

The last global review of the role of psychology in developing countries was edited by Sinha and Holtzman in 1984. This paper evaluates journal publications appearing in the Psychlit database in the decade following Sinha and Holtzman's review, focusing on studies which contain scientific evidence of practical outcome. There are three categories of such research, namely, social/organisational, health/welfare, and educational/developmental, with clear evidence of reliability, validity, and utility in each category, but largely in health and welfare. Despite this relative imbalance however, there are signs of what Sinha has defined as true indigenisation, namely, progressing beyond assimilation of, and anti-conformity against, the so-called "mainstream", towards a more pluralistic search for a psychology that works.

Psychology in Developing Countries: Reassessing its Impact

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Introduction

More than a decade has passed since the last major attempt to assess the impact of psychology in developing countries (Sinha & Holtzman, 1984). Based on a literature which was largely rhetorical and prescriptive, rather than empirical and explorative, that review contained the suggestion that far from aiding development, psychology could be having a retarding influence (Mehryar, 1984; see also, Connolly, 1985, 1986; Moghaddam & Taylor, 1985, 1986a, 1986b; Peltzer & Bless, 1989). This, Mehryar argued, had

been partly because of focusing on the victims of poverty rather than on the context of poverty. In this brief review we consider whether, over the last 10 years, psychology has moved on from its dismal performance up to the mid-1980s (Moghaddam, 1990).

In an age of accelerating information technology, we are accustomed to research literature increasing exponentially over the period of just a few years. The possibility that this may not be as true for research on the application of psychology to developing countries, as it is for research in other areas of psychology (Lonner, 1989) should be of concern to us. This is especially true if, with increasing internationalism and multiculturalism, we are not to ignore the greater part of humanity, struggling with the many social, psychological and physical deprivations of life in developing countries.

For the 10-year period up to and including 1984, a scan of the Psychlit database, conducted in December 1994 and using the search term "developing countr*" or "Third World", revealed that 330 journal articles were published. The corresponding figure for 1985-94 is 454, a growth rate of 38 per cent. This latter does not compare well with cross-cultural psychology (search term "cross cultural"), the growth rate of which was 58 per cent for the same period. The number of cross-cultural publications was also much higher: 3,017 and 4,752 respectively. Thus, despite the growth of interest in applying psychology to the problems confronting developing countries, that enterprise was still secondary to the interest in comparing cultures on various psychological attributes (Berliner, 1988; D. Sinha, 1990a; Sloan, 1989). Today, Psychlit will indicate to any user that the differential may be widening even further.

It is, however, important to acknowledge that much of the work in developing countries may not be published, or is published locally, and will therefore be beyond the reach of databases such as Psychlit. Examples would include regional journals, such as the *South Pacific Journal of Psychology*, and national journals, such as *Jurnal Psikologi*, in Malaysia. Fully translated English versions or reviews of such works (Sánchez & Wiesenfeld, 1991) are rare, and so any attempt to review the impact of psychology in developing countries must therefore be constrained by the reality that many indigenous psychology journals are not cited by expensive Western computerised databases. Although our access to the available

literature was therefore necessarily restricted and selective, we have provided a geographical breakdown of the data.

In addition, Psychlit remains the major database and, to the extent that larger samples tend to reduce the overall probability of error, it should give us a reasonably representative cluster sample. It gave us a *very* large sample, and for the sake of conceptual clarity, as well as to reflect themes discerned from our analysis of the literature, our review of the psychology of developing countries is set out under three broad headings. These are: (a) social and organisational psychology; (b) health and welfare psychology; and (c) educational and developmental psychology. These areas not only overlap, providing a degree of continuity, but they also appear remarkably consistent, whether we are considering psychology in Armenia (Jeshmaridian & Takooshian, 1994) or in Vietnam (Bazar, 1994).

Indeed, it may be argued that these three broad areas form the psychological basis for understanding the process of change integral to national development (Moghaddam, 1990; Shouksmith, 1996). As they are also widely judged to be the most relevant branches of our discipline (*New Scientist*, 1994), we feel that the use of these categories is justified in the present review. For each content area we present a summary table of the work to date, highlighting those papers which contain scientific evidence of practical outcomes, in particular reliability, validity and/or utility (Ross, 1984). Since these science practitioner indices are rare (see, Ecknesberger, 1989; Julio, 1992), even within "mainstream" psychology (Furnham, 1994; Kwiatkowski, 1994), we believe that they provide a stringent test of the impact of psychology in developing countries over the past 10 years. Finally, we have restricted ourselves to discussing only those studies which we felt, using our combined clinical judgement (Srinivas, 1995, p. 215) were particularly unusual, noteworthy or informative. We have, however, provided extensive references to assist the reader.

Social and Organisational Psychology

Social and organisational studies, published between 1985 and 1994, which relate to developing countries are summarised in

Table 1
Social/Organisational Psychology in Developing Countries
(Number of papers with demonstrated impact in brackets)

Issues	Regional Focus			Multiregional Focus	Sum
	Africa	Asia	Americas		
Selection	0	0	0	2 (2)	2 (2)
HRD ^a	8 (1)	16 (1)	4 (1)	17	45 (3)
Occ/Health ^b	2 (1)	2 (2)	2 (1)	1	7 (4)
Marketing ^c	3	1	4 (2)	9 (6)	17 (8)
Modernisation ^d	1	1	0	10 ^e	12
Intercultural relations ^e	3 (1)	0	1	6 ^e (2)	10 (3)
Interpersonal relations ^f	3	1	1	7	12
				GRAND TOTAL*	105 (21)

Notes: ^s This includes 1 study from Eastern Europe.

^a This includes 1 study from Eastern Europe.

^a Figures across Tables 1–3 do not tally to 454, because some papers (N = 4) were not readily classifiable into any of our three categories, while others (N = 22) straddled more than one of them.

^a In descending order: management development; achievement personality; technology transfer; organisational development; women in development; performance appraisal; ergonomics; vocational guidance; community participation.

^b All concerned with women in development.

^c Aid, market research, organisational seller behaviour, alcohol promotion, dehumanising effects of consumerism.

^d Changes in: crime rates; locus of control; family life; child labour; marginalisation; poverty due to arms expenditure; industrial status.

^e Intergroup attitudes, including stereotyping influenced by Western media coverage of developing countries.

^f Feminism; human rights; sexual jealousy; intimacy; interpersonal skills; attribution; and belief in heredity.

Table 1. A considerable proportion of papers have focused on foreign aid and investment. For instance, studies of occupational selection have reviewed the problems encountered by multinational assessment centres, concluding that the central problem is to determine

appropriate behavioural criteria for working in different cultures (Imada, Van Slyke, & Hendrick, 1985). In addition to this, discriminant function analysis has delineated a small number of variables which can accurately identify aid expatriates who will be relatively effective technical advisors to developing countries (Kealey, 1989).

Women in Development (WID) is high on the agenda of aid agencies, and concern with WID is reflected in the available psychological studies of human resource development (Sainz, 1986). In contrast to Western observations (there may be selection implications here), women employees in Pakistan have been found to have significantly higher organisational commitment than their male counterparts (Alvi & Ahmed, 1987). In the Caribbean, small businesses run by women have been found to benefit significantly from an intervention based on Locke's goal-setting theory (Punnett, 1986). Women also feature prominently in studies of organisational health and welfare. Several reports indicate that when women in developing countries secure paid employment, their home labours do not cease (Sánchez, 1993). Such increased demands have been observed to significantly increase stress and ill-health among women (Gallin, 1989). Indeed, it has been reported that, in Nigeria, for workers of both genders, job stress accounts for up to 41 per cent of the variation in general health (Shanar & Famuyiwa, 1991). Finally, while in the West adolescent prostitution tends to be associated with social stress, in Brazil it is likely to be motivated by adventurousness or by pure commercialism (Penna-Firme, Grinder, & Linhares-Barreto, 1991). Such distinctions, if true, are potentially important for enhancing the effectiveness of social marketing initiatives aimed at prostitutes (or "commercial sex workers") in developing countries (Clift, 1989).

Consumer behaviour in general is poorly represented in psychological literature, despite its wide potential. An exception is the psychology of Western public with regard to donating to overseas aid projects (Harper, 1991). Relevant research has involved developing sophisticated attributional measures of Third World poverty, and measuring their empirical relationships to the belief in a just (or fair) world (Harper & Manasse, 1992; Harper, Wagstaff, Newton, & Harrison, 1990). Although the link with donation behaviour remains unexplored (Furnham, 1993), such work may eventually contribute towards sensitising donor publics toward "First" and "Second" World perpetuation of poverty in the "Third"

World (Jordan, 1985; Mehryar, 1984). Already studied in that vein have been media portrayals of the so-called "Third World" and their negative impacts on stereotyping (Perry, 1985; Perry & McNelly, 1988), as well as an attempt to develop taxonomies of the delivery styles adopted by aid organisations and consultants, from the paternalistic to the participative (Gow, 1991; Lawrence, 1989; Sahara, 1991; see also, Cottam, 1989).

Nonetheless, psychology still has to prove its worth to policy makers and major aid organisations (Jones, Reese, & Walker, 1994). Previously however (Skjorshammer, 1984), psychologists had successfully demonstrated their worth in community programme goal setting and negotiating, surveys, data analysis and evaluation, and may also have a general role to play in social and organisational development (Sloan, 1990), for example, in training personnel how to manage relocation stress (White et al., 1991).

Health and Welfare Psychology

Studies concerning the psychology of health and welfare, published between 1985 and 1994, which relate to developing countries are summarised in Table 2. In developing countries this category of research appears to be the most prominent. It also seems that the international scientific community does perceive (a) a key role for psychologists and psychological factors in the provision of health care (Holtzman, Evans, Kennedy, & Iscoe, 1987; Lolas, 1985; Neghme, 1985; Schlebusch, 1986), and (b) that this role is one which involves both indigenous and "imported" constructs, such as behaviour modification (Elder et al., 1989) and source credibility (Budden & Hossain, 1986; Hubley, 1986).

In contrast to social and organisational research, there is empirical evidence of the psychometric properties of assessment questionnaires and interview schedules. For some of the psychometric measures used, there is evidence of interrater reliability (Serpell, 1988), classificatory face validity (Amering & Katschnig, 1989), predictive validity (Kua & Ko, 1992; Mari & Williams, 1993), culture fairness (Maj, D'Elia, Satz, & Janssen, 1993), and cost effectiveness (Sen, Wilkinson, & Mari, 1987; Durkin, Zaman, Thorburn, & Hasan, 1991). The literature also reflects some sensitivity—based

Table 2
Health/Welfare Psychology in Developing Countries
(Number of papers with demonstrated impact in brackets)

Issues	Regional Focus			Multiregional Focus	Sum
	Africa	Asia	Americas		
Relevant role perceived for psychology ^a	1 (1)	1 (1)	0	12 (6)	14 (8)
Assessment ^b	8 (3)	6 (2)	3 (5)	11 (5)	28 (11)
Schizophrenia	2 (2)	2 (2)	2 (2)	22 (14)	28 (20)
Managing drug dependency ^c	1	1 (1)	1	6	9 (1)
Comm. health ^d	15 (6)	7 (4)	2 (1)	18 (10)	42 (21)
AIDS ^e	3 (1)	0	1	13 (5)	17 (6)
Industrialisation ^f	7 (3)	1 (1)	6 (0)	29 (8)	43 (12)
Nutrition and caregiver* education ^g	0	4 (3)	5 (1)	26 (7)	35 (11)
Abuse and neglect ^h	1	1	1 (1)	8 (3)	11 (4)
(Inter)national migration ⁱ	3	2	1	6	12
Refugees ^j	0	0	7	5	12
Intervening vs disabilities ^k	1	3	0	8	12
				GRAND TOTAL	263 (94)

Notes: ^s This includes 1 study from Eastern Europe.

* This includes 1 study from Eastern Europe.

^a Biopsychosocial model, behaviour modification, clinical psychology, health education.

^b Tests and classification systems (often psychiatric).

^c Trends and suggested preventative measures for abuse of alcohol and (much less often) use of tobacco.

^d Buffering role for community and need for pluralistic forms of care.

^e Often prescriptive, theoretical models.

^f Physical (e.g., diet and road accidents), mental (e.g., depression and suicide), behavioural (e.g., delinquency), and including both children and the elderly.

^g Primarily nutrition, population control, and sanitation.

^h Familial (child, parental, spouse), extrafamilial (child), physical, mental, and sexual.

ⁱ Including street children.

^j From war, natural disaster, and torture.

^k Predominantly childhood, mental, and prescriptive.

on empirical studies—to interviewee effects (Kortman & Ten-Horn, 1989), ethnocentrism in criterion definition (Kortman, 1990; Wig, 1985), and the need for ethnographic, qualitative measures to complement quantitative data (Yach, 1992).

Earlier research had implied a link between “developing country” status and a comparatively benign course for schizophrenia. With one questioned reservation (Cohen, 1992), this finding has now been replicated in a wide variety of cultures and with a large number of subjects, involving over 20 international studies (some good examples can be found in *Psychological Medicine*, 22 [1], and associated Monograph Supplement 20). This apparently reliable finding may contain a number of lessons for Western cultures concerning the importance of family and wider social support networks (for a review, see Karno & Jenkins, 1993). The same lessons have previously been drawn with respect to childhood psychological disorders (De Almedia-Filho, 1984), and may apply to managing drug and alcohol dependency (De Silva, Peiris, Samarasinghe, & Ellawala, 1992).

Community health care also featured in earlier research, and the number of studies documenting a positive impact on community based interventions—in terms of both health outcomes (WHO, 1993) and financial utility (Gittelman, Nagaswami, & Asuni, 1989; Kay & Kabir, 1988)—has since grown. In addition, specific psychological impediments and facilitators to community practice have lately been identified (for earlier examples, see Frankel, 1984; Justice, 1984). One particular recent development is the idea that “cultural” influences on health programmes should include not only the culture of the local community, but also the “culture” of health organisations and bureaucracies, and even “international development” itself (Stone, 1992).

An important development over the last 10 years has been the accumulation of evidence in support of a pluralistic approach to health care. That is, one in which the value of both traditional and modern methods of healing is appreciated and integrated. Among the notable benefits of this integration are the increased impact of health services, their increased cost effectiveness, the incorporation of traditional support systems (families) into the healing process, and improved outcomes (Lefley, 1990; Stone, 1986). Recently, studies have also investigated the benefits of such pluralism at the *individual* level, both for the *consumers* of health

services (Frye, 1990) and for the *providers* of health care (Elliot, Pitts, & McMaster, 1992). The ability to tolerate more than one type of health intervention provides a psychological foundation for the *de-specialised* (or generic) health professional required by developing countries (Barbee, 1986; Jilek, 1986; Moghaddam, 1989; Stone, 1990).

AIDS prevention is one area where such despecialisation could release valuable human resources. Despite the widespread failure to control the epidemic (Crane & Carswell, 1992; Schopper, 1990), the scientific community does foresee a pivotal role for the behavioural sciences (Ankrah, 1989), for example, in determining the cultural appropriateness of intervention programmes (Airhihenbuwa, 1989), identifying at-risk segments of society such as women (De Bruyn, 1992), and mathematically modelling the demographic impact of sexual behaviour patterns (Anderson, 1992).

Psychological research has further impacted by determining the health correlates of industrialisation, both (previously) physical (Munroe & Munroe, 1984) and (latterly) mental. In particular, within developing countries, increases in socioeconomic status (SES) may bring significant *declines* in child mental health (Cederblad & Rahim, 1986) and an increased incidence of anorexia nervosa (Di Nicola, 1990; Sobal & Stunkard, 1989) and drug dependency (Baasher, 1989). The psychological underpinnings of these changes in health are at present being empirically investigated by psychologists in the field (Schumaker, Ohwona, & Akuamoah-Boateng, in press). Psychologists are also sounding empirical alarm bells about the implications of industrialisation for the care of the elderly in developing countries (D. Sinha, 1991).

Psychology appears to be impacting on a broad spectrum of human health and welfare in the developing world. In the case of childhood, studies have established a link between iodine deficiency and intellectual impairment (Dunn, 1992). Research effort has been made to assess the link between providing health education for caregivers and child nutritional status (Cleland & Van Ginneken, 1988, in particular with regard to diarrhoea; Stanton, Clemens, Khair, & Khatun, 1987). Patterns of child abuse and neglect in developing countries may differ substantially from the West, with familial neglect reported to be associated with poverty rather than necessarily with premeditation, and more intentional

abuse being extrafamilial (D'Antonio, Darwish, & McLean, 1993; Doeck, 1991; Farinatti, Fonseca, & Brugger, 1990). Finally, studies dealing with the rehabilitation of traumatised refugees have empirically demonstrated the positive impact of skills and therapeutic programmes with adult women (see, *Women and Therapy*, 13 [1–3], 1994), reasserted the need to design culturally appropriate interventions (Gong, Cravens, & Patterson, 1991; Morris & Silove, 1992), and identified stress buffers for children (Chemienti & Abu Nasr, 1992–93; Cliff, 1993).

Educational and Developmental Psychology

Educational and development studies, published between 1985 and 1994, in developing countries are summarised in Table 3. As can be seen the number of studies in this area was by far the lowest for the three categories used here. It would appear that time has substantiated reservations in the 1975–84 literature about using Western tests in the educational context. Intelligence tests are the most commonly used, and many lack appropriate norms, reliability, and predictive or discriminant validity, and even fail to discriminate between developmentally delayed (“retarded”) children and those without developmental problems (Hu & Oakland, 1991; Parmar, 1989). Opinion is divided over whether there are sufficient merits in such testing which outweigh the costs (MacKenzie, 1989). With regard to the measure of personality, evidence is equally equivocal, with assessments of instrument validity ranging from negative (Wilson, 1987) to positive (Ali, 1988). Nevertheless, a strong case can be made for psychometric testing in teacher selection (Brandon & Moriah, 1988; see also, Yoder, 1986), and the value (and validity) of psychometrics in predicting students’ choices of both subject (Akpan, 1986) and teacher style (Clarkson, 1984) has already been established.

Interventions designed to accelerate the development of literacy have also been successful. Significant improvements relative to controls have been demonstrated between sustained silent reading and academic achievement (Aranha, 1985) and Freire’s method of teaching literacy and critical awareness (Kiwia, 1990). In terms of general cognitive development, links have been empirically

Table 3
Educational/Developmental Psychology in Developing Countries
(Number of papers with demonstrated impact in brackets)

Issues	Regional Focus			Multiregional Focus	Sum
	Africa	Asia	Americas		
Testing	2 (2)	3 (3)	2 (2)	1 (1)	8 (8)
Literacy	1 (1)	2 (1)	0	2	5 (2)
Cognitive development ^a	2	3 (1)	1	5 (1)	11 (2)
Social development ^b	0	1	1	7 (1)	9 (1)
Sociocognitive ^c				2 (2)	2 (2)
Development of school psychology	4	1	2 (1)	7 (1)	14 (2)
Participation of community ^d	2	0	1	2	5
Tertiary ed. ^e	1	0	1	3	5
Precocity	1	0	0	0	1
				GRAND TOTAL	60 (17)

Notes: ^a Models, early intervention, science and technology, and distance learning.

^b Migrant adjustment, socialisation, moral, emotional.

^c Educational interventions generally; family influences on school achievement.

^d Caregivers' expectations, cultural forms of childhood reaction to political repression, limits of Western models.

^e Postgraduate selection policy and preparation for reentry. Training for mental health care, teachers, and statistics.

established between the provision of textbooks and mathematical achievement (Lockheed, Vail, & Fuller, 1986); gender and educational opportunities (Stromquist, 1989); and available resources and intervention success (Guthrie, 1986).

Human development in the wider sense also seems to have been accelerated. Integrated child development services in Latin America and India have led to both cognitive and social psychological benefits (D. Sinha, 1990b); similar results have been obtained in Thailand and Malawi (Lockheed, Fuller, & Nyirongo, 1989). School psychology (Oakland & Cunningham, 1992; Oakland & Wechsler, 1990) and child development research in general (Wagner, 1986), are being evaluated as attaining professional recognition in

developing countries. Despite the progress made in applying psychology to the educational and developmental problems of developing countries, a certain amount of frustration persists that policy makers do not listen to educational and developmental psychologists (Wagner, 1996).

Conclusions

Over the past 10 years much attention has been focused on applying the psychology of health and welfare to developing countries. Bearing in mind our introductory caveats, for every paper concerning educational/developmental psychology there were 1.8 papers on social/organisational psychology and 4.7 on health/welfare psychology. Considering only those papers which report a demonstrated impact, again health/welfare is the most prominent area (71 per cent of papers), followed by social/organisational (16 per cent) and educational/developmental (13 per cent). Within the context of scarce resources and tremendous needs of the "Third World", we would argue strongly for researchers to give priority to empirical demonstrations of the benefits of psychology, especially in the educational/developmental and in the social/organisational spheres.

Some leading commentators (Azuma, 1984; Berry, Poortinga, & Segace, 1992; Laboratory of Comparative Human Cognition, 1986; D. Sinha, 1989; J.B.P. Sinha, 1984; Sloan, 1989) have envisaged three stages in the progress of psychology in developing countries—stages that are reminiscent of Henri Tajfel's (1978) intergroup account of how social minorities find a "positively distinctive social identity". For psychologists in developing countries, such an identity would perhaps be predicated on finding a way of putting psychology effectively to work, without compromising traditional cultural values and social pride. According to Tajfel, this may entail either outperforming the outgroup on some common dimension (such as ingroup loyalty/community support, as in the improved prognosis for schizophrenia in developing countries; greater cognitive "tolerance", Carr, McAuliffe, & MacLachlan, in press; and more useful application of psychological technology) or (much rarer perhaps) finding some genuine,

qualitatively different attribute on which to differentiate the ingroup (such as describing a unique series of sociocultural developmental stages, see Nsamenang, 1996).

Stage one is normally characterised by attempts to assimilate into the mainstream, for example, by replicating Western studies in developing countries. This seems to have been the early template for psychology in developing countries (Shouksmith, 1996). The period covered by Sinha and Holtzman's (1984) review marks the beginning of stage two, which emphasises the positive aspects of cultural attributes. In this stage, however, the game is still controlled by the majority—Western psychology. As J.B.P. Sinha succinctly expressed it, "In the seventies, a large number of studies were conducted which ... tried to discover the cultural roots of our social behaviour [but] A typical feature of many of these studies was the tinge of negative self-image which led us to list 'what-we-are' in terms of 'what-we-are-not'" (1984, p. 173, parenthesis added; see also, Diaz-Guerrero, 1992).

The final possibility (stage 3) involves transcending both the conformity of stage 1 and the anti-conformity of stage 2, and assessing social reality independently of the "need" for comparison with other cultures. In the case of psychology, several scholars have argued that this would entail evaluating which forms of psychology *work* in the local context and independently of their origin (Diaz-Guerrero, 1990; Moghaddam, 1987; Moghaddam & Taylor, 1986b; Munandar, 1990; Nell, 1990).

In this review, we have addressed the issue of the contribution of psychology by focusing on those studies that have actually contributed towards development, by demonstrating either reliability, validity, or utility *in a local context*. Our review reveals that the number of such studies—although often published (and perhaps practised) by "social scientists outside the domain of psychology" (Moghaddam, 1990, p. 29)—has increased substantially from 1984 to 1994, and is continuing to increase. Psychology may finally, therefore, be contributing meaningfully towards development.

REFERENCES

- AIRHIHENUWA, C.O. (1989). Perspectives on AIDS in Africa: Strategies for prevention and control. *AIDS Education and Prevention*, 1 (1), 57–69.

- AKPAN, E.U. (1986). Factors affecting students' choice of science subjects in Nigerian secondary schools. *Research in Science and Technological Education*, 4(1), 99–109.
- ALI, M.R. (1988). Relationship between achievement motivation and academic performance of college students in a developing country. *Psychological Reports*, 63(3), 719–722.
- ALVI, S.A., & AHMED, S.W. (1987). Assessing organizational commitment in a developing country: Pakistan—A case study. *Human Relations*, 40(5), 267–280.
- AMERING, M., & KATSCHNIG, H. (1989). Panic attacks and culture-bound syndromes. *Psychiatria Fennica, Suppl.*, 91–95.
- ANDERSON, R.M. (1992). Some aspects of sexual behaviour and the potential demographic impact of AIDS in developing countries. *Social Science and Medicine*, 34(3), 271–280.
- ANKRAH, M.E. (1989). AIDS: Methodological problems in studying its prevention and spread. *Social Science and Medicine*, 29(3), 265–276.
- ARANHA, M. (1985). Sustained silent reading goes East. *Reading Teacher*, 39(2), 214–217.
- AZUMA, H. (1984). Psychology in a non-Western country. *International Journal of Psychology*, 19(1), 45–55.
- BAASHER, T. (1989). Drug and alcohol problems and the developing world. *International Review of Psychiatry*, 1(1–2), 13–16.
- BARBEE, E.L. (1986). Biomedical resistance to ethnomedicine in Botswana. *Social Science and Medicine*, 22(1), 75–80.
- BAZAR, J. (1994). Vietnamese psychologists meet challenges of a changing society. *Psychology International*, 5(3), 1–3.
- BERLINER, P. (1988). A model for usable cross-cultural psychology. *Psyke and Logos*, 9(1), 60–91.
- BERRY, J.W., POORTINGA, Y.H., & SEGALL, M.H. (1992). *Cross-cultural psychology* (ch. 16). New York: Cambridge University Press.
- BRANDON, E.P., & MORIAH, S.J. (1988). Vocational guidance for trainee teachers? Some Caribbean evidence. *British Journal of Guidance and Counselling*, 16(2), 157–166.
- BUDDEN, M.C., & HOSSAIN, N. (1986). Tobacco marketing campaigns and role model selection in developing countries: The case of Bangladesh. *Health Marketing Quarterly*, 4(2), 63–67.
- CARR, S.C., MCAULIFFE, E., & MACLACHLAN, M. (in press). *Cassandra's psychology of aid*. London: Routledge.
- CEDERBLAD, M., & RAHIM, S.I. (1986). Effects of rapid urbanization on child behaviour and health in a part of Khartoum, Sudan: I. Socio-economic changes 1965–1980. *Social Science and Medicine*, 22(7), 713–721.
- CHEMIENTI, G., & ABU NASR, J. (1992–93). Children's reactions to war-related stress: II. The influence of gender, age and the mother's reaction. *International Journal of Mental Health*, 21(4), 72–86.
- CLARKSON, P.C. (1984). Papua New Guinea students' perceptions of mathematics lecturers. *Journal of Educational Technology*, 76(6), 1386–1395.
- CLELAND, J.G., & VAN GINNEKEN, J.K. (1988). Maternal education and child survival in developing countries: The search for pathways of influence. *Social Science and Medicine*, 27(12), 1357–1368.

- CLIFF, J. (1993). The impact of war on children's health in Mozambique. *Social Science and Medicine*, 36 (7), 843-848.
- CLIFT, E. (1989). Social marketing and communication: Changing health behavior in the Third World. *American Journal of Health Promotion*, 3 (4), 17-24.
- COHEN, A. (1992). Prognosis for schizophrenia in the Third World: A re-evaluation of cross-cultural research. *Culture, Medicine, and Psychiatry*, 16 (1), 53-75.
- CONNOLLY, K. (1985). Can there be a psychology for the Third World? *Bulletin of the British Psychological Society*, 38 (8), 249-257.
- (1986). Psychology and the Third World: A commentary on Moghaddam and Taylor. *Bulletin of the British Psychological Society*, 39 (1), 8-11.
- COTTAM, M.L. (1989). Cognitive psychology and bargaining behavior: Peru versus the MNCs. *Political Psychology*, 10 (3), 445-475.
- CRANE, S.F., & CARSWELL, J.W. (1992). A review and assessment of non-governmental organization-based STD/AIDS education and prevention projects for marginalized groups. *Human Educational Research*, 7(2), 175-193.
- D'ANTONIO, I.J., DARWISH, A.M., & McLEAN, M. (1993). Child maltreatment: International perspectives. *Maternal Child Nursing Journal*, 21 (2), 39-52.
- DE ALMEIDA-FILHO, N. (1984). Family variables and child mental disorders in a Third World urban area (Bahia, Brazil). *Social Psychiatry*, 19 (1), 23-30.
- DE BRUYN, M. (1992). Women and AIDS in developing countries. *Social Science and Medicine*, 34 (3), 249-262.
- DE SILVA, H.J., PEIRIS, M.U., SAMARASINGHE, D.S., & ELLAWALA, N.S. (1992). A two-year follow-up study of alcohol-dependent men rehabilitated at a special unit in a developing country. *British Journal of Addiction*, 87 (10), 1409-1414.
- DIAZ-GUERRERO, R. (1990). Psychology and society: Selected contributions. *Revista Latinoamericana de Psicologia*, 22 (1), 131-160.
- (1992). The need for an ethnopsychology of cognition and personality. *Psychology: A Journal of Human Behaviour*, 29 (3-4), 19-26.
- DI NICOLA, V.F. (1990). Anorexia multiforme: Self-starvation in historical and cultural context: II. Anorexia nervosa as a culture-reactive syndrome. *Transcultural Psychiatric Research Review*, 27 (4), 245-286.
- DOEK, J.E. (1991). Management of child abuse and neglect at the international level: Trends and perspectives. *Child Abuse and Neglect*, 15 (1), 51-56.
- DUNN, J.T. (1992). Iodine-deficiency: The next target for elimination. *New England Journal of Medicine*, 326 (4), 267-268.
- DURKIN, M., ZAMAN, S., THORBURN, M., & HASAN, M. (1991). Population-based studies of childhood disability in developing countries: Rationale and study design. *International Journal of Mental Health*, 20 (2), 47-66.
- ECKNESBERGER, L.H. (1989). A bridge between theory and practice, between general laws and contexts? *Psychology and Developing Societies*, 1 (1), 21-35.
- ELDER, J.P., SCHMID, T.L., THOMAS, L., HOVELL, M., & MOLGAARD, C.A. (1989). The global relevance of behavioral medicine: Health and child survival in the developing world. *Annals of Behavioral Medicine*, 11 (1), 12-17.
- ELLIOT, E., PITTS, M., & McMASTER, J. (1992). Nurses' views of parasuicide in a developing country. *International Journal of Social Psychiatry*, 38 (4), 273-279.
- FARINATTI, F.A., FONSECA, N.M., & BRUGGER, E. (1990). Child abuse and neglect in a developing country. *Child Abuse and Neglect*, 14 (1), 133-134.

- FRANKEL, S. (1984). Peripheral health workers are central to primary health care: Lessons from Papua New Guinea aid posts. *Social Science and Medicine*, 19 (3), 279-290.
- FRYE, B. (1990). The process of health care decision making among Cambodian immigrant women. *International Quarterly of Community Health Education*, 10 (2), 113-124.
- FURNHAM, A. (1993). Just world beliefs in twelve societies. *Journal of Social Psychology*, 133 (3), 317-329.
- FURNHAM, A. (1994, 18 June). In search of the best person for the job. *New Scientist*, 45-47.
- GALLIN, R.S. (1989). Women and work in rural Taiwan: Building a contextual model linking employment and health. *Journal of Health and Social Behavior*, 30 (4), 374-385.
- GITTELMAN, D.J., NAGASWAMI, V., & ASUNI, T. (1989). Mental health promotion through psychosocial rehabilitation. *International Journal of Mental Health*, 18 (3), 99-116.
- GONG, G., CRAVENS, R.B., & PATTERSON, T.E. (1991). Clinical issues in mental health service delivery to refugees. *American Psychologist*, 46 (6), 642-648.
- GOW, D.D. (1991). Collaboration in development consulting: Stooges, hired guns, or musketeers? *Human Organization*, 50 (1), 1-15.
- GUTHRIE, G. (1986). Current research in developing countries: The impact of curriculum reform on teaching. *Teaching and Teacher Education*, 2 (1), 81-89.
- HARPER, D.J. (1991). The role of psychology in the analysis of poverty: Some suggestions. *Psychology and Developing Societies*, 3 (2), 193-201.
- HARPER, D.J., & MANASSE, P.R. (1992). The just world and the Third World: British explanations for poverty abroad. *Journal of Social Psychology*, 132 (6), 783-785.
- HARPER, D.J., WAGSTAFF, G.F., NEWTON, T.J., & HARRISON, K.R. (1990). Lay causal perceptions of Third World poverty and the Just World theory. *Social Behavior and Personality*, 18 (2), 235-238.
- HOLTZMAN, W., EVANS, R.I., KENNEDY, S., & ISCOE, I. (1987). Psychology and health care. *International Journal of Psychology*, 22 (2), 221-267.
- HU, S., & OAKLAND, T. (1991). Global and regional perspectives on testing children and youth: An empirical study. *International Journal of Psychology*, 26 (3), 329-344.
- HUBLEY, J.H. (1986). Barriers to health education in developing countries. *Health Education Research*, 1 (4), 233-245.
- IMADA, A.S., VAN SLYKE, M.D., & HENDRICK, H.W. (1985). Applications of assessment centres multinationally: The state of the art, obstacles and cross-cultural implications. *Journal of Management Development*, 49 (4), 54-67.
- JESHMARIDIAN, S., & TAKOOSHIAN, H. (1994). Country profile: Armenia. *Psychology International*, 5 (2), 8-9.
- JILEK, W.G. (1986). Witchcraft and psychotherapy. *British Journal of Psychiatry*, 149, 796-797.
- JONES, D., REESE, A., & WALKER, C. (1994, September). *Finding a role for psychology in development*. 29th Annual Conference of the Australian Psychological Society, Wollongong.
- JORDAN, J. (1985). And a psychology of the First World? *Bulletin of the British Psychological Society*, 38 (12), 417-418.
- JULIO, F. (1992). Balancing relevance and excellence: Organizational responses to link research with decision-making. *Social Science and Medicine*, 35 (11), 1397-1404.

- JUSTICE, J. (1984). Can socio-cultural information improve health planning? A case study of Nepal's assistant nurse-midwife. *Social Science and Medicine*, 19(3), 193-198.
- KARNO, M., & JENKINS, J.H. (1993). Cross-cultural issues in the course and treatment of schizophrenia. *Psychiatric Clinics of North America*, 16(2), 339-350.
- KAY, B.J., & KABIR, S.M. (1988). A study of costs and behavioral outcomes of menstrual regulation services in Bangladesh. *Social Science and Medicine*, 26(6), 597-604.
- KEALEY, D.J. (1989). A study of cross-cultural effectiveness: Theoretical issues, practical applications. *International Journal of Intercultural Relations*, 13(3), 387-428.
- KIWIA, S.F. (1990). The applicability of Freire's method of teaching literacy in a Third World context. *Psychology and Developing Societies*, 2(1), 85-98.
- KORTMAN, F. (1990). Psychiatric case finding in Ethiopia: Shortcomings in the Self-Reporting Questionnaire. *Culture, Medicine and Psychiatry*, 14(3), 381-391.
- KORTMAN, F., & TEN-HORN, S. (1989). Comprehension and motivation in responses to a psychiatric screening instrument: Validity of the SRQ in Ethiopia. *British Journal of Psychiatry*, 153, 95-101.
- KUA, E.H., & KO, S.M. (1992). A questionnaire to screen for cognitive impairment among elderly people in developing countries. *Acta Psychiatrica Scandinavica*, 85(2), 119-122.
- KWIATKOWSKI, R. (1994). Testing in the workplace. *The Psychologist*, 7(1), 10-34.
- LABORATORY OF COMPARATIVE HUMAN COGNITION (1986). Contributions of cross-cultural research to educational practice. *American Psychologist*, 41, 1049-1058.
- LAWRENCE, J.E. (1989). Engaging recipients in development evaluation: The "stakeholder" approach. *Evaluation Review*, 13(3), 243-256.
- LEFLEY, H.P. (1990). Rehabilitation in mental illness: Insights from other cultures. *Psychosocial Rehabilitation Journal*, 14(1), 5-11.
- LOCKHEED, M.E., VAIL, S.C., & FULLER, B. (1986). How textbooks affect achievement in developing countries: Evidence from Thailand. *Educational Evaluation and Policy Analysis*, 8(4), 379-392.
- LOCKHEED, M.E., FULLER, B., & NYIRONGO, R. (1989). Family effects on students' achievements in Thailand and Malawi. *Sociology of Education*, 62(4), 239-256.
- LOLAS, S.F. (1985). The emergence of the biopsychosocial approach: A model for Third World health care systems. *Social Science and Medicine*, 21(12), 1337.
- LONNER, W. (1989). The introductory psychology text and cross-cultural psychology: Beyond Ekman, Whorf, and biased IQ tests. In D.M. Keats, D. Munro, & L. Mann (Eds), *Heterogeneity in cross-cultural psychology* (pp. 4-42). Lisse: Swets & Zeitlinger.
- MACKENZIE, C.G. (1989). The eleven-plus examination in developing countries: A case study. *Educational Studies*, 15(3), 281-300.
- MAJ, M., D'ELLA, L., SATZ, P., & JANSSEN, R.S. (1993). Evaluation of two new neuropsychological tests designed to minimize cultural bias in the assessment of HIV-1 seropositive persons: A WHO study. *Archives of Clinical Neuropsychology*, 8(2), 123-135.
- MARI, J.J., & WILLIAMS, P. (1993). A comparison of the validity of two psychiatric screening questionnaires (GHQ-12 and SRQ-20) in Brazil, using Relative Operating Characteristic (ROC) analysis. *Psychological Medicine*, 15(3), 651-659.
- MEHRYAR, A.H. (1984). The role of psychology in national development: Wishful thinking and reality. *International Journal of Psychology*, 19(1), 159-167.

- MOGHADDAM, F.M. (1987). Psychology in the three worlds. *American Psychologist*, 42 (10), 912-920.
- (1989). Specialization and despecialization in psychology: Divergent processes in the three worlds. *International Journal of Psychology*, 24 (1), 103-116.
- (1990). Modulative and generative orientations in psychology. *Journal of Social Issues*, 46 (3), 21-41.
- MOGHADDAM, F.M., & TAYLOR, D.M. (1985). Psychology in the developing world: An evaluation through the concepts of "dual perception" and "parallel growth". *American Psychologist*, 40 (10), 1144-1146.
- (1986a). The state of psychology in the Third World: A response to Connolly. *The Bulletin of the British Psychological Society*, 39 (1), 4-7.
- (1986b). What constitutes an "appropriate psychology" for the developing world? *International Journal of Psychology*, 21 (2), 253-267.
- MORRIS, P., & SILOVE, D. (1992). Cultural influences in psychotherapy with refugee survivors of torture and trauma. *Hospital and Community Psychiatry*, 43 (8), 820-824.
- MUNANDAR, A.S. (1990). Indonesian managers, today and tomorrow. *International Journal of Psychology*, 25 (5-6), 855-869.
- MUNROE, R.L., & MUNROE, R.H. (1984). Health and wealth in four societies. *Journal of Social Psychology*, 123 (1), 135-136.
- NEGhme, A.R. (1985). Essential teaching philosophy should be that of the biopsychosocial method. *Social Science and Medicine*, 21 (12), 1339.
- NELL, V. (1990). One world, one psychology: "Relevance" and ethnopsychology. *South African Journal of Psychology*, 20 (3), 129-140.
- New Scientist Editorial Comment. (1994, June). *New Scientist*.
- NSAMENANG, A.B. (1996). Cultural organization of human development within the family context. In S.C. Carr & J.F. Schumaker (Eds), *Psychology and the developing world* (pp. 60-70). Westport, CT: Praeger.
- OAKLAND, T., & WECHSLER, S. (1990). School psychology in Brazil: An examination of its research infrastructure. *School Psychology International*, 11 (4), 287-293.
- OAKLAND, T.D., & CUNNINGHAM, J.L. (1992). A survey of school psychology in developed and developing countries. *School Psychology International*, 13 (2), 99-129.
- PARMAR, R.S. (1989). Cross-cultural transfer of non-verbal intelligence tests: An (in)validation study. *British Journal of Educational Psychology*, 59 (3), 378-388.
- PELTZER, K., & BLESS, C. (1989). History and present status of psychology in Zambia. *Psychology and Developing Societies*, 1 (1), 53-64.
- PENNA-FIRME, T., GRINDER, R.E., & LINHARES-BARRETO, M.S. (1991). Adolescent female prostitutes on the streets of Brazil: An explanatory investigation of ontological issues. *Journal of Adolescent Research*, 6 (4), 493-504.
- PERRY, D.K. (1985). The mass media and inference about other nations. *Communication Research*, 12 (4), 595-614.
- PERRY, D.K., & McNELLY, J.T. (1988). News orientations and variability of attitudes toward developing countries. *Journal of Broadcasting and Electronic Media*, 32 (3), 323-334.
- PUNNETT, B.J. (1986). Goal-setting: An extension of the research. *Journal of Applied Psychology*, 71 (1), 171-172.
- ROSS, A.S. (1984). Practical problems associated with programme evaluation in Third World countries. *Evaluation and Programme Planning*, 79 (3), 211-218.

- SAHARA, T. (1991). Donor delivery style, learning, and institutional development. *Journal of Management Development*, 10(6), 60–83.
- SAINZ, F. (1986). Women's present and future. *Boletín de Psicología El Salvador*, 5(20), 97–109.
- SÁNCHEZ, E., & WIESENFELD, E. (Eds). (1991). Latin America. *Applied Psychology: An International Review*, 40(2), 111–236.
- SÁNCHEZ, L. (1993). Women's power and gendered division of domestic labor in the Third World. *Gender and Society*, 8(3), 434–459.
- SCHOPPER, D. (1990). Research on AIDS interventions in developing countries: State of the art. *Social Science and Medicine*, 30(12), 1265–1272.
- SCHLEBUSCH, L. (1986). Medical psychology and psychoneurology: Contributions of clinical psychology. *South African Journal of Psychology*, 16(2), 47–56.
- SCHUMAKER, J.F., OHWONA, A., & AKUAMOAH-BOATENG, R. (in press). Eating disorders in Nigeria, Ghana and Australia. *Journal of Social Psychology*.
- SEN, B., WILKINSON, G., & MARI, J.D. (1987). Psychiatric morbidity in primary health care: A two-stage screening procedure in developing countries: Choice of instruments and cost-effectiveness. *British Journal of Psychiatry*, 151, 33–38.
- SERPPELL, R. (1988). Assessment criteria for severe intellectual disability in various cultural settings. *International Journal of Behavioral Development*, 11(1), 117–144.
- SHANAR, J., & FAMUYTWA, O.O. (1991). Stress among factory workers in a developing country. *Journal of Psychosomatic Research*, 35(2–3), 163–171.
- SHOUKSMITH, G. (1996). History of psychology in developing countries. In S.C. Carr & J.F. Schumaker (Eds), *Psychology and the developing world* (pp. 15–25). Westport, CT: Praeger.
- SINHA, D. (1989). Cross-cultural psychology and the process of indigenisation: Second view from the Third World. In D.A. Keats, D. Munro, & L. Mann (Eds), *Heterogeneity in cross-cultural psychology* (pp. 24–40). Lisse: Swets & Zeitlinger.
- (1990a). Applied cross-cultural psychology and the developing world. *International Journal of Psychology*, 25(3), 381–386.
- (1990b). Interventions for development out of poverty. In R.W. Brislin (Ed.), *Applied cross-cultural psychology* (pp. 77–97). New Delhi: Sage.
- (1991). Rise in the population of the elderly, familial changes, and their psychosocial implications: The scenario of the developing countries. *International Journal of Psychology*, 26(5), 633–647.
- SINHA, D., & HOLTZMAN, W.H. (Eds). (1984). The impact of psychology on Third World development. *International Journal of Psychology*, 19(1), 3–192.
- SINHA, J.B.P. (1984). Toward partnership for relevant research in the Third World. *International Journal of Psychology*, 19(1), 169–177.
- SKJORSHAMMER, M. (1984). Psychologists as participants in development projects in the Third World. *Tidsskrift for Norsk Psykologforening*, 21(5), 252–258.
- SLOAN, T.S. (1989). Beyond cross-cultural psychology: The case of Third World factory women. *Psychology and Developing Societies*, 1(2), 137–151.
- (1990). Psychology for the Third World? *Journal of Social Issues*, 46(3), 1–20.
- SOBAL, J., & STUNKARD, A.J. (1989). Socioeconomic status and obesity: A review of the literature. *Psychological Bulletin*, 105(2), 260–275.
- SRINIVAS, K.M. (1995). Organization development for national development. In D. Saunders & R.N. Kanungo (Eds), *New approaches to employee management in developing countries* (pp. 197–223). Greenwich, CT: JAI Press.

- STANTON, B.F., CLEMENS, J.D., KHAIR, T., & KHATUN, K. (1987). An educational intervention for altering water-sanitation behaviours to reduce childhood diarrhea in urban Bangladesh: Formulation, preparation and delivery of educational intervention. *Social Science and Medicine*, 24 (3), 275–283.
- STONE, G.C. (1990). An international review of the emergence and development of health psychology. *Psychology and Health*, 4 (1), 3–17.
- STONE, L. (1986). Primary health care for whom? Village perspectives from Nepal. *Social Science and Medicine*, 22 (3), 293–302.
- (1992). Cultural influences in community participation in health. *Social Science and Medicine*, 35 (4), 409–417.
- STROMQUIST, N.P. (1989). Determinants of educational participation and achievement of women in the Third World: A review of the evidence and a theoretical critique. *Review of Educational Research*, 59 (2), 143–183.
- TAJFEL, H. (1978). *Differentiation between social groups*. London: Academic Press.
- WAGNER, D.A. (1986). Child development research and the Third World: A future of mutual interest? *American Psychologist*, 41 (3), 298–301.
- (1996). Using social science for literacy work in developing countries. In S.C. Carr & J.F. Schumaker (Eds), *Psychology and the developing world* (pp. 81–89). Westport, CT: Praeger.
- WHITE, G.L., et al. (1991). Essential health education for deployment in underdeveloped countries. *Military Medicine*, 156 (4), 169–171.
- WHO (World Health Organisation). (1993). Mental health care in the Western Pacific region: Present status, needs, and future directions. *International Journal of Mental Health*, 22 (1), 101–116.
- WIG, H.H. (1985). Standardised assessment in developing countries. *Acta Psychiatrica Belgica*, 85 (3), 429–433.
- WILSON, A. (1987). Approaches to learning among Third World tertiary science students: Papua New Guinea. *Research in Science and Technological Education*, 5 (1), 59–67.
- YACH, D. (1992). The use and value of qualitative methods in health research in developing countries. *Social Science and Medicine*, 35 (4), 603–612.
- YODER, J.H. (1986). Gifted education: A view from the Third World. *Gifted Education International*, 4 (2), 74–79.

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