SIBLING RANK OF MALAY PSYCHIATRIC PATIENTS AND JUVENILE DELINQUENTS

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INTRODUCTION

Relationships of birth order to achievement and mental health have attracted considerable interest. Writers on the subject generally agree that ordinal position among siblings is more clearly related to particular personality traits and achievement than to mental health. The most recent thorough review and discussion is Sampson's (1965), and the most influential recent contribution is Schachter's *Psychology of Affiliation* (1959).

This study presents information on sibling rank of Malay psychiatric patients and juvenile delinquents that may help to clarify apparent contradictions between Euro-American and Asian findings. For instance, later-born siblings in the United States and England (Barry and Barry, 1967), but earlier-born males in India, Japan, and Singapore (Chinese), seem to be overrepresented among schizophrenic patients (Fig. 1). Such East-West differences may open an approach to a resolution of the dispute concerning the special effects of sibling rank upon mental health and achievement (Bayer and Folger, 1967; Schooler, 1961).

The explanations for relationships between sibling rank and state of mental health have been remarkably national and ethnocentric,

especially in dealing with sociopsychological hypotheses. The changing position of wage-earners in the Japanese economic system (Caudill, 1964), the special family responsibilities of Hindu Indian oldest sons (Rao, 1965; Sundararaj and Rao, 1966), the special prestige, responsibilities, and isolation of oldest Singapore Chinese sons (Murphy, 1959), and the tendency in America to favour boys have all been cited to explain why oldest male
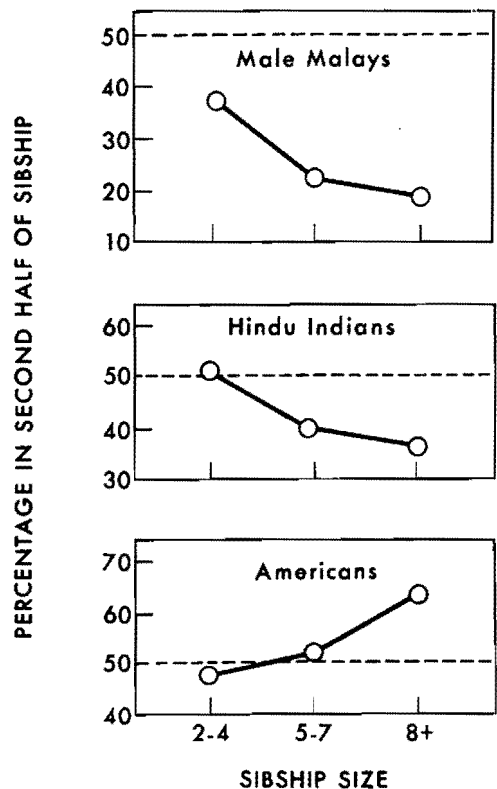

Fig. 1—Percentage of schizophrenic patients in second half of sibship (after Barry and Barry, 1967).

siblings in Asia and youngest females in America are overrepresented among the mentally ill. Yet boys are relatively more privileged in Asia than in America.

Malay attitudes toward the family of orientation *vs.* the family of procreation appear to be intermediate between those of Americans and those of the Chinese, Japanese, and Indians. Ancestor worship is absent; parents are child-oriented and do not expect to be cared for in old age by their children, but they nickname children according to birth order. The Malay family, smaller than the Chinese and probably than the Indian family, is nuclear in structure. Among Malays, as in much of Southeast Asia, male-female equality is relatively greater than in Chinese, Japanese, and Indian families (Burling, 1965).

This study presents sibling-rank data for 97 Malay psychiatric patients (61 inpatients and 36 outpatients) and 41 juvenile delinquents. The data for patients of each sex are examined in relation to all family siblings and to siblings of the patient's sex; in the latter case the patient is then described as either "male among brothers" or "female among sisters". "Only" siblings (five cases) are counted as oldest and youngest siblings. The term only siblings of one sex refers to true only children and those with siblings only of the opposite sex.

The report also presents sibling rank in relation to the general diagnosis of psychosis, to the more specific schizophrenias, and to symptoms of anxiety and depression. Economic status and family size are also examined.

MATERIALS AND METHODS[1]

The Malaysian research project of which this study is but a part was conducted from

July 1966 to June 1968. For 14 months before the structured study of deviant samples, the late Dr. Gerald Resner and the author made field studies, surveyed institutions for deviants, and became familiar with the folk-healing system, local mental health concepts, and aspects of the Malay community, its history, customs, and religion (Islam).

Employing a modification of Spitzer's Mental Status Schedule (Spitzer *et al.*, 1967) and an unstructured interview, I then examined 102 Malay psychiatric patients[2] and 41 juvenile delinquents, spending about $1\frac{1}{2}$ hours per subject. An interpreter was used only when a local Malay dialect was spoken. Sixty-one inpatients were hospitalized in the only three general hospitals with psychiatric facilities: the University Hospital in the capital, Kuala Lumpur (centrally located — population predominantly Chinese and Tamil); one in Kota Bharu, Kelantan (northeastern, predominantly Malay); and one in Georgetown, Penang (predominantly Chinese). Patients on the psychiatric wards of these hospitals, would represent a group less contaminated by chronicity, hospitalism, and physical therapies than those in the two government mental hospitals (total capacity 7,000) and would provide a small though relatively unselected sample. Probably this decision excluded a few violent patients, since they were more likely to be sent directly or transferred quickly to a mental hospital. The inpatient sample included all Malay psychiatric patients admitted to the University Hospital (Kuala Lumpur) during the study period (September 1967 to June 1968) and those on the psychiatric wards of the two government general hospitals. Ward administrators had been forewarned of the visit several months in advance, but, to prevent

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[1] A critique of the method may be obtained upon request to the author. It demonstrates the need for further study with larger samples and better controls.

[2] Sibling-rank information was not obtained for five cases, two inpatients and three outpatients. These were dropped, but 14 others with partial information were retained.

any special selection, did not know the specific date.

The 36 outpatients (also seen within the same period) included 19 nonpatient "cases" discovered in three villages across the Sarawak River from Kuching by Dr. Karl Schmidt Principal Investigator of the extensive psychiatric census research project there; five outpatients seen at the University Hospital; one rural villager seen in his own home; and 11 not necessarily typical referrals from the private Roman Catholic Assunta Hospital in Westernized, suburban Petaling Jaya. Only one of these 11 had originally been admitted as a psychiatric patient.

The 41 Malay teen-age boys of the Sungei Besi Approved school (reform school) represented all but the most serious or incorrigible male delinquents in Malaya between the ages of 15 and 18, that is, approximately 75% of the 10% of juvenile delinquents incarcerated.

A demographic survey of 300 families (1,600 people) was made in eight Malay villages: five in the subdistrict of Ulu Langat, Selangor; two in Trengganu; and one in Perak. They covered a broad range of urban-ruralness and were geographically and culturally similar to the three hospital samples although these villages were by no means an ideal control group. Interviewers were an Ulu Langat public health assistant and, for the other three villages, Malay university students raised near the villages they surveyed.

Hypothetically, if sibling rank and diagnosis are not associated, each sibling rank should have an equal chance of being represented in each patient group. The probability that specified associations were due to chance was tested by the chi-square method (A, Table 1) by comparing the number of first- or last-borns observed in each deviant sample with the number expected, figured from the patients' sibship sizes. For patients (and

Table 1

Oldest and youngest sibling ranks among Malay inpatients, outpatients, and juvenile delinquents*.

Samples		♂ oldest sibling	♀ oldest sibling	Oldest ♂ among brothers	Oldest ♀ among sisters	♂ youngest sibling	♀ youngest sibling	Youngest ♂ among brothers	Youngest ♀ among sisters
Inpatients									
	O-E*	13-9.5	6-6.8	19-15.3	10-9.5	7-9.5	7-6.8	13-15.3	10-9.5
	N*	39	20	32	12	39	20	32	12
	p*	<.20		<.20					
Outpatients (N = 14-19)	O-E	7-3.6	6-3.4	8- 7.1	7-5.7	2-3.6	4-3.4	7- 7.1	5-5.7
	N	16	19	14	14	16	19	14	14
	p	<.05	<.20						
Juvenile delinquents (N = 41)	O-E	16-8.6		19-13.4		5-8.6		10-13.4	
	p	<.01		<.10		<.20**		<.30**	

* Method A : $X^2 = \dfrac{(O-E)^2}{E} + \dfrac{[(N-O) - (N-E)]^2}{N-E}$

O = Σ number of oldest or youngest observed   N = Total sample

E = Σ number of oldest or youngest expected   P = Probability; values greater than .30 omitted

** Underrepresented

Table 2

Sibling rank and psychoses.

Samples		♂ oldest sibling	♀ oldest sibling	Oldest ♂ among brothers	Oldest ♀ among sisters	♂ youngest sibling	♀ youngest sibling	Youngest ♂ among brothers	Youngest ♀ among sisters	X² method*
Psychotic inpatients										
	O-E	13-8.8	4-5.1	18-13.6	5-6.0	6-8.8	6-5.1	10-13.6	8-6.0	
	N	32	15	27	10	32	15	27	10	A
	p	<.10	-	<.10	-	<.30**	-	<.20**	<.20	
Schizophrenic inpatients and outpatients										
	O-E	11-7.1	1-2.5	13-9.1	2-2.8	3-7.1	3-2.5	6-9.1	4-2.8	
	N	24	9	20	6	24	9	20	6	A
	p	<.10	-	<.10	-	<.10**	-	<.20**	-	
Psychoses vs. other diagnoses, inpatients										
	p	<.10	-	<.05	-	-	-	-	-	B
Schizophrenia vs. other diagnoses, inpatients + outpatients										
	p	<.20	<.10**	<.30	<.20**	-	-	-	-	B

* Method A: See Table 1

Method B: $X^2 = \dfrac{(|ad-bc| - 1/2N)^2 N}{(a+b)\,(c+d)\,(a+c)\,(b+d)}$, a 2×2 contingency table using $1/2N$ as Yates Correction Factor for small samples.

   a = Oldest (or youngest) who are psychotic (or schizophrenic)
   b = Others psychotic (or schizophrenic)
   c = Oldest (or youngest) not psychotic (or schizophrenic)
   d = Others not psychotic (or schizophrenic)
   N = Total sample
** Underrepresented.

delinquents), the differences by sibling rank regarding anxiety, depression, or psychosis were compared with their whole patient (or delinquent) sample, testing for the probability that such differences were due to chance (method B, Table 2). In other words, method A measures overrepresentation of a given sibling rank in a patient sample *vis-à-vis* the sibships of the patients, and tests differential likelihood of hospitalization or other deviant status for siblings of various ranks; method B measures overrepresentation for a particular diagnostic category within the sample and attempts to partially correct for differences in rates of hospitalization and thus find out how diagnoses or symptoms vary from one sibling-rank category to another within a whole deviant sample.

To compare such factors as family size, economic status, and diagnosis, the chi-square formula was used. Because of the small numbers and for the sake of discussion, 10% ($p < .10$) was considered as statistically significant. (See Solomon and Nuttall (1967), for criticism of the chi-square method.)

RESULTS

Deviant samples (inpatients, outpatients, and juvenile deliquents).

Sibling rank within the three samples (Table 1). The proportion of male oldest siblings within the outpatient sample exceeded expectation (p < .05); female oldest siblings were also excessive, though not significantly so. Among inpatients, an excess of male oldest siblings was not statistically significant, but an excess of oldest siblings among juvenile delinquents was (p < .01). For siblings oldest in reference to their own sex (for example, males among brothers), overrepresentation was significant among juvenile delinquents (p < .10), but not among inpatients. Only siblings (none) and only siblings in reference to their sex (three) were less well represented among juvenile delinquents than among patients, but neither category differed significantly from the eight-village survey.

Sibling rank and psychosis (Table 2). Male oldest siblings and oldest among brothers were overrepresented among the psychotic inpatients (p < .10), of whom 70% were schizophrenic. Youngest females among sisters were overrepresented, but youngest males among brothers were underrepresented, each at better than the 10% level. For inpatients, the distribution of psychoses in oldest, youngest, and all inpatients was also tested (method B). The proportion of psychoses in male oldest siblings and in oldest males among brothers (but not in male or female youngest siblings) was significantly higher (p < .10 and p < .05 respectively) than for the total group.

Male oldest siblings and oldest males among brothers were overrepresented (method A) (p < .10) among diagnosed schizophrenics in the inpatient sample. Male youngest siblings were underrepresented (p < .10), as were youngest males among brothers,

female oldest siblings, and, though the sample was small, oldest females among sisters.

Considering the relationship of schizophrenia to other inpatient diagnoses (method B), male oldest siblings were not significantly overrepresented (p = .15 or p < .20), but oldest female siblings were underrepresented (p < .10) and, without reaching significance, oldest females among sisters.

Concerning the withdrawal-vs-affiliation aspect of schizophrenia, catatonic patients should have been the most withdrawn and furthest from the affiliative tendencies of oldest siblings postulated by Schachter (1959), hence more likely to be later-born siblings. Since no schizophrenic patients examined were catatonic, the predominantly paranoid with predominantly depressed schizophrenics, was compared thus shifting attention from the dynamics of pure affiliation to the relationship between aggression and dependency (Breen, 1968). Because the sample was small, the sexes were combined. More male and female oldest siblings were paranoid than depressed (8:1), and more youngest were depressed than paranoid (2:1). First-and second-half sibships stood in like relationship. Although the smallness of the samples prevented statistical analysis, the raw figures suggested that among schizophrenics, male oldest siblings were more likely to be paranoid and female youngest siblings to be depressed.

Sibling rank and depression (Table 3). Although no significant association was found between depressed inpatients and sibling rank (method A), depressed male first-born inpatients were significantly underrepresented among all inpatients (p < .05) (method B).

Male oldest siblings were overrepresented among depressed outpatients (p < .05), a possible trend also of oldest females; yet both

Table 3

Sibling rank and depression.

Samples	♂ oldest sibling	♀ oldest sibling	Oldest ♂ among brothers	Oldest ♀ among sisters	♂ youngest sibling	♀ youngest sibling	Youngest ♂ among brothers	Youngest ♀ among sisters	X^2 method*
Depressed inpatients									
O-E	7-7.6	6-6.8	13-11.9	10-9.5	6-7.6	7-6.8	11-11.9	10-9.5	
N	30	20	24	15	30	20	24	15	A
p	-	-	-	-	-	-	-	-	
Depressed outpatients									
O-E	3-1.1	4-2.4	4- 3.0	5-4.4	0-1.1	2-2.4	2- 3.0	3-4.4	
N	7	13	7	10	7	13	7	10	A
p	<.05	<.30	-	-	-	-	-	-	
Depressed juvenile delinquents									
O-E	12-7.5	-	16-11.6	-	5-7.5	-	9-11.6	-	
N	34	-	29	-	34	-	29	-	A
p	<.10	-	<.10	-	-	-	-	-	
Depressed vs. other inpatients									
p	<.05**	-	-	-	-	-	-	-	B
Depressed vs. other outpatients									
p	-	-	-	-	-	-	<.30**	-	B
Depressed vs. other delinquents									
p	-	no significant relationships					-	-	B

* See Tables 1 and 2.
** Underrepresented.

may merely reflect the overrepresentation of oldest siblings in the outpatient sample. Depressed youngest brothers were equivocally underrepresented when compared with all male outpatients (method B). Oldest siblings were about equally overrepresented within the sample of juvenile delinquents and among the depressed patients of that sample.

Sibling rank and anxiety (Table 4). Male oldest siblings and oldest males among brothers were overrepresented among anxious inpatients, probably because of overrepresen-

tation in the whole sample (method A). No significant association between anxiety and sibling rank (method B), was found although oldest males among brothers tended to be overrepresented and oldest females tended to be underrepresented.

Male oldest siblings were overrepresented about equally among all outpatients and among anxious outpatients (p<.05 for both) (method A), but anxious outpatients were not especially likely to be male oldest siblings (method B).

Table 4
Sibling rank and anxiety.

Samples	♂ oldest sibling	♀ oldest sibling	Oldest ♂ among brothers	Oldest ♀ among sisters	♂ youngest sibling	♀ youngest sibling	Youngest ♂ among brothers	Youngest ♀ among sisters	X² method*
Anxious inpatients									
O-E	8-5.1	5-5.3	12-9.1	6-5.5	3-5.1	6-5.3	8-9.1	6-5.5	
N	22	13	17	9	22	13	17	9	A
p	<.20	-	<.20	-	-	-	-	-	
Anxious outpatients									
O-E	6-2.7	3-2.3	6-4.5	4-4.3	2-2.7	4-2.3	4-4.5	5-4.3	
N	13	13	11	10	13	13	11	10	A
p	<.05	-	-	-	-	<.30	-	-	
Anxious juvenile delinquents									
O-E	10-4.9	-	13-8.8	-	3-4.9	-	5-8.8	-	
N	21	-	18	-	21	-	18	-	A
p	<.01	-	<.05	-	-	-	<.10**	-	
Anxious vs. other inpatients									
p	-	-	<.30	-	-	-	-	-	B
Anxious vs. other outpatients									
p	-	<.20**	-	-	-	-	-	<.30	B
Anxious vs. other delinquents									
p	-	-	<.30	-	-	-	-	-	B
Anxious vs. others (all samples)	"Only" ♂	"Only" ♀					"Only" ♂ among brothers	"Only" ♀ among sisters	
p	-	-	-	-	-	-	<.30	-	B

* See Tables 1 and 2.
** Underrepresented.
"Only" males among brothers include "only" males and males with no male siblings; similarly for females.

Oldest siblings and oldest among brothers were overrepresented in the juvenile delinquent sample as a whole (p<.01 and p<.10 respectively) and to a greater degree among anxious delinquents (p<.01 and p<.05 respectively); youngest among brothers were underrepresented (p<.10); also more than in the overall delinquent sample. Anxious delinquents showed a tendency to be oldest among brothers when compared with the other delinquents.

Within the total small sample of true only siblings (five) and children whose siblings were all of the opposite sex (20), more males without brothers tended to be anxious than expected.

Table 5
Sibship size.

Samples	4 or fewer	5-7	8 or more	Total observed
	O-E	O-E	O-E	-
Inpatients	28-22.7	21-22.7	10-13.6	59
Outpatients	10-13.5	11-13.5	14-8.0	35
Juvenile delinquents	14-15.8	20-15.8	7- 9.4	41
Total observed	52	52	31	135

$$X^2 = \Sigma \; \frac{(O\text{-}E)^2}{E} + \frac{[(N\text{-}O) - (N\text{-}E)]^2}{N\text{-}E}$$

df 4, p < .05

Sibship size (Table 5). Inpatients came from significantly smaller families, outpatients from significantly larger ones (p<.05), contrasting with Western findings that inpatients tend to be later-born siblings from larger families (Barry and Barry, 1967; Schooler, 1961; Farina et al., 1963; Hare and Price, 1969).

Male first-born patients tended to come from large families (eight or more siblings) and male last-borns from smaller families (four or fewer siblings). This trend may counter the contention that male first-born patients are overrepresented merely because their sibships are incomplete (that is, younger sibs are still being born). This would have been a particular issue with the juvenile delinquents, who were young compared with the patients, yet more often than expected came from sibships of five to seven children. The number of female patients was too small to show a discernible trend.

Sibship size did not significantly differ for the sexes, thereby failing to support the idea that the birth of a son may limit the size of a family, advanced to explain overrepresentation of youngest male siblings in some Western studies.

Economic status[3] (Table 6). Inpatients were overrepresented in the poorest class and outpatients in the upper three classes (p<.02). Juvenile delinquents tended to be slightly poorer than patients. Male and female patients did not differ significantly as to economic status of their families.

No statistically significant relationship between sibship size (four or fewer, five to seven, eight or more) and the five economic levels was found though the wealthiest families were overrepresented among the largest sibships, and sibships of five to seven children were overrepresented in the poorest economic group, because of the weight of the delinquent sample. Comparison of male first- and last-borns showed no clear trend.

Economic backgrounds of schizophrenic and nonschizophrenic inpatients were similar. The significant difference in economic background between outpatients and inpatients probably reflects both diagnostic differences — neurotics vs psychotics — and the economic concomitants of urban or suburban residence,

[3] Based on a five-level breakdown of family income: less than Malaysian dollars (M) 50, 50-149, 150-249, 250-600, and more than 600 per month. $3.00 M = $1.00 U.S. = ŧ0.42.

Table 6

Family income, outpatients *vs* inpatients.

Samples	Family income*					Total observed
	1	2	3	4	5	
	O-E	O-E	O-E	O-E	O-E	
Outpatients	4-3.4	10- 6.8	9-5.3	11-14.7	1-4.9	35
Inpatients	5-5.6	8-11.2	5-8.7	28-28.5	12-8.1	58
Total Observed	9	18	14	39	13	93

*1 = >600 Malaysian $ per month
2 = 250-600
3 = 150-249
4 = 50-149
5 = <50

$$X^2 = \Sigma \frac{(O-E)^2}{E} + \frac{[(N-O) - (N-E)]^2}{N-E}$$

df 4, p < .02

Table 7

Comparison of deviants in samples with villagers in eight-village survey :
Sibship size and family income.

Sample	Sibship size (O-E)			Total observed	df	p
	<4	5-7	>8			
Deviants (IP, OP, JD)*	59-69.2	52-46.6	31-19.2	135	-	-
Villagers	150-132.8	84-89.4	25-36.8	259	-	-
Total observed	202	136	56	394	2	<.001
Deviants (IP, and JD)	42-53.5	41-34.81	17-11.7	100	-	-
Villagers	150-138.5	84-90.2	25-30.3	259	-	-
Total observed	192	125	42	359	2	<.02

	Level of Family Income (O-E)							
	1	2	3	4	5			
Deviants (IP, OP, JD)	9-3.4	20-12.0	20-28.6	61- 60.0	21-25.2	129	-	-
Villagers	2-7.6	19-27.0	75-64.4	132-135.1	63-56.8	291	-	-
Total observed	11	29	93	195	82	420	4	<.001**
Deviants (IP, and JD)	16-9.3***		11-21.5	50-45.5	20-21.0	97	-	-
Villagers	21-27.8**		75-64.5	132-136.5	63-62.3	291	-	-
Total observed	37***		86	182	83	388	3	<.01

* IP = Inpatients; OP = Outpatients; JD = Juvenile delinquents.
** If columns 1 and 2 are combined, df = 3, p <.001.
*** Columns 1 and 2 are combined because samples were small.

Table 8
Sibship size and family income of villagers*.

Sibship Size	Level of family income**				Total observed
	1 & 2***	3	4	5	
<4	9-11.7****	31-38.6	71-72.5	44-32.2	155
5-7	7-6.3	24-20.7	42-38.8	10-17.2	83
>8	4-2.0	11-12.6	11-12.6	1-5.6	27
Total observed	20	66	124	55	265

   * Sibship size and family income of deviant samples, p = n.s.
  ** See Table 6 for explanation of income levels.
 *** Income levels 1 and 2 are combined because samples were small.
**** Figures show observed minus expected numbers.

$$X^2 = \Sigma \frac{(O-E)^2}{E} + \frac{[(N-O) - (N-E)]^2}{N-E}$$

df 6, p < .01

since most outpatients came from the urban vicinity of Kuala Lumpur and the Sarawak state capital of Kuching.

Comparison of deviants with villagers of the survey (Table 7).

This comparison shows statistically significant differences in economic status and sibship size and their interrelationship.

Economic status - deviants *vs* villagers: In the eight-village survey (Table 7) economic status was based on occupation whenever monthly income was not specified. The villagers' families were less affluent than those of all deviants combined (p<.001) and, except in the poorest category, those of inpatients and delinquents (outpatients, being more urban, were omitted) (p<.01). Large village families were more affluent than small families (p<.01).

Sibship size - deviants *vs* villagers: The deviants came from larger families than the villagers (p<.001). When outpatients, who

tended to be urban, were omitted, the significance persisted (p<.02). Because larger families have more chance of being represented in any category, including deviants, the significance might be an artifact.

DISCUSSION

Male oldest siblings and oldest males among brothers, beyond their general overrepresentation in all three deviant groups (inpatients, outpatients, and juvenile delinquents), were significantly overrepresented only among psychotic and schizophrenic inpatients.

The underrepresentation of oldest depressed males among inpatients (Table 3) is particularly notable in that it conflicts with the trend toward overrepresentation of oldest males in the inpatient sample but is consistent with the reciprocal predominance of oldest male paranoid schizophrenic patients. Furthermore, rural Malays do not view depression as mental illness. Among depressed outpatients, youngest males and

youngest males among brothers were under-represented. Apparently, schizophrenia is underrepresented among oldest females, oldest females among sisters, youngest males, and youngest males among brothers (Table 2).

The directional trends are consistent although statistical significance was not always achieved with the chi-square test, partly as a function of the small sample sizes.

Relationships that invite further inquiry: Sibling-rank relationships by sex among schizophrenics are inversely related, males tending to be earlier born, females later born. A larger sample is needed to find our whether Malay female youngest siblings and Malay female youngest among sisters are overrepresented among hospitalized schizophrenics. Being the oldest male among brothers (which includes true oldest siblings and those with older sisters) seems to "protect" males slightly from being outpatients and juvenile delinquents, whereas being an oldest female among sisters (possibly having older brothers) is not consistently advantageous, though it "protects" slightly against being an outpatient. Being a youngest female among sisters (possibly having younger brothers) seems to make one more "susceptible" to psychosis. The youngest male among brothers may benefit by his status, being less likely to be depressed or anxious (Tables 3 and 4).

Other investigators have noted the influence of opposite-sex siblings (Sampson, 1965; Gregory, 1959), such as the asset of having one older opposite-sex sibling (but not two) in three-sibling families (Grosz, 1968).

Family size and economic status (comparison with eight villages): Deviants were from significantly larger and more affluent families than were the villagers in the eight-village survey, though the relative proportion of poverty was about the same if the more urban

outpatients were excluded. However, since infant mortality rates are high in rural areas[4] where the fertility rate is lower than elsewhere, family size may partially reflect survival rate, introducing other variables into the sibling-rank puzzle. These include effects of sibling death (including infant death) on the personality of other siblings and on parental behavior (Cain and Cain, 1964; Lubin, 1961) and a disguising of "true" birth order that would hamper evaluation of the physiological aspects of sibling rank. The average sibship size for each inpatient sample decreases as one moves from large to small urban centers, such as from Kuala Lumpur (5.8) to Penang (5.5) to Kota Bharu (5.0). Outpatients who live near cities— Petaling Jaya (Westernized suburb of Kuala Lumpur) (6.6) or Kuching (capital of Sarawak) (5.8) — hence near medical facilities, come from larger families than do those who are at some distance.

Let us examine the social-class variables. Mental and social deviance in Malaya seem to be associated with large families, high economic status, and urban proximity. If these variables are also related to sibling-rank patterns, then sibling rank would be associated with mental and social deviance through the effects of family size, social class, and urban proximity. For instance, "upward-striving" or "transitional" families

[4] Infant mortality per 1,000 live births, 1964: Kelantan (Kota Bharu)—71; Selangor (Kuala Lumpur)—40; Penang (Georgetown)—39. The mortality rate for males, like the male birth rate, is 20% higher than for females; hence, the ratio of Malay men to women remains 990:1000 (1947), 987:1000 (1957), and 993:1000 (1965). Total birth rate, 1964: 42.8: 1000 population in rural Kelantan; 44.8:1000 in urban Selangor.

The 1957 National Census, like the study samples, reveals a similar larger urban family size: 4.2 family members including parents in rural Kelantan, and 5.1 members in relatively urban Selangor. However, improved health conditions, including a drastically reduced infant mortality, and an increased literacy rate without a significant increase in birth control, may have affected these figures in the 10-year period following freedom from colonial rule in 1957.

(influenced by urbanization-Westernization) may put greater pressures upon oldest sons. Findings in the outpatient and delinquent samples, in which the deviants tended to come from villages and towns around the big cities, where Malays combine traditional with modern ways of life, would support this idea. Within the poorer, more rural inpatient sample where small families were overrepresented (p<.05), sibship size like sibling rank, diagnosis (schizophrenic vs nonschizophrenic), and sex was not related to economic status. But between deviants and villagers sibling-rank distribution, sibship size, and economic status differ significantly. Economic status is presumed but not proven to be directly related to urban proximity.

Since small sibship size was characteristic of both the group of more severely mentally ill inpatients and the village control, we may conclude that family size, while tending to exaggerate sibling-rank effects, is not crucially related to sibling-rank patterns. Furthermore, since economic status was unassociated with sibling rank in the small sample of deviants, the effects of rank cannot be considered by-products of social class.

Nevertheless, the significantly larger size and greater affluence of families of the total deviant sample (inpatients, outpatients, and delinquents) may be relevant to understanding the effects of social class on mental illness in the United States and elsewhere, where social class is usually inversely related to family size (Chen and Cobb, 1960). Sibship size might affect prevalence of mental disorder in heretofore unnoticed ways independent of social class. In this light, cultural change, transitional status, and social disintegration take on increased importance.

SUMMARY

Data on sibling rank for 97 Malay psychiatric patients and 41 juvenile delinquents

resemble those obtained in other Asian studies. Male deviants were more likely to be the oldest of their sibships, a trend probably increasing with family size.

Male oldest siblings and oldest males among brothers were overrepresented among inpatients, outpatients, and juvenile delinquents and among psychotics, particularly schizophrenics. Oldest males among brothers may have been overrepresented among anxious inpatients and delinquents but not among outpatients. However, underrepresentation of male oldest siblings among depressed inpatients suggests an inverse sibling rank relationship between depressive and other psychoses. This was further suggested by the observation that paranoid schizophrenics were more likely to be male oldest siblings; depressed schizophrenics, female youngest siblings.

Female oldest siblings were overrepresented among outpatients, underrepresented among anxious outpatients, and, along with oldest females among sisters, underrepresented as schizophrenics.

Male youngest siblings were underrepresented among outpatients and juvenile delinquents, more clearly so, along with youngest males among brothers, as psychotics and schizophrenics. No clear youngest sibling pattern emerged in reference to anxiety and depression. However, among delinquents, youngest males among brothers were underrepresented with anxiety, but were relatively overrepresented when compared with the whole delinquent sample. Although "only" siblings were few, they were evidently underrepresented among juvenile delinquents. Youngest females among sisters were overrepresented among psychotics and possibly among anxious outpatients.

Demographic variables showed that deviants tended to come from larger and more

affluent families than did the control group of villagers. Within the deviant groups, no simple associations existed between sibling rank, family size, economic status, sex, and diagnoses, but economic status and family size differed significantly by category of deviance; that is, inpatients usually came from smaller and poorer families than outpatients and from smaller but not poorer families than delinquents.

The issues of cultural change and transitional status were raised because outpatients and juvenile delinquents, who tend to be oldest male siblings, also tend to come from the vicinity of big cities.

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