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Mental health implications of sexual orientation

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Abstract

The findings of a study designed to examine relationships among four measures of clinical psychopathology (depression, self-esteem, marital discord, sexual discord), a measure of sexual attitudes, and measures of both sexual activities and sexual preferences are reported. These relationships are examined in relation to a four-group typology of sexual orientation based on self-report preference measures. Individuals are categorized as either predominantly heterosexual, homosexual, bisexual, or asexual in their preferred sexual orientation. The sample ($N = 689$) consists largely of younger, well-educated individuals who are predominantly single and come from diverse ethnic backgrounds. Analysis of variance and both simple and multiple regression analyses were used to control for the effects of background characteristics of respondents. Significant mean differences among sexual orientation groups were obtained, but the prediction or explanation of clinical psychopathology based on these differences proved to be very limited. After controlling for background characteristics of the subjects, sexual orientation differences maintained significance only for depression, uniquely accounting for less than 2% of its total variance. Implications of the findings for practice by the mental health practitioner are discussed.

It is a long-standing belief in our culture that "deviant" behaviors are likely to be associated with personal and social pathologies. Those who depart from sexual attitude and experience norms tend to be particularly susceptible to the label of deviance. Typically, such labels of deviance imply negative dispositional qualities about the individual that extend beyond the non-normative orientation or behavior in question. In lay terms, the common assumption is that something is "wrong" with such individuals. What is "wrong" with these indi-

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viduals may be ill-defined, yet it often involves implications that they are emotionally, psychologically, or morally not stable or well.

That the helping professions have contributed to this association of instability and lack of wellness is clear. Until 1973, the American Psychiatric Association included homosexuality as a diagnostic category in its *Diagnostic and Statistical Manual of Mental Disorders.* It was assumed that homosexuality, as both a preference and a mode of behavior, needed to be "cured" and that individuals with such a proclivity were disturbed in other areas of their personalities and social functioning. Unfortunately, the replacement diagnoses of sexual orientation disturbance and ego-dystonic (conflicted) homosexuality listed in later editions have not remedied the problem. These are still sufficiently ambiguous to allow considerable conjecture, as well as serve to define the desire to acquire or increase heterosexual arousal (in place of or in addition to homosexual arousal) as one of mental illness requiring a psychiatric disorder (Walker, in press). Ironically, it appears that before, you were sick if you liked being homosexual; now you are sick if you do not like being homosexual (MacDonald, 1976).

Much of the research literature regarding homosexuality reflects a similar bias through attempts to show that the homosexually-oriented manifest abnormal characteristics in addition to their "sexual perversion" (MacDonald & Games, 1974). According to several extensive literature reviews, however, much of this research has been characterized by poor or biased sampling procedures, vague, erroneous, or simplistic definitions of homosexuality, the application of inappropriate measures, and the lack of clear or consistent findings to support these assumptions (Coleman, 1982; Gonsiorek, 1977; Hudson & Ricketts, 1980; Meredith & Reister, 1980).

These indications are noteworthy in their potential for perpetuating stereotypes and dispositional attributions among researchers, helping professionals, and the general public that do not appear fully supportable by the scientific literature. Although the evidence is mixed, findings that there are no major mental health differences between the homosexually- or bisexually-oriented and heterosexuals is growing (for a detailed review, see Gonsiorek, 1977; also Coleman, 1978; Gagnon & Simon, 1973; Hoffman, 1968; Hooker, 1957; Horstman, 1975; Oberstone & Sukoneck, 1967; Ohlson & Wilson, 1974; Pillard, 1982; Thompson, McCandless, & Strickland, 1971). These writers do not attempt to claim that psychological disturbance is not evident among these nonnormative groups; only that the degree of disturbance is not consis-

tently greater than that of more normative sexual orientation groups.

This paper represents an effort to test the traditional assumption that heterosexually-oriented individuals constitute an upper end of a "wellness continuum" wherein heterosexuals can be expected to demonstrate significantly higher levels of satisfaction, stability, and functioning than homosexuals; the latter often thought to be at the lower end of that continuum. Part of this effort will include an examination of the degree to which personal descriptors in addition to sexual orientation can be expected to predict clinical psychopathology. An additional goal is that of applying a behaviorally specific measurement technique based on reported preference for well-defined sexual activities to the development of a typology of sexual orientation.

Two important issues are involved here: one of measurement and one of definition. Regarding measurement, there exists, to date, a scarcity of reliable and valid instruments for use in the study of mental health and human sexual functioning (Gonsiorek, 1982). Verbal ratings, evaluation of fantasy content, strictly behavioral measures of sexual activity, psychological and personality tests, and psychophysiological measures have all been employed to measure sexual orientation. Most of these, however, offer little direct, unambiguous information regarding sexual orientation or its possible association with psychopathology. Two tests, the Minnesota Multiphasic Personality Inventory (MMPI) and the Rorshach Index of Pathological Thinking, have been applied most frequently in attempts to discriminate homosexuals from heterosexuals and to address the question of whether homosexuality per se is pathological. Use of these and similar measures in this context, however, has been criticized due to their lack of reliability and objectivity (Chapman & Chapman, 1969; Dahlstrom, Welsh, & Dahlstrom, 1973; Hersen & Barlow, 1976).

Several worthy contributions have more recently been made to the measurement of sexual experience, interest, or preference (D'Agostino, McCoy, & Lacunda, 1976; Deragotis, 1976; Foster, 1977; Harbison, Graham, Quinn, McCallister, & Woodward, 1974; Hoon, Hoon, & Wincze, 1976). These measures, however, have not (with the exception of Harbison, et al.) been applied to questions of psychopathology as it relates to sexual orientation.

In terms of defining sexual orientation, questions remain regarding the nature and uniformity of its conceptualization. Should "orientation" be based on behavior, preference, or both? Should the definition be based on a specific number or proportion of sexual experiences or

should that be left completely to the respondent's subjective interpretation of their personal orientation? There are also methodological questions regarding such problems as sampling bias, social desirability response bias, and denial on the part of the respondent, as well as measurement error due to differing operational definitions.

The present definition is based on preference (although a definition based on activity scores is possible) and is intended to create an unambiguous typology for comparative purposes. Preference was chosen because it is free of many of the external constraints that are often imposed upon an individual's actual activity. Of course, in such instances where orientation was to be defined by actual participation or involvement in a given domain of sexual functioning, activity scores would serve well as the basis for a typology development. Statistical comparisons between activity and preference scores are provided in the method section. For purposes of this study, only four sexual orientation groups were compared: those who prefer heterosexuality, homosexuality, bisexuality (ambisexuality),[1] and those who largely prefer not to be involved in any sexual activities (asexuality). The heterosexual and homosexual comparisons were given greatest attention.

Method

This study was part of a larger research effort that was designed to study several aspects of sexual activity and preference, to examine the ways these relate to several clinically relevant problem areas, and to explore a somewhat different approach to the measurement of sexual activity and preference.

Subjects

The study was based on a non-random sample of 689 persons who voluntarily completed a detailed questionnaire concerning the extent to which they engaged in a wide variety of different sexual activities and the extent to which they preferred to engage in those activities. Along with this questionnaire, a background information sheet, four clinical well-being scales, and a sexual attitude scale were included to form the questionnaire packet answered by all respondents.

This sample was collected primarily from graduate and upperclass

[1]The term ambisexuality is introduced as a conceptual alternative and will be used throughout the remainder of this text to replace the term bisexuality. Iacono-Harris (Note 1) notes that the emphasis with ambisexuality is on *both* whereas the emphasis with bisexuality is on *equal* in regard to the degree of sexual orientation relative to both male and female partners.

undergraduate college students of social science courses. Interested students either completed the questionnaire during class time or received credit for filling it out in sessions administered by the author outside of class time. In all cases, the participants were fully informed of the nature of the study and of the survey questionnaire before deciding to participate. The questionnaires were administered to groups of students with confidentiality and anonymity of responses being stressed. The issue of social desirability response bias was discussed with participants who were encouraged to respond in ways that accurately characterized them at that point in time. Because of the non-random nature of the study sample, the extent to which results can be generalized cannot be assured.

The sample for this study was obtained from several states, but most of the respondents were from universities in Hawaii, Wisconsin, Kansas, New York, and California. Among the 689 respondents, 67.5% were female; the mean age was 25.0 years; and the mean number of years of school completed was 15.2.

The sample is quite diverse with respect to ethnic status as 46.1% were Caucasian, 30.2% were Japanese, 9.2% were Chinese, 3.1% were Hawaiian or part-Hawaiian, and 11.3% were described as a "mixed or other" ethnic group. The majority of the sample was single (69.9%), 20.3% were married, and 9.8% claimed some other marital status; 70.3% had never married, 24.7% had married once, and 4.9% said they had married two or more times.

There were 83.0% who had no children, 15.0% had one to three children, and only 2.0% had more than three children. The respondents' living arrangements were quite varied as 12.8% were living alone, 23.8% resided with one person, 17.8% resided with two other persons, and 18.6% and 14.2% resided with three and four other persons, respectively; 12.8% resided with five or more other persons.

All of these data indicate that the sample largely consists of younger, well-educated individuals who are predominantly single and come from diverse ethnic backgrounds. Because these respondents volunteered to complete a detailed and explicit questionnaire concerning their sexual activity and their preferences for such activity, it can be presumed that this is a liberal sample in terms of the respondents' attitudes toward human sexual expression.

Measurements

In addition to completing a background questionnaire that was used

to obtain the above data, each respondent completed four short-form clinical scales; a *Sexual Attitude Scale* (Hudson, Murphy, & Nurius, Note 2), and a multidimensional self-report questionnaire called the *Sexual Activity and Preference Scale* or SAPS (Hudson & Nurius, Note 3). The first of the four short-form clinical scales is called the *Generalized Contentment Scale* or GCS (Hudson & Proctor, 1977; Hudson, Hamada, Keech, & Harlan, Note 4) which was designed to measure the degree or magnitude of non-psychotic depression. The second scale, called the *Index of Self-Esteem* or ISE (Hudson & Proctor, Note 5) measures the degree or magnitude of a problem the client has with the evaluative component of self-concept. The *Index of Marital Satisfaction* or IMS (Cheung & Hudson, 1982; Hudson & Glisson, 1976) is the third scale, and it was designed to measure the degree or magnitude of a problem partners have in their marital relationship. Within the context of this study, "marital relationship" was expanded to include any ongoing intimate dyadic relationship. The fourth scale is called the *Index of Sexual Satisfaction* or ISS (Hudson, Harrison, & Crosscup, 1981) which measures the degree or magnitude of dissatisfaction that partners experience with the sexual component of their relationship. Each scale (including the SAS) has a reliability based on coefficient alpha of .90 or better (some have reliabilities as high as .96) and all of them have high face, discriminant, and construct validity. The details of the psychometric research that was conducted to validate these scales are reported elsewhere (Hudson, 1982).

The *Sexual Attitude Scale* or SAS was designed to measure the degree to which one adheres to a liberal or conservative orientation towards human sexual expression with higher scores indicating greater conservatism. This scale also has been found to have a reliability in excess of .90 and good discriminant validity (Hudson, Murphy, & Nurius, Note 2).

The *Sexual Activity and Preference Scale* or SAPS contains 78 items; each one describing a sexual activity in simple, specific behavioral terms. The respondent is asked to provide two ratings for each item: an estimate of the frequency with which one currently engages in the activity and an estimate of the frequency with which one would prefer to engage in that activity. Each item was rated as a category partition scale where 1 = Never, 2 = Rarely, 3 = Occasionally, 4 = Fairly frequently, and 5 = Very frequently.

The SAPS was factor-analyzed and was found to contain six separate dimensions. These are: Heterosexual Orientation (HET),

Homosexual Orientation (HOM), Autosexual Orientation (AUT), Anal Orientation (ANA), Multiple Partners Orientation (MUL), and a factor that represents Locational Variety (LOC)—variety in terms of the place where one engages in sexual activity. In terms of these six dimensions, the SAPS was found to have excellent to outstanding factorial validity. The content validity for each of the six factors is unambiguous because each item refers to an explicit behavior; those items identifying homosexual and heterosexual activities and preferences clearly identify the partner as a member of the same or opposite sex.

The reliability of each of the six activity and the six preference scales was determined by computing coefficient alpha based on the generalized Spearman-Brown formula (Nunnally, 1978). The reliability coefficients for the 12 subscales are shown in Table 1, where it can be seen that the lowest alpha was .759 and the highest was .976. A more detailed account of the psychometric characteristics of the SAPS is provided by Hudson and Nurius (Note 3). Statistical comparisons of preference and activity scores supported use of preference scores in the development of the sexual orientation typology. Although the correlations between activity and preference were generally quite high (see Table 1), preference scores showed somewhat higher alpha coefficients, and mean preference scores were generally higher than mean activity scores. For these reasons, preference scores were believed to be more accurate and representative of individuals' predominant orientation.

Table 1
Reliability and Correlation Coefficients for Sexual Activity and Preference Subscales

Preference Subscales	Coefficient Alpha	Activity Subscales	Coefficient Alpha	Correlation Coefficients
Heterosexual	.9757	Heterosexual	.9751	.74*
Homosexual	.9561	Homosexual	.9506	.79*
Autosexual	.8750	Autosexual	.8155	.72*
Anal Orientation	.8169	Anal Orientation	.7591	.87*
Multiple Partners	.8645	Multiple Partners	.7971	.75*
Locational Variety	.8630	Locational Variety	.7773	.52*

*$p < .001$.

The scores for all four clinical scales (GCS, ISE, IMS, ISS), the *Sexual Attitude Scale* (SAS), and the 12 subscales within the *Sexual Activity and Preference Scale* (HETA-P, HOMA-P, AUTA-P, ANAA-P, MULA-P, and LOCA-P) are computed to range from 0 to 100. The

four clinical scales each have a clinical cutting score of 30. That is, a score of 30 or more indicates the presence of a clinically significant problem in the area being measured; the higher scores corresponding to great severity. The scores on the SAS and SAPS are of relative importance (low to high), but because they do not measure personal or social dysfunction, they do not have clinical cutting scores.

Results and Discussion

Typology Developments

Four sexual orientation typologies were developed from the SAPS responses as a means of describing or defining a person's predominant sexual orientation.[2] These four distinct groups of people were defined in regard to homosexual and heterosexual preference measures. These are: (a) those who score less than 10.0 on both measures (asexuality), (b) those who score less than 10.0 on the homosexual measure and 10.0 or more on the heterosexual measure (heterosexuality), (c) those who score less than 10.0 on the heterosexual measure and 10.0 or more on the homosexual measure (homosexuality), and (d) those who score 10.0 or more on both measures (bi- or ambisexuality). There were 56 persons in the asexual group, 508 persons in the heterosexual group, 8 persons in the homosexual group, and 113 persons in the ambisexual group. These samples do not sum to 689 due to missing data. It should be noted that the above definition of homosexuality implies exclusive or almost exclusive homosexual orientation and is a more stringent definition than is commonly applied.

It is a consistently and widely reported phenomenon that males engage in and prefer a greater degree of homosexual activity than do females. Since this population was predominantly female (67.5%), one would expect slightly lower percentages of homosexual orientation than if the number of males were greater. Statistical comparisons between the sexes within this sample tended to support this expectation. Males demonstrated significantly higher levels of activity and of preference for all dimensions of sexual activity except the heterosexual

[2]The Heterosexuality and Homosexuality subscales were used to determine group membership. With a range of 0 to 100, an individual score of 10.0 represents an extreme end of the continuum by virtue of being a very low score. Therefore, a score of 10.0 or less on the homosexual measure, for example, would indicate an exclusive or very predominant non-homosexual orientation. The degree of the individual's heterosexual and asexual orientation would then be evidenced through their score on the heterosexual measure.

factor. Females exceeded males on both heterosexual activity and preference, but not to a significant degree.

Although the sample proportions were roughly in agreement with those currently reported in the literature, a slight reciprocal relationship is evident; the "exclusively homosexual" figures are smaller, and the ambisexual figures are larger for this sample. It is important to note that such comparisons across studies are difficult because of differences in defining and measuring sexual orientation. Given this methodological ambiguity, differences among samples regarding sexual orientation group membership should be interpreted with caution. According to Gagnon (1977, pp. 254, 261), approximately 3-4% of men and 2-3% of women are homosexually-oriented; within the present sample (and based on a somewhat different definition), 2.7% of men and .04% of women are so oriented.

Gagnon also reports that 15% of men and 10% of women are ambisexually-oriented, whereas in this sample 20% of men and 15% of women are ambisexual. Consistent figures are not as readily available in the literature regarding the prevalence of asexuality. However, the sample consisted of 5% of men and 10% of women reporting a predominantly asexual orientation. The problem of differing definitions previously described cannot be resolved at this point. The above percentage comparisons are made more to establish where the reported sexual orientation of this sample stands in relation to other research findings. Interestingly, males and females did not significantly differ according to any of the background traits (including general sexual attitudes) nor for three of the four clinical measures. Gender differences did achieve significance for ISS, the measure of sexual discord ($t(562) = 1.94$, $p < .05$). However, since this was the only significant difference among the clinical indices and the mean difference between the sexes was slight (less than 2 points), their scores were pooled and differences by sexual orientation within the total sample were considered.

Simple Mean Comparisons

Analysis of variance procedures were employed in testing for significant differences of means among the sexual orientation groups. Mean comparisons of sexual activity and preference scores are displayed in Table 2. The heterosexual and homosexual activity and preference scores have been excluded from this comparison due to the redundancy among these factors and the sexual orientation groups which were

developed from them (see footnote 2). All of the activity and preference subscales reflect statistically significant differences among the groups. Although no anticipated outcomes by group have been specified here, the very low scores across all dimensions for the asexual group and the greater orientation towards anal activity for the homosexual and ambisexual groups are consistent with expectations of this typology.

Mean comparisons of clinical scores among the four sexual orientation groups are presented in Table 3. As shown, the depression (GCS), self-esteem (ISE), and sexual satisfaction (ISS) score differences among the groups were significant ($p < .01$). For the three clinical variables found to be significant, the rank order of the means of the sexual orientation groups is identical for each. To the extent that clinical dysfunction was indicated, the asexual group demonstrated the greatest degree, the homosexual group was next, the ambisexual group followed, and the heterosexual group evidenced the least amount. These data would appear to conform to the wellness continuum described earlier with the addition of asexual individuals indicating even greater disturbance than the homosexually-oriented.

However, the actual mean differences between the groups is quite small; in most cases, well below the standard error of measurement for the SAPS. Further, these mean scores are all quite low relative to the 0 to 100 range possible on the clinical scales. Although the standard

Table 2
Mean Comparisons of Sexual Activity and Preference Scores among Sexual Orientation Groups

SAPS Scores[a]	R^2[b]	Sexual Orientation Group Means			
		Asexual	Hetero-sexual	Homo-sexual	Ambi-sexual
Multiple Partners-A*	.1272	2.32	10.17	29.90	20.86
Anal-A*	.1497	0.85	7.26	20.66	15.69
Autosexual-A*	.1726	3.86	20.32	32.50	35.66
Locational Variety-A*	.1022	3.18	13.37	22.66	18.84
Multiple Partners-P*	.1500	2.37	17.85	38.54	35.15
Anal-P*	.2875	0.39	10.03	26.91	28.12
Autosexual-P*	.1956	3.46	22.07	38.75	42.62
Locational Variety-P*	.1310	3.21	31.16	38.84	38.51
Total-A*	.2700	4.96	24.24	27.28	31.21
Total-P*	.3715	3.06	33.72	33.03	47.15

[a]See footnote 3; A = activity; P = preference.

[b]R^2 represents the proportion of variance for each variable that was accounted for by the differences among the group means.

*Differences among means were significant at $p < .001$.

Table 3
Clinical Scale Means and Standard Deviations
by Sexual Orientation Groups

Clinical Scales	R^{2a}	Sexual Orientation Group Data[b]			
		Asexual	Hetero-sexual	Homo-sexual	Ambi-sexual
Depression (GCS)*	.0257				
M		28.51	22.32	28.13	24.44
SD		14.61	10.69	13.54	12.93
N		57	505	8	113
Self-esteem Problems (ISE)*	.0213				
M		33.57	25.88	29.88	26.54
SD		17.57	13.68	16.24	16.26
N		57	504	8	114
Marital Discord (IMS)	.0054				
M		22.87	20.39	29.16	22.56
SD		18.14	15.94	21.95	18.02
N		35	374	4	80
Sexual Discord (ISS)*	.0273				
M		28.19	18.48	20.67	19.82
SD		15.29	13.11	14.62	13.46
N		31	433	6	93

[a]R^2 represents the proportion of variance in the clinical scale scores that is accounted for by the differences among the sexual orientation group means.
[b]Cell sizes vary due to missing data.
*Differences among means were significant at $p < .001$.

deviations indicate a sizable range among scores, the group means reflect an overall lack of marked disturbance.

To establish better whether these significant differences can be regarded as clinically important, the possible influences of intervening variables must be considered. Specifically, is there a relationship between the clinical measurement scales and the sexual orientation groups after eliminating the effects of sexual attitude and background characteristics? Mean comparisons provide evidence that the sexual orientation groups do differ significantly in relation to their background characteristics and their sexual attitudes ($p < .01$). These traits include age, sex, ethnicity, education, marital status, number of marriages, number of children, and number in household. For purposes of analysis, sexual attitudes will be included when referring to background characteristics. Most notably, the homosexual and ambisexual groups are older, live with fewer people, are more liberal in their sexual attitudes, and are somewhat more likely to be Caucasian. More detailed information on differences in sexual activity, preference, and attitude according to background trait descriptors is reported else-

where (Nurius & Hudson, 1982). These variables were then tested for potential interaction effects with sexual orientation and for moderating effects between sexual orientation and the measures of clinical pathology.

Testing for Interaction and Moderating Effects

A test for interactions was conducted to determine whether their exclusion from analysis was justified; the dropping of nonsignificant interaction terms permitting more parsimonious analysis and unconditional interpretation of outcomes. This was accomplished by regressing each of the clinical measures onto background characteristics (BC), the four sexual orientation groups (SO), and their interactions in an hierarchical multiple regression solution. The categorical variables were treated as dummy coded variables. In testing for each of the three *groups* of variables at $\alpha = .017$, interactions were found to be significantly related only to depression (GCS).[3]

Each of the individual interaction components of GCS was then evaluated to determine which ones were responsible and should be retained in the model.[4] As none of the individual interaction components proved to be significant, the decision was to drop them from analysis. Since no interactions were retained, all were pooled into the error term and subsequent analysis was based on linear additive regression solutions.

The background characteristics were then examined for unique contribution to clinical pathology and for their shared variance with sexual orientation in relation to the clinical measures. To do this, two regression solutions were compared; one that included the background characteristics (including sexual attitudes) as covariates, and one that

[3]The alpha level used to test each group is derived from a general formula to maintain an overall protection against committing a Type I error at the .05 level by taking the number of the model components into account (Bock, 1975; Finn, 1974; Hudson & Murphy, 1980). The general formula is:

$$\alpha_T = .05 = 1 - (1 - \alpha_i)^k \text{ and } \alpha_i = 1 - \sqrt[k]{1 - \alpha_T}$$

In this case:

$$\alpha_T = .05 = 1 - (1 - .05)^3 \text{ and } \alpha_i = 1 - \sqrt[3]{.95} = .01695$$

[4]The alpha level for each of the 33 interaction components was computed as:

$$\alpha_i = 1 - \sqrt[33]{.95} = .000518.$$

Nine *sets* of interactions comprised of groupings of the nine background characteristics interactions with sexual orientation and a pooling of the above 33 degrees of freedom were also tested ($\alpha = .002$) and found nonsignificant.

did not. When the effects of BC were removed in the covariate model, the variance in the clinical measures attributable solely to sexual orientation was lower than in the simple regressions that did not control for these effects. This confirms that BC was not creating a suppression effect.

On the other hand, it appears that BC was confounding the relationship between sexual orientation and the clinical measures of self-esteem and sexual discord. These two measures (ISE and ISS) were significantly related to sexual orientation in the simple model but were not in the covariate model. Thus, what appeared to be a significant relationship could be accounted for by the differences among the subjects with respect to background characteristics. In terms of their unique contribution to clinical disturbance, BC as a set was found to be significant for all but the measure of marital discord (IMS). The squared correlations derived from both models are noted in Tables 3 and 4.

Sexual Orientation Effects in Relation to Clinical Measures

The covariate model was examined next to determine to what extent sexual orientation accounts for the variance in each of the clinical

Table 4
Analysis of Clinical Measures by Sexual Orientation Controlling for Background Characteristics

Source	*df*	*ms*	*F*	*p*	R^{2a}
Depression (GCS)					
BC	14	702.74	5.83	.001	.1104
SO	3	502.05	4.16	.006*	.0169
Error	645	120.60			
Self-esteem Problems (ISE)					
BC	14	1618.66	8.76	.001	.1578
SO	3	512.46	2.77	.04	.0107
Error	646	184.81			
Marital Discord (IMS)					
BC	14	300.75	1.11	.344	.0338
SO	3	114.28	0.43	.740	.0027
Error	461	270.29			
Sexual Discord (ISS)					
BC	14	687.31	4.17	.001	.0983
SO	3	442.60	2.68	.045	.0136
Error	646	164.91			

[a]R^2 represents the proportion of variance in the clinical scale scores that is accounted for by the differences within the background characteristics (BC) and the sexual orientation (SO) variables in an hierarchical multiple regression model.

*Significant at $p < .017$, using protected alpha.

variables once the effects of BC and SAS have been removed or controlled for. After eliminating the effects of BC and SAS, sexual orientation was not significantly related to self-esteem (ISE), marital discord (IMS), or sexual discord (ISS), but was to depression (GCS).

As noted in Table 3, the variation within each clinical measure attributable to sexual orientation irrespective of attitudes or background traits was significant for GCS, ISE, and ISS, but not for IMS. The amount of variance of each of the clinical variables that was accounted for by differences in sexual orientation, however, was very modest (Table 3: R^2 for GCS = .0257, ISE = .0213, IMS = .0054, ISS = .0273). In short, sexual orientation can be expected to make a significant but very small contribution to the explanation of variance in these problem areas, and the explainable variance is reduced even further when backgrounds and attitude variables are considered.

Conclusion

These data indicate that statistically significant differences in sexual activities, preferences, and background characteristics do exist for this sample when sexual orientation groups are defined using the four-group typology. The differences are greatest concerning the sexual activities and preferences of the respondents as one would logically expect. The area of next greatest variance was that of general sexual attitudes followed by age as the single most significant variable among the background characteristics.

Clearly, depression (GCS) is significantly related to sexual orientation even after all background variables have been held constant ($p < .006$). Similarly, GCS was the only clinical measure for which there were significant interactions, yet no single interaction could be identified to account for a significant amount of variation. The clinical relevance of this statistical relationship needs to be carefully and cautiously assessed. That these differences bear substantial utility in the prediction or explanation of clinical psychopathology for an individual is not strongly supported. That is, although there is an unmistakable statistically significant relationship between depression and sexual orientation, the proportion of variance that it can account for is so low ($R^2 = .0169$; Table 4) that its clinical relevance would appear to be quite limited.

Cause and effect associations cannot be established on the basis of correlational relationships or regression analysis alone. The potential influence of other unexamined variables such as social expectations

and social sanctions needs to be considered. If a client demonstrates clinical disturbance that appears related to sexual orientation, to what extent is this distress directly *due* to the sexual proclivity versus being an indirect *consequence* of it? The essential question is to what degree is the individual's problem rooted in their sexual preference per se and to what degree is he or she paying the price of norm-breaking via social sanctions? As such these social influence variables were not included in this design so the question remains to be answered by future research.

However, another approach to examining this issue is through the application of a person-environment (P-E) fit model (French, 1973; French, Rodgers, & Cobb, 1974). P-E fit (or "misfit") represents a measure of the discrepancy between the rewards and demands in the environment and the motives and abilities of the individual. The amount of a given characteristic desired by the person (P) is subtracted from the amount of the characteristic required or allowed by the environment (E) to produce a score representing the P-E fit. A score of zero represents a perfect fit, a negative discrepancy ($E < P$) denotes that the environment is providing less of the characteristic than the person wants, and a positive discrepancy ($E > P$) occurs when the environment requires or allows for more than the individual wants (Caplan, Cobb, French, Harrison, & Penneau, 1980). In the present case, the discrepancy between sexual activity (E) and the preference for these activities (P) may well prove to constitute a valuable approach to the study of psychological strain or distress. The application of such a paradigm is of potential importance in that it represents a novel conceptualization of clinical psychopathology that is not dependent upon an illness model, incorporates both personal and environmental factors, and is based upon a theoretical and quantitative model with substantial empirical support. Further research on the use of this model in relation to human sexual expression and functioning is currently underway (Note 6).

Until further empirically supported guidelines are available, the clinician would gain better evidence of causality if the unanswered questions regarding the impact and consequences of one's sexual orientation on mental and emotional well-being were considered and explored with the client. If such causality becomes apparent for any given case, intervention may include behavioral or attitudinal changes on the part of the client; it may also include such changes in the client's environment. Although attempts to treat the homosexually-

oriented based on an illness model (i.e., to eliminate same-sex feelings and behavior) have by and large not proven successful, evidence is growing that therapists can have a positive impact on facilitating homosexual functioning (Coleman, 1982). Research is still needed to guide and evaluate treatment approaches in this domain. By assisting troubled clients to recognize the many complicating factors involved with and perhaps interfering with the maintenance of good mental health when non-normative sexual issues are evident, they can better understand the dynamics of their problem in a social context. They can then choose among alternative means of either adjusting within it or work to influence the social forces problematic to their well-being.

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