

Sociology as a discipline came into being as a response to rapid social change, associated with intellectuals of the day trying to 'make sense' of the nineteenth century revolutions. Enough is known about the likely impact of broad climate change related social changes on how people live their lives and that these social changes will have both direct and indirect effects on health. Many of these effects will be identified and analysed by epidemiologists. The sociological contribution will be to develop and extend the analysis of these effects, most especially perhaps at a qualitative level, where the focus should be on understanding the implications of climate change for health.

There are many opportunities for social scientists and sociologists in general and health sociologists in particular to make significant contribution to understanding the climate change related processes of adaptation and mitigation. As Giddens (1983) has argued, sociology is the study of 'alternative futures'; not only of what is but what might be.

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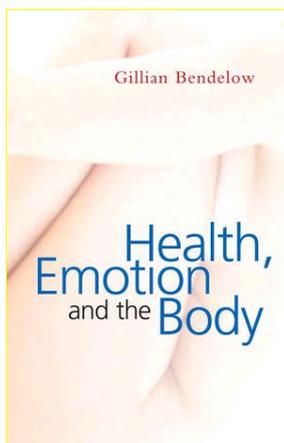
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BOOK REVIEWS



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Reviewed by Tomaž Krpič, University of Ljubljana, Slovenia

Gillian Bendelow's latest book comes as an attempt to critically re-evaluate prevailing contemporary Western biomedicine and to develop a new integrated model of health and illness. Although medicine suffers from the lack of a conceptual framework with which to link up different levels of understanding relating to health (from genes to physiology, psychology, family, community, and society), and although nowadays the medical limitations of healing are perhaps more self-evident than ever, people still cherish a hope about medicine's future miraculous development. Yet it seems that medicine's precise failure to comprehend the new situation has forced laymen to set out towards a new practical understanding of health and illness in the sphere of alternative/complementary medical practice. Without any doubt, the findings provided by sociologists like Bendelow can build a strong, stable, and constructivist bridge between positivist scientific knowledge of medicine on the one side, and lived individual experience of health and illness on the other.

In the introductory chapter of her book, Bendelow makes a short, illustrative, yet highly elucidative review of existing models of health and illness. In contrast to the predominating biomedical model, Bendelow sets up an integrative model of health and illness. A paradigm shift in models evidently reveals a need for transformation from a mechanistic to a holistic understanding and practising of health and illness. While the old Cartesian dualism between the mind and the body still exists, the paradigm shift shows more faith in the interaction between the mind and the body than in the reduction of the mind to the physical conditions of the body. Above all, the social integration of an individual is emphasised as an important element for maintaining good health or for healing illness. Another difference is that the integrative model focuses on long-term health conditions to avoid risk, instead of on acute illness.

The second chapter debates conditions for a mind/body/society model of stress. According to Bendelow, the concept of stress is essential for the construction of any new health model. Not only does the biological level count, but the social level is important as well. Of course, to Bendelow, the social aspect comes first and the biological second, as emotions are culturally relative (the author refers to Goffman's 'deep acting,' Hochschild's 'emotional work,' and Peter Freund's 'dramaturgical stress'). Stress, then, is a state 'of coping with a perceived, real or imagined threat to one's physical, mental, spiritual or emotional wellbeing, resulting in a series of physiological responses and adaptations' (49).

As a consequence, the third chapter is about the inability of modern medical science to accept the above-defined mind-body relationship, culminating in medically unexplainable symptoms

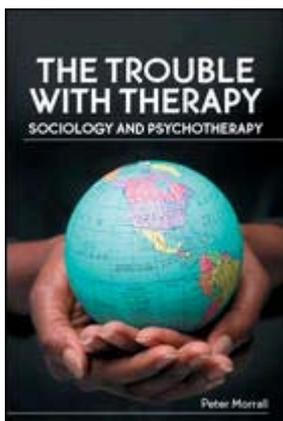
(like chronic pain, fatigue syndrome, and so on). Due to the fact that such medical conditions can be highly contested and cannot be clearly defined in medical terms, a space is created for their manipulation by different social trends and beliefs. Even medicine is not 'immune' to this and to commercialising trauma, misery, and, most of all, human madness.

This leads us to the next chapter of Bendelow's book. Besides a desire to reveal the scientific logic beneath the surface of unexplained phenomena, medicine develops several responses to emotional and psychological distress based on physical and chemical interventions in the body. Yet, modern medicine is falling short in this attempt, which is most evident in the increase of pharma-scepticism, the phenomenon of laymen rejecting pharmaceutical and technical interventions. People who confront terminal or chronic health conditions swerve to complementary medicine or to alternative healing systems, for they are frequently deeply disappointed by the limitations of modern medicine.

As a consequence, the penultimate chapter is devoted to the review of various dilemmas, contradictions, and problems that accompany the use of alternative/complementary approaches to healing. Despite the fact that the effects of alternative/complementary medicine are often either unknown or incapable of being proven by rational scientific examination patients may feel temporary physical/emotional relief, although this could simply be due to individual suggestibility. Although visiting an alternative doctor or spiritual healer can be pretty expensive and thus inaccessible for many people, it has nevertheless increased over the past years, especially amongst the middle class.

One particular reason for the growing interest in alternative/complementary medical practice is the application of new communication technologies, above all the Internet, which people use to look for information and advice about their health and illness. The relationship between patients and doctors, once in favour of the latter, has significantly changed as the doctors are no longer the only ones who possess medical knowledge and licence to intervene in someone's body. Although some therapists are perhaps nothing more than fancy charlatans exploiting others' suffering, their chances are good as long as doctors keep on forgetting that not only the physical body of an individual is subject to healing, but the mind (i.e. emotions and cognitions) is also an important element during the process of healing.

Bendelow's book *Emotion, Health and the Body* is an excellent study of the dilemmas concerning health and illness that people are facing in everyday life. Due to the 'over-medicalisation' of human life and a reductionist understanding of the mind-body connection, medicine focuses solely on the body. However, the human need for adequate information and the individual's longing for emotional stability are still unjustifiably neglected. On top of that, modern society 'nurtures' the cult of individualism, which prevents us from maintaining a proper social contextualisation of health and illness. Thus, the true value of Bendelow's book lies in her stressing the importance of a close relationship between the mind and body. Within the social context, the emotional as well as the physical health of an individual contribute to their being a member of our modern community.



Peter Morrall

The Trouble with Therapy: Sociology and Psychotherapy

Open University Press 2008 £21.99 (pbk)

(ISBN 978-0335218752) 272 pp

Reviewed by Daniel Holman, University of Essex, UK

From the outset Peter Morrall declares that, probably due to his prolonged exposure to sociology, he is a trouble-maker. More than this, he is an *angry* trouble-maker; angry because ‘the physical world is deteriorating, global society is in disarray, and humanity debased’ (5), and yet whilst psychotherapy (along with sociology) is in the position to understand and repair society and individual lives, it is instead dysfunctional, arrogant, selfish, abusive, infectious, insane, and deceitful. The substantive chapters are titled accordingly, except the first chapter (‘Enlightenment’), which is an overview of four key sociological frameworks (structuralism, interactionism, constructionism, and realism) and their application in understanding therapy. In order to illustrate the arguments made in the book, throughout the author refers to the story of ‘Heather’, a pathologically insecure and troubled woman with a ‘Jekyll and Hyde’ character who has had extensive experience with therapy.

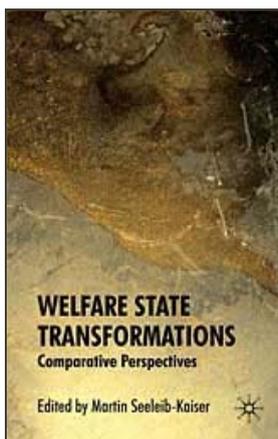
Chapter two, ‘Dysfunctional’, provides a brief overview of the main types of therapy and how they are (dis)organised under various national and international umbrellas, arguing that therapy is filled with confusion and rivalry, and that choosing a therapist is a lottery. Chapter three, ‘Arrogant’, focuses on the scientisation of therapy and the questionable credibility this brings with it. Chapter four, ‘Selfish’, argues that therapy focuses too much on the self, ignores social context, and is overflowing with sexuality, by dealing with problems of sexual abuse, performance, and perversions, for example. Chapter five, ‘Abusive’, considers issues of power and control. Chapter six, ‘Infectious’, looks at the spread of therapy culture, and issues of professionalisation and medicalisation. Chapter seven, ‘Insane’, argues that therapy is uninformed when it comes to the topic of madness, and is in turn a mad business itself. The last of the substantive chapters, chapter eight, ‘Deceitful’, is concerned with the (misguided) goal of happiness.

Morrall draws on an eclectic range of mostly theoretical material from psychology, psychiatry, philosophy, media sources, official agencies, as well as sociology, to cover this broad terrain. Although many of the arguments presented in this book are not new, it is useful to have them brought together under one sustained critique with ample reference to their theoretical context. For example, chapter three contains an overview of the sociology of science, covering the themes of positivism, scientific medicine, legitimacy, efficacy, and how these apply to therapy. Chapter four talks of the sexualisation of society, repression and oppression, gender-bending, and historical accounts of sexuality, before going on to consider sex and therapy. The result is that the author’s arguments are generally well-contextualised, mostly in terms of theory, but also in terms of social changes and changing practice, which makes the book interesting and accessible to read.

The use of Heather's story is in some respects analogous to her 'Jekyll and Hyde' character. On the one hand, it makes the book more interesting to read; on the other, it is possible to argue that Morrall puts too much weight on the experiences of one person. It raises the question of what arguments would have been made if the story of someone who had had positive experiences with therapy had been used instead. Similarly, although the book is entitled *The Trouble with Therapy*, and the reader should therefore rightfully expect a critique, many of the arguments made seem overly one-sided. For example, in chapter eight Morrall discusses the happiness industry, which he contends has commodified happiness and promotes it as the ultimate goal in life. He argues that those deemed to be happy, however, are 'really ill-informed or idiots, or both', given the mess that global society is in (189). He argues that the happiness industry is fuelled by positive psychology (e.g. self-help programmes), which is something therapists collaborate in. There are two issues here. The first is that very little mention of therapy is actually made; the focus is on positive psychology, and therefore it seems that the two are somewhat conflated. The second, and related issue, is that therapy is more concerned with alleviating the suffering of those who are not as happy as the norm, or even positively distressed, as opposed to inducing a universal state of Nirvana. Here and elsewhere, there seems to be very little concession that in some cases therapy alleviates misery and suffering.

That said, this book is a critique rather than an appraisal, and so the bigger problem is that despite the author stating that he positions himself on the sceptical as opposed to cynical side of trouble-making, it is difficult to come away from the book with the impression that he holds his position throughout. At one point he presents the view that therapy is like prostitution, except that prostitutes are more sincere than therapists (211). Elsewhere he states that 'the therapeutic enterprise is spreading plague-like across Western society and is rapidly contaminating the rest of global society' (145). Overall, the tone of the book is mostly one of contempt for therapy, and seems in places to verge on the polemical, which might put off readers who would otherwise learn of the valid criticisms that *are* presented. The result might be *less* rather than *more* collaboration between sociology and therapy, which runs counter to Morrall's statement that his critique 'has the express aim of informing psychotherapy practice...'. Although they are thin on the ground and appear mostly as almost a footnote at the end of the book, Morrall does offer some suggestions as to how this aim might be achieved, by focusing more on social factors in therapy, recognising the limitations of scientific evidence, and training therapists with sociological knowledge, for example.

In sum, this book presents a broad range of well-contextualised sociological criticisms of therapy, and will be useful for readers who wish to gain background knowledge of them, as long as they are aware of the sometimes cynical nature of the text and often one-sided nature of the arguments made. What the reader makes of the book, of course, will depend to a large extent on their appraisal of therapy prior to reading it; it will undoubtedly find favour with those who are already mostly against therapy, and provoke interest in those who are already mostly for it. In my view, it is a pity that the author offers little positive sociological analysis of therapy. Given that we already more or less know what the trouble with therapy is, a book offering more suggestions for how we might overcome these problems would have been welcome. With that said, what is presented here is a critique, and in that respect it includes a number of interesting arguments, and should serve as a useful point of reference. Hopefully its value in encouraging debate is not compromised by its sometimes polemical tone.



Martin Seeleib-Kaiser (ed.)

Welfare State Transformations: Comparative Perspectives

Palgrave Macmillan 2008 £50.00 (hbk)

(ISBN 9780230205789) 280pp

Reviewed by Thomas Kostera, Université Libre de Bruxelles, Belgium

Since the welfare state's proclaimed crisis due to the end of the '*trente glorieuses*', many reforms have taken place across OECD countries to address the problems of rising unemployment, ageing populations and shrinking budgets. Much political and academic debate has revolved around the questions of if and how the state should retrench from its responsibility for social security by privatising certain social risks such as old-age, poverty, sickness or unemployment. Whilst path-dependent analysis suggested a stickiness of institutions, others pointed to the possible privatisation of risks according to 'neo-liberalist' ideas.

Instead of discussing whether or not the state should privatise social protection, the main concern of the book edited by Seeleib-Kaiser is to explore whether the public domain has actually surrendered silently to 'neo-liberalist' ideas of welfare or whether the changes in the public-private mix of welfare provision could instead be conceptualised as a transformation of the welfare state itself.

In the first theoretical chapter the analytical framework is developed. Suggesting a departure from conventional concepts of public social policy, Seeleib-Kaiser introduces the concept of *welfare systems* which takes into account the fact that the boundaries between the terms 'private' and 'public' are blurred since public social services do not necessarily equate to state services. Hence, private arrangements tightly regulated by the state do not fall outside the public domain of welfare provision. In order to gain a comprehensive understanding of possible welfare state transformations with regard to shifts from public to private social security, three different modes of policy intervention are analysed in the book: financing, provision and regulation of social policies. Furthermore, discourse, institutions and outcomes are set out as analytical dimensions.

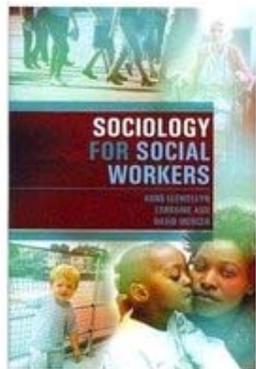
The book is then structured in three parts in order to address the question of whether change varies in its extent and contents among policy areas and countries. Part I of the book presents empirical studies, across different policy areas, of different advanced industrial countries such as Denmark, the United Kingdom, Southern and Central European states, and Japan. The second chapter, written by Martin Powell, analyses the change of the public-private mix in the United Kingdom across healthcare, pensions, elderly and family care. Showing how the pattern of change varies across services and over time, he discusses the decline of direct state provision and the increase in regulation and governance of social services. In the third chapter, Jørgen Goul Andersen inquires about a possible retrenchment of the Danish welfare state and analyses changes across unemployment, pension and other welfare policies such as healthcare, elderly care and education. The following chapter by Ana Guillén and Maria Petmesidou exposes the common traits of reform challenges to Southern European countries and changes in the public-private mix of social policy due to the catch-up process in welfare provision. The transformations

of the welfare state in Central and Eastern European countries are the focus of the fifth chapter by Martin Potůček. He analyses how democratisation, the establishment of the market economy and accession to the European Union have led to a broad variety of approaches to welfare provision in these countries. The first part is concluded by a chapter on the Japanese welfare state in which Roger Goodman shows how Japan's cultural heritage has led to a distinct pattern of welfare provision and thus to a distinct public-private mix after reforms.

Part II of the book provides cross-sectional analyses of different key policies. In the seventh chapter Paul Bridgen and Traute Meyer analyse the shift from state run pension systems to multi-pillar systems and its impact on the social inclusion of different social categories of retired citizens. The changing public-private mix in OECD healthcare systems with respect to financing, expenditure, service provision and regulatory structures is scrutinised in chapter 8 by Heinz Rothgang et.al. They show how systems move towards hybrid forms of healthcare systems due to contrary trends in reform measures. In the following chapter on unemployment policies Daniel Clegg focuses on institutional arrangements, looking at whether signs of state retrenchment can be found. Chapter 10 by Peter A. Kemp and chapter 11 deal with the changing notion of work and its recommodification, incapacity, and new social risks such as the balance between working and family life respectively.

Part III presents the conclusions. These are introduced by John Clarke's chapter on the complexity of welfare formations and the possibility of multiple rather than one-dimensional transformations of the welfare state. Chapter 13 by Seeleib-Kaiser summarises and discusses the results that point away from a simple privatisation of social policies to complex processes of refocusing state responsibility in welfare provision.

Seeleib-Kaiser's book represents an outstanding contribution to the literature on welfare state reforms, retrenchment and recommodification. By dissecting with sharp analytical precision the blurred terms of 'public' and 'private' responsibility in social policy, the authors show that the welfare state is neither as path-dependent nor as radically privatised as had been expected by some scholars. The different chapters expose the ways in which the state sometimes has to intervene more to do less and that changes in one state and across policies can represent contradictory trends. The variation between quantitative and qualitative methodological approaches, and between country comparisons across different policies on the one hand and cross-sectional analyses on the other, will provide the reader with rich information on the welfare state and inspiration for further research into different social policies and systems.



Anne Llewellyn, Lorraine Agu, and David Mercer

Sociology for Social Workers

Polity Press 2008 £18.99 (pbk)

(ISBN 0745636985) 264pp

Reviewed by Barbara Thomas, Ann Arbor, Michigan, USA

'Sociology for Social Workers' offers an introduction to the discipline of sociology for social work students. To engage their intended audience, Llewellyn and her colleagues demonstrate the relevance of sociology to the practice of social work throughout the text. The authors first provide a prologue that describes the sociology discipline, key sociological themes, and both

classical and contemporary theories. Next, the authors discuss broad social and structural factors, that should be of interest to social work students, in sociological terms—social class, inequality, crime and deviance. The remainder of the book consists of chapters that offer a sociological perspective on providing social work services to individuals in accordance with their achieved or ascribed statuses.

In the first part of the book, the authors introduce the reader to fundamental sociological themes. In so doing, they discuss the development of, and define the social work profession from a sociological perspective. Ostensibly, the authors took this approach to establish a framework for the remainder of the book. Perhaps appropriately, portions of this section are reminiscent of Mills' first chapter of *The Sociological Imagination* (1959). In this chapter, entitled 'The Promise', Mills put forward the notion that there is a reflexive connection between 'public issues' and 'private problems'. Throughout this section, Llewellyn and her colleagues present examples that highlight the interconnectedness of the individual and the group. In the chapter that follows, the authors continue their discussion of key sociological themes by situating them in a theoretical context. Each of the broad theoretical orientations is discussed: structural theories, social action theories and critical theories.

In the section that follows, Llewellyn and colleagues define and discuss social class, inequality, crime and deviance. These factors are discussed in terms of their general influence on the shaping of British society as a whole as well as their influence on individuals and their actions. The authors emphasise that social workers should understand the theoretical perspectives related to social stratification. Moreover, Llewellyn and colleagues describe the role of power in perpetuating the structure and processes whereby group membership (e.g., race or ethnicity, gender, age, etc.) determines life chances by facilitating or limiting access to resources. This discussion provides a good segue into the remaining chapters in the book, which discuss several achieved and ascribed statuses as they relate to their influence on the field of social work as well as key issues for work with various vulnerable and/or marginalised populations.

This textbook would be useful as a companion text in a social problems or introductory human behaviour in the social environment course.

Submitting a book review

Mso welcomes the submission of reviews of books that are of relevance to medical sociology. A list of books available for review is published in each edition, but the editorial team will also be happy to consider reviews of books not listed, provided they are of relevance to the medical sociology community. Please contact the editorial team if you would like a copy of a book for review. There is no prescribed format for reviews, although reviewers should provide the full reference of the book, including the price, number of pages and the ISBN. Reviews should be no longer than 1000 words. Completed reviews should be submitted as a Word document via email to mso@liv.ac.uk. Book reviews will not be subject to peer review, and the decision to publish them will be made by the editorial team. The editorial team also reserve the right to edit articles prior to publication.

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Jean Baxen and Anders Breidlid (Eds) (2009) *HIV/AIDS in Sub-Saharan Africa: Understanding the Implications of Culture and Context*. Cape Town: University of Cape Town Press.

Susan E. Bell (2009) *DES Daughters: Embodied Knowledge and the Transformation of Women's Health Politics*. Philadelphia: Temple University Press.

Cecil Helman (2008) *Medical Anthropology*. Aldershot: Ashgate.

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