Tropical illness profiles: the psychology of illness perception in Malawi

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Psychological and social investigations of tropical diseases can make a significant contribution to understanding and managing many illnesses. One-hundred and seventy-five Malawian university students rated peopled who suffered from AIDS, malaria, schistosomiasis and the 'common cold', on 11 psycho-social dimensions related to illness. Analysis of variance and factor analysis was used to distinguish distinctive illness profiles reflecting perceptions of (people with) these illnesses. Results suggested that infirmity was associated with AIDS and that the seriousness of malaria was minimized. Within a context of many threats to health the importance of distinguishing between serious illnesses is emphasized for effective health promotion interventions.

Keywords: illness perception; malaria; HIV/AIDS; schistosomiasis; common cold; Malawi

Introduction

Recently there has been a great deal of research concerning perceptions, behaviours, and coping mechanisms with regard to AIDS. Much of it has sought to identify high risk behaviours such as unprotected sex and intravenous drug use, which appear to be strongly influenced by factors such as sexual orientation and culture[1]. In many developing countries the transmission of HIV is primarily through heterosexual contact and injecting drug abuse plays a minor role[2]. By 1994, Malawi, with 12% of the total population estimated as being HIV positive, had one of the highest prevalence rates in the world[3].

By comparison to the flurry of activity in researching psychosocial aspects of HIV/AIDS there has been relatively little interest in social and psychological approaches to understanding other serious diseases which also occur in tropical regions. Furthermore, Vecchiato[4] has stated that biotechnological attempts to eradicate malaria have failed because they have neglected *subjective* beliefs about the illness.

To develop a better psychological understanding of tropical diseases, data is needed on how individuals perceive these illnesses, not in isolation, but in *relation* to one another. As an initial step towards a comparison of tropical diseases Ager[5] compared people's perceptions of their risk for getting malaria and schistosomiasis. He found that in Malawi both these common diseases were seen as unpredictable and uncontrollable. However, he also reported that there were *differences* between the two diseases in terms of what predicted people's adherence to preventive guide-lines (low risk behaviours). The present study was primarily concerned with comparing beliefs about people who are ill with AIDS and people who are ill with malaria. Schistosomiasis was included in the comparison as a serious, but usually less severe, endemic 'contrast illness', while the 'common cold' was included as a more global and less severe 'contrast illness'. Our hypothesis was that perceptions of people suffering from these different illnesses would vary. Such differences should be meaningfully related to health promoting initiatives.

Method

One-hundred and seventy-five students (130 males, 45 females) attending an introductory course at Chancellor College, University of Malawi, completed a questionnaire, during class time, as part of their course work. They all gave informed consent. Male students had a mean age of 21.24 (s.d. = 1.52), while female students had a mean age of 19.95 (s.d. = 1.79). This age and sex distribution reflects that throughout the college. The questionnaire was completed anonymously. The questions used were taken from those previously used in a study to explore perceptions of AIDS among students[6]. Students were asked to 'imagine someone who is ill with' ... each of four conditions, and rate them on eleven 7-point scales.

Results

The mean ratings for each illness on the eleven scales are given in Table 1. An analysis of variance (ANOVA) was conducted on each of the scales across the four illnesses. Significant differences were found on all scales. Post-hoc tests (Duncan Multiple Range Tests) were used to identify which illness ratings differed significantly (at 0.05 significance level).

To investigate the more general themes underlying subjects' ratings for each of the target diseases, factor analysis was performed on responses for AIDS and malaria. Table 2 shows the results of these principle components analyses (using varimax rotation) for the eleven rating scales shown in Table 1. Only factors with eigen values greater than 1[7] were 'interpreted'. This resulted in five factors for AIDS and four for malaria. The items loading on each factor, along with the total variance explained by each factor and our interpretation of these loadings (taking mean scores into account), is also summarised in Table 2. In both cases these factor solutions appear to be 'strong' with over 50% of the total variance being explained. This indicates that a small number of 'themes' can explain fairly well how subjects rated the different illnesses.

Table 1 Means (standard deviations) and F values for illness ratings on each scale.

	F	Illness ratings			
1 Not born with it	24.34	S	M[c]	C[ma]	A[a]
		1.35	1.47	1.76	2.73
		(1.24)	(1.36)	(1.72)	(2.13)
2 Does not look ill	75.23	C[s]	S[c]	A	M
		3.13	3.52	4.89	5.76
		(1.76)	(1.83)	(2.18)	(1.49)
3 Can not be cured	295.76	A	C	S[m]	M[s]
		1.77	5.42	6.19	6.17
		(1.85)	(1.93)	(1.26)	(1.17)
4 Can not work or go to school	43.34	M	A	S[c]	C[s]
		3.11	4.21	5.09	5.42
		(2.02)	(2.25)	(2.08)	(1.83)
5 Became ill suddenly	85.00	M	C	S	A
		2.53	3.37	4.75	5.57
		(1.66)	(1.93)	(1.85)	(2.14)
6 Not like me	18.64	A[s]	S[c]	M[c]	C[m]
		2.92	3.37	4.13	4.66
		(2.35)	(2.37)	(2.35)	(2.34)
7 Can not give illness to others	83.28	M	C	S	A
		3.18	5.54	5.65	6.45
		(2.31)	(2.21)	(1.92)	(1.28)
8 Is not to blame for illness	58.57	M[c]	C[m]	S	A
		2.14	2.59	3.65	4.79
		(1.82)	(1.99)	(2.10)	(2.03)
9 Unlikely to die soon	117.88	C	S	M	A
		2.02	2.84	3.86	5.52
		(1.65)	(1.78)	(1.81)	(2.03)
10 Not old	8.48	S[mc]	M[sc]	C[sm]	A
		2.65	2.85	2.95	3.47
		(1.61)	(1.45)	(1.57)	(1.55)
11 Could not have avoided illness	69.21	C	M	A[s]	S[a]
		3.07	3.73	5.36	5.64
		(2.08)	(2.05)	(1.95)	(1.82)

M and [m]: Malaria; A and [a]: AIDS; S and [s]: Schistosomiasis; C and [c]: Common Cold.
When superscript this denotes no significant difference between the ratings for these diseases and those with which they are paired.
All F values were significant at $P < 0.01$.
Lower ratings on the 1–7 scale indicate stronger agreement with the statements.

Table 2 Factor analysis on ratings for AIDS and Malaria

	AIDS	Malaria
First factor	20.8% infirm 2, −4	18.7% nasty 7,8,9,10,11
Second factor	13.0% at fault 8,11	14.9% ever present nuisance 1,4,5, −2
Third factor	11.9% longevity identification 6,10,9	10.6% young identification 6, −10
Fourth factor	10.7% dangerous progression 5,7, −3	10.0% curable 3
Fifth factor	9.4% congenital 1	—
Total percentage of variance explained	65.8%	53.3%

First: Variance explained.
Second: Interpretation of factors.
Third: Items constituting factors.

Discussion

AIDS was clearly distinguished from the other three illnesses by being seen as the least easily cured, having the most gradual onset and being the most contagious. Those people who had AIDS were judged as being the most to blame for their illness and the most likely to die soon. The factors identified through factor analysis accounted for an impressive 65.8% of the total variance in subjects' ratings. It appears that the strongest factor determining how people saw someone with AIDS was their degree of infirmity. Clearly people with AIDS were imaged to be 'infirm'. The themes of people with AIDS being 'at fault', of 'longevity identification' (being seen as similar to oneself and at the same time being anticipated to live for a long time yet), of 'dangerous progression' (seeing AIDS as a dangerous disease which is going to worsen) and seeing it as 'congenital' were additional aspects of how people viewed a person with AIDS. While infirmity, being at fault, dangerous progression and being congenital are perhaps easily understood ways of perceiving a person with AIDS, we suspect that 'longevity identification' is less so. This factor seems on the one hand to acknowledge that people who get AIDS are people like 'myself', and on the other hand to suggest that people like myself live for a long time.

This could be understood as reflecting the idea that once AIDS develops it can remit rather than steadily worsening and resulting in imminent death. However, we believe that an interpretation in terms of denial is possibly also valid. Although our students felt that people who get AIDS are like themselves, the notion that they are going to live for a long time suggests to us the feeling of invulnerability. This notion of perceived invulnerability regarding AIDS has also been noted in young people in Europe.[8]

Malaria was clearly distinguished by producing the most ill looking appearance, being the most debilitating illness regarding going to school or working, sufferers becoming ill the most suddenly and being the least contagious. Factor analysis indicated that the degree of 'nastiness' was the strongest theme determining how a person with malaria was seen. As the mean scores for malaria on this factor were generally rather low, this indicates that while 'nastiness' was an important theme in how people view malaria, in most cases it is not seen as a particularly 'nasty' illness. The idea of malaria being an 'ever present nuisance' was also a strong factor in how a person with malaria was percieved. Our students felt that young people, like themselves ('young identification'), were the sort of people who got malaria. The fact that malaria was also seen as curable is a prominent feature of how the illness was generally viewed. These themes seem to generally play down the seriousness of malaria.

Schistosomiasis was not clearly distinguished from the other illnesses by falling at any extreme on our scales. The common cold was more clearly distinguished by being seen as the hardest to have avoided and the least likely to cause death soon. Our results may be representative of only a rather small and select sample. Nonetheless, as 'opinon leaders' the influence that students' opinions have on others, especially in developing countries, can be quite significant. Even among the most educated of Malawian youth, dangerous misconceptions about AIDS and malaria persist. The importance of AIDS awareness campaigns emphasizing that people who are HIV positive or even those who have AIDS in remission, may look healthy (as opposed to infirm) is a key message to communicate in Malawi. The seriousness of malaria is being played down, it being seen as a 'ever present nuisance' The dangers of malaria (still the major killer in Malawi) should be strongly emphasized if people are to be motivated to avoid high risk behaviours. The approach of 'profiling' perceptions of different illnesses, in different illness contexts, offers a tool for increasing the sensitivity and in turn the effectiveness of health promotion in the tropics.

References

1 MacLachlan M. *Culture and Health* John Wiley and Sons: Chichester UK, 1997.
2 Bledsoe C. The politics of AIDS and condoms for state homosexual relationships in Africa: recent evidence from the local print media. *Disasters* 1991; **15** (1): 1–11.
3 Liomba G. *HIV/AIDS Statistics for 1993*. AIDS Secretariat, Ministry of Health: Lilongwe, Malawi, 1994
4 Vecchiato NL. Ethnomedical beliefs, heath education and malaria eradication in Ethiopia. *Int Quarterly Comm Health Educ* 1991; **11** (4): 385–397.
5 Ager A. Perception of risk for malaria and schistosomiasis in rural Malawi *Trop Med Parasitol* 1992; **43**: 234–238.
6 Eiser C, Eiser R, Lang J. Adolescents' beliefs about AIDS prevention *Psychol Health* 1989; **3** (4): 278–296.
7 Tabachnick BE, Fidell FS. *Using Multivariate Statistics*, 2nd edn. Harper: New York, 1989.
8 Woodcock A, Stenner K, Ingham R. *Young People Talking about HIV and AIDS: Interpretations of Personal Risk of Infection*. Department of Psychology: University of Southampton, UK, 1992.