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Self-Concept, Sexual Knowledge and Attitudes, and Parental Support in the Sexual Adjustment of Women with Early- and Late-Onset Physical Disability

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Three groups of college women were compared on the following dimensions: sexual experiences, sexual satisfaction, self-concept, sexual attitudes and knowledge, and parental support for sexual development. Groups were composed of women with late-onset physical disability, early-onset physical disability, and no disability. Measures utilized included an extension of the Sexual Interaction Inventory, the Tennessee Self-Concept Inventory, the Sexual Knowledge and Attitude Test, and questionnaires developed for this study. The early-onset group reported fewer current sexual experiences than did the nondisabled group. The early-onset group was dissatisfied with the frequency of sexual behavior to a greater degree than the nondisabled group. Also, both disabled groups believed that they could enjoy sexual experiences more than they did at present in contrast to the nondisabled group. There were no group differences for self-concept, though several aspects of self-concept contributed significantly to sexual adjustment for the disabled groups. No group differences were found for sexual knowledge and attitudes or parental support for sexual development, nor did these variables relate to sexual adjustment. Group differences in sexual adjustment are discussed in terms of functional, emotional, and social implications. Recommendations for further research include following the social development of women with late-onset conditions, comparing the social skills and cognitions of the two disa-

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bled groups, and assessing men who have established intimate relationships with disabled women.

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INTRODUCTION

Physically disabled individuals do not differ from nondisabled individuals on the average in overall life satisfaction (Cameron *et al.*, 1973), yet concern is frequently raised over their sexual adjustment (e.g., Hetrick, 1967; Lundberg, 1978; Melnyk *et al.* 1979; Sandoughi et al., 1971). Given the central role of sexual expression in most people's lives and the documented relationship between a healthy sexual expression and both acceptance of a disabling condition and commitment to rehabilitation in disabled individuals (Anderson and Cole, 1975), sexuality and disability should clearly be an important area of investigation. However, despite recent interest in this area, very few empirically derived findings exist, especially on the sexual adjustment of disabled women.

The paucity of studies in this area is due in part to the fact that of the newly disabled, approximately 78% are men (Crigler, 1974). Of greater concern, however, has been a filtering of stereotyped attitudes toward women's sexuality into the literature on the sexuality of disabled women. Smith and Bullough (1975) noted that women with spinal cord damage are able to participate reasonably well in the sex act in the traditionally more passive role so have seemed to have fewer problems than men. Haring (1979) demonstrated negative attitudes held by college students toward sexuality and disability in general and toward disabled women in particular. Gendel (1981) noted that physicians and other health care professionals frequently ignore the sexual concerns of their female patients due to the expectation that they are sexually inactive. Concern seems to be directed toward the sexuality of disabled women for such reasons as fertility and pregnancy and protection from exploitation rather than toward satisfying sexual expression.

Whereas women with adult-onset disabilities have been noted to worry during the initial rehabilitation period about renewed sexual expression (Hetrick, 1967; Mac Dougall and Morin, 1979; Melnyk *et al.*, 1979), no research has been conducted that comprehensively measures the actual range and frequency of nor satisfaction with sexual expression for these women. Given the often drastic changes in the life circumstances of newly disabled women and the limitations in mobility and/or sensation subsequent to trauma, they seem likely to experience some restriction in sexual expression. Added to the physical restrictions placed on sexual expression are the numerous psy-

chological implications of disability. Lundberg (1978) noted that the feeling of being a disabled person, the sense of insecurity about individual prognosis, loss of self-respect, dependency upon other people, changes in relations with the partner and the rest of the family, and unfulfillment of expected parental roles could drastically negatively influence a happy sex life. Lundberg also points to the difficulty in extricating psychological from physical variables affecting sexual adjustment.

Numerous factors can thus influence the sexual expression of women with disabilities. Bullard and Knight (1981) argued from research findings that severity of the handicap, age of onset of the disability, and age of first sexual experience were not related to sexual problems among those with disabilities. An emphasis was rather placed on the person's attitude that the disability limited possibilities for sexual expressions. The woman with a disability must not only respond to a social reality that may differ from that of her non-disabled peers, it appears that she must also respond to her own cognitive and attitudinal processes regarding sexual expression. Since these processes are often acquired prior to adulthood as a function of rearing conditions and socialization during childhood and adolescence, they may differ in women with congenital or early-onset as compared with traumatic or late-onset disabilities. Two such variables of interest herein are self-concept and sexual knowledge and attitudes.

Numerous studies have pointed to low self-concept for individuals with early-onset disabilities and in general attribute this to extended infantilization, overprotection by parents and others, and relative social isolation (e.g., Hayden *et al.,* 1979; Wabrek *et al.,* 1978). Regarding women disabled as adults, self-concept seems to strengthen as a function of time since the onset of the condition (Fitting *et al.,* 1978). For both groups, this seems likely to influence sexual expression, as self-concept likely correlates with performance in social situations. Similarly, sexual knowledge is likely to influence sexual expression, and at least one study (Grossman, 1972) demonstrated less sexual knowledge among students with early-onset disability than among their nondisabled peers. This is consistent with other reports that describe the sexual education of disabled youngsters as limited due to parental overprotection and a hesitation to view them as sexual beings (Anderson and Cole, 1975; Gendel, 1981; Hayden *et al.,* 1979; Mac Dougall and Morin, 1979; Minde *et al.,* 1972; Smith and Bullough, 1975).

Given the decreased availability of sexual partners, due to the stigma still associated with disability, and physical limitations which may make intercourse difficult or unsatisfying, a broader understanding of what constitutes viable sexual expression may be indicated for women with disabilities (Rabin, 1980). Sexual attitudes should therefore affect sexual expression, too. Two studies suggest conservative sexual attitudes for congenitally disabled

women (Grossman, 1972; Mac Dougall and Morin, 1979). Related to an earlier point, a more restricted view may impede sexual expression. It may also preclude self-acceptance regarding what pleases a women sexually and communication with her partner about this.

The aim of this study was to document the sexual expression and satisfaction of a sample of women with early-onset disability, late-onset disability, and no physical disability. In addition, we investigated the extent to which self-concept, sexual knowledge and attitudes, and a third variable related to these, parental support for sexual development, accounted for differences in sexual expression and satisfaction. It was expected that the nondisabled women would engage in more frequent sexual activity than women from either of the disabled groups and would report greater satisfaction with their sexual expression. Based on previous literature, women with early-onset disabling conditions were expected to show lower self-esteem, less sexual knowledge, and more conservative sexual attitudes than women with late-onset disabling conditions or no disabilities. It was also hypothesized that, in comparison with the other two groups, women with early-onset disability would report lower levels of parental support for sexual development. Finally, it was expected that all three variables: self-concept, sexual knowledge and attitudes, and parental support for sexual development, would contribute significantly to variation in sexual behavior and satisfaction among disabled women.

METHODOLOGY

Subjects

Subjects constituting the nondisabled group ($n = 30$) were recruited from a psychology undergraduate pool at a suburban state university in California. Subjects constituting the disabled groups ($n = 52$) were recruited from several universities in California through the handicapped student service representative at each institution. Consequently, letters of invitation were sent to disabled students by this service on each campus to protect confidentiality. The letters requested those with neuromuscular or orthopedic conditions to volunteer for this research project. A response rate of 20% was thus obtained. Though low in absolute terms, many women in the disabled population had other types of disabilities (e.g., visual or hearing handicaps) and would have no reason to respond. Demographic data are presented in the Results section.

Disabilities represented in the study included muscular dystrophy ($n = 2$), spinal cord injury (11), post polio syndrome (8), amputation (1), rheumatoid and osteoarthritis (3), transverse myelitis (1), hip disarticulation (2), cerebral palsy (3), multiple sclerosis (5), spina bifida (4), and other unspeci-

fied neurological conditions (12). Based on self-report, 25 women acquired their disability after age 18, constituting the late-onset disability group, whereas the other 27 were either born with or acquired their disability prior to age 3, constituting the early-onset disability group.

Procedure and Measures

The disabled women were sent a questionnaire by mail, whereas the nondisabled women completed it in a private office on campus. A demographic information section preceded other measures within this questionnaire, which addressed: age, ethnicity, marital and relationship status, living situation, and income. Participants with disabilities then answered questions related to the nature of the disability: ambulatory aids, age of onset, prognosis, degree of sensory impairment, motor impairment, and spasticity, bowel and bladder control and concern about this, and the extent to which the participant felt her condition limited her sexual expression.

All participants subsequently were asked to complete identical measures. Sexual knowledge and attitudes were assessed by the Sexual Knowledge and Attitudes Test (SKAT) (Lief and Reed, 1972). Using a true–false response format for 166 items, a knowledge score and separate attitude scores related to heterosexual relations, sexual myths, abortion, and masturbation were obtained.

The Tennessee Self-Concept Scale (Fitts, 1964) was used as a measure of self-concept. The scale consists of 100 self-descriptive statements which are answered on a five-point Likert-type scale. In addition to several validity scores, this scale yields scores for Defensive Positive, General Maladjustment, Psychosis, Psychopathy, Neurosis, Personality Integration, Personal Self, Physical Self, Social Self, Self-criticism, and Total Positive. The latter five scales are purportedly descriptive of different aspects of self-concept.

An extension and modification of the Sexual Interaction Inventory (SII) (LoPiccolo and Steger, 1974) was used to evaluate sexual experience and satisfaction. The scale presents a series of statements describing specific sexual behaviors (e.g., "male and female engage in sexual intercourse"). Following each statement, the subject is asked to indicate current frequency of this activity (on a five-point scale from "never" to "several times a week"), desired frequency of this activity (also on a five-point scale from "never" to "several times a week"), current level of enjoyment (on a six-point scale from "extremely pleasant" to "extremely unpleasant"), and desired level of enjoyment (i.e., the statement "Ideally, I would like to find this activity" was completed with an answer on a six-point scale from "extremely pleasant" to "extremely unpleasant"). The original 17-item scale was expanded to 27 items to include behaviors such as manual self-stimulation, use of vibrator, sexual fantasy,

homosexuality, and anal intercourse. It was thought that for some women these added behaviors may be more likely means for sexual expression. LoPiccolo and Steger (1974) derived summary scores across these behaviors to reflect (i) satisfaction with frequency of sexual behaviors (sum of the difference between current and desired frequencies of all listed activities), (ii) difference between current level of enjoyment and desired level of enjoyment of the behaviors, (iii) level of current enjoyment, and (iv) frequency of current sexual expression. These same scale derivations were used in the present study for the expanded version. LoPiccolo and Steger also used additional scales to reflect comparisons between marital/sexual partners, but these were not included in this study of (mostly) single women. In addition, subjects were asked to answer 10 more general questions about their sexuality. As a more straightforward indication of general satisfaction with their sexuality, they were asked to rate their satisfaction, using a five-point scale, pertaining to level of sexual responsiveness, availability of partners, method of contraception, frequency of sexual interactions with men, variety of sexual experience past and present, level of sexual interest, level of sexual interest shown them by men, comfort in discussing sexuality, and level of physical-sexual attractiveness.

Finally, 20 questions developed for this study were posed to the subjects concerning the level of communication, education, and support about dating and sex received during childhood from parents. Half the questions dealt directly with parental attitudes or level of communication and half with the subject's satisfaction concerning each issue. Content areas included parental support of dating and parents' general communication about sex, menstruation, sexuality, and reproduction. Questions were answered on a seven-point scale, with high scores reflecting attitudes of openness, encouragement, support, and high satisfaction. Scores were derived for father's provision of sexual education and support, subject's satisfaction with this, mother's provision of sexual education and support, subject's satisfaction with this, and general level of communication about sex in the home during development.

RESULTS

Demographic information

Demographic information is summarized in Table I. Age differences were significant among groups, $F(2, 79) = 14.86, p < .01$. Both the late-onset and early-onset disability groups were older than the nondisabled comparison group, $t(50) = 4.84, p < .01$, and $t(49) = 4.51, p < .01$, respective-

Table I. Demographic Constitution of the Three Samples

	Late-onset disability (n = 25)	Early-onset disability (n = 27)	Nondisabled (n = 30)
Age			
Mean	31	30	24
SD	6.69	6.03	4.39
Marital status (%)			
Single	48	67	93
Married	24	7	3
Divorced	24	26	3
Separated	4	0	0
Living with lover or spouse (%)	44	15	30
Currently involved in relationship (%)	80	44	83
Work full- or part-time (%)	44	59	80

ly. As can be noted in Table I, there was a significant age discrepancy between groups. This was not unexpected considering that education is likely to be delayed or prolonged for those with disabilities. Thus attempts to match on age would have excluded many disabled women who had not yet begun or returned to college. However, age needed to be entered as a covariate in relevant subsequent analyses, as age differences might reasonably be expected to affect sexual knowledge, attitudes, and experience. Furthermore, both the late- and early-onset groups were found to have been married more often than the nondisabled group, $\chi^2(1) = 4.89$, $p < .05$, and $\chi^2(1) = 11.94$, $p < .01$, respectively. Late-onset women were more likely to be living with a spouse or lover than were women from the early-onset group, $\chi^2(1) = 4.06$, $p < .05$. The variable of having a live-in spouse or lover therefore was also entered as a covariate in relevant analyses. Finally, as expected because many were still in the rehabilitation phase, fewer late-onset disabled than nondisabled women worked full- or part-time, $\chi^2(1) = 6.16$, $p < .01$. Nonsignificant group differences were found for all remaining demographic variables.

Disability-Related Information

The percentage of the disabled women in each group with impairments in specific areas of functioning is presented in Table II. A series of pairwise comparisons was performed for these and other disability-related variables thought to be relevant to sexual expression. Participants with late-onset conditions reported more sensory impairment, $t(50) = 1.68$, $p < .05$, and more

Table II. Degree of Impairment for Disabled Subjects

Condition	% positive for condition	
	Late-onset group	Early-onset group
Spasticity	64[a]	56
Incomplete bowel control	64[b]	15
Incomplete bladder control	76[b]	36
Sensory impairment	80[a]	49
Motor impairment	88	89
Speech impairment	12	11

[a] $p < .05$ for group comparison.
[b] $p < .01$ for group comparison.

spasticity, $t(49) = 1.80$, $p < .05$, than those with early-onset conditions. Late-onset participants reported less voluntary bowel control, $t(50) = 3.04$, $p < .01$, and control over bladder function, $t(50) = 3.70$, $p < .01$, than did early-onset participants. Yet, women from the early-onset group felt more so that their disability was a limiting factor in the availability of sexual partners than did the women from the late-onset group, $t(49) = -2.43$, $p < .01$.

Nonsignificant group differences were found for motor impairment and speech impairment. Concern about the possibility of a bowel (32%) or bladder (48%) accident during a sexual encounter was expressed by several women from both groups, but there was no significant group differences in level of concern. Though 57% of the disabled women felt that their sexual activities were limited to some extent by their disabilities, no group differences were found regarding self-reported influence of the disabling condition on the frequency of sexual expression, the variety of ways in which they could express themselves sexually, enjoyment of their sexual expression, nor their partner's enjoyment of sex.

Sexual Behavior and Satisfaction

The modified SII listed 27 specific sexual behaviors. No statistical group comparisons of these specific behaviors were made because of the noted differences in age and marital or dating status of the women in the three groups. Nonetheless, the low current frequency of occurrence for almost all sexual activities for women with early-onset disability was striking in comparison to women from the other two groups. With the exception of engaging in sexual fantasies, women with early-onset disabilities did not on the average report engaging in any sexual behavior more frequently than once a month, and they engaged only in sexual self-caressing at that frequency. All other behaviors, beginning with dating or kissing a member of the opposite sex, were reported as occurring "never" or "a few times per year." They

did, however, appear to desire experience with the full range of heterosexual activities, much like women in the other two groups. There were no similarly striking results from the reported sexual activities of the women with late-onset disability, who appeared to experience most behaviors at a frequency similar to the nondisabled women.

Multivariate analyses of covariance (MANCOVA) were performed for the summary scores derived from this instrument: frequency satisfaction, desired-to-current enjoyment difference, current enjoyment, and frequency of current experience. Age and the presence of a live-in spouse or lover were used as covariates in the analyses. The overall multivariate test was significant, $F(10, 124) = 2.88, p < .01$, and univariate analysis of covariance (ANCOVA) tests showed significance for three of the four scores. In these cases planned comparisons using pairwise t tests reflecting stated hypotheses were completed using the conservative alpha level set by the Bonferroni approach ($p = .028$).

Satisfaction with frequency of sexual expression was lowest for the early-onset group and highest for the nondisabled group, $F(2, 66) = 5.12, p < .01$; however, planned comparisons were significant only for the early-onset with nondisabled comparison, $t(49) = 2.25, p < .01$. Reported satisfaction with the frequency of sexual activity was thus consistent with that predicted by the hypothesis.

There were significant group differences also for the difference score between how much a person currently enjoyed a particular sexual activity and how much, ideally, she would like to enjoy it, $F(2, 66) = 6.02, p < .01$. Again, the discrepancy was greatest for the early-onset group, followed by the late-onset group, and then the nondisabled group. Planned comparisons showed significance for late-onset to nondisabled, $t(49) = 2.54, p < .05$, and early-onset to nondisabled, $t(50) = 3.41, p < .001$, group comparisons. However, this should not be interpreted to mean disabled women enjoyed their sexual experiences less than those without disabilities, rather that they were more likely to feel that they would like to and could possibly enjoy them more than they currently did.

Finally, current sexual expression was more frequent for the nondisabled group, followed by the late-onset, and then the early-onset group, $F(2, 66) = 5.01, p < .01$. Planned comparisons showed the late-onset to nondisabled group comparison only to approach the conservative alpha level used herein, while the early-onset to nondisabled comparison was significant, $t(50) = 3.13, p < .01$.

Analyses of the general sexual satisfaction ratings also included in this section of the questionnaire tended to support the findings from the above analyses of the specific sexual activities. The one-way ANCOVA, controlling for age and presence of live-in spouse or lover, was significant, $F(2, 77) = 3.52, p < .05$. Pairwise planned comparisons indicated significant differ-

ences in satisfaction levels in the predicted direction for the early-onset to nondisabled comparison, $t(49) = 3.09$, $p < .01$. Comparison of the late-onset to nondisabled group only approached the conservative significance level, but was consistent with the trend toward less sexual satisfaction in general for women with disabilities.

Two additional aspects of this overall index were isolated for analysis as they were felt to be particularly relevant to sexual adjustment for disabled women. Though all three groups were equally satisfied with their perceived level of physical-sexual attractiveness, ratings of how satisfied they were with men's level of sexual interest in them were significantly different, $F(2, 76) = 6.21$, $p < .01$. Planned comparisons showed women from the early-onset group to be significantly less satisfied with this than were women from the nondisabled group, $t(49) = 3.52$, $p < .001$, whereas the difference between the late-onset and nondisabled group was not significant.

Self-Concept

Three separate multivariate analyses of variance (MANOVA) were performed on three sets of scores from the TSCI to assess group differences in self-concept. First, the Variability and Conflict validity scale scores were analyzed together in order to evaluate group differences in inconsistency and/or conflict in response patterns, which would be reflected by subjects' tendencies to respond differently to similar test items. Second, the groups were compared across the Empirical scales of the TSCI (i.e., the Defensive Positive, General Maladjustment, Psychosis, Psychopathy, Neurosis, and Personality Integration scales). The final analysis included the self-concept scales (i.e., Total Positive, Physical Self, Personal Self, Social Self, and Self-criticism).

All three MANOVAs yielded nosignificant results. Observed mean values were consistent with those reported for the norm sample. Therefore, the hypothesis of *overall* lower self-esteem for the early-onset group was not supported. Similarly, no significant relationships were found between time since onset of the disabling condition and scores on any of the self-concept scales.

Sexual Knowledge and Attitudes

An ANCOVA on scores from the Sexual Knowledge subscale of the SKAT, controlling for age, yielded nonsignificant results. A MANCOVA, again controlling for age, on the scores from the four attitude subscales was similarly nonsignificant, as were planned comparisons corresponding to the

related hypothesis stated a priori. Contrary to expectation then, women from the early-onset group were no less (nor more) knowledgeable about nor conservative in their sexual attitudes than were women from the other two groups.

Parental Support for Sexual Development

It was predicted that women from the early-onset group would report less openness from their parents and less parental support and encouragement regarding their sexual development and dating behaviors than women from the other two groups. However, since a MANOVA and subsequent planned pairwise comparisons yielded nonsignificant results for all measures of parental communication and support, this prediction was not supported.

Relationships Among Variables

Pearson product-moment correlation coefficients were calculated to investigate the relationships of self-concept, sexual knowledge and attitude, and parental support variables with disabled women's sexual experience and satisfaction. Nondisabled women were not included in these analysis. Though several measures of sexual experience and satisfaction had been obtained, reported current frequency of sexual expression and ratings of general satisfaction with one's sexuality were felt to be most central. Only these were therefore included in this analysis to limit the number of tests. As can be seen in Table III, several self-concept variables were significantly related to both sexual adjustment measures: Defensive Positive, Physical Self, Social Self, and Total Positive. The General Maladjustment and Personal Self measures were in addition significantly related only to satisfaction with one's sexuality. Thus, a more positive self-concept in these areas, and especially in regard to one's physique, was more common in disabled women who were more sexually active and satisfied with their sexuality.

Sexual knowledge and attitude variables were not related at all to satisfaction with one's sexuality, but several significantly predicted the frequency of disabled women's sexual expression. More sexual knowledge and liberal attitudes toward heterosexual interactions and maturbation were related to a higher frequency of sexual expression. None of the measures of parental support for sexual development was related to frequency of sexual expression or sexual satisfaction.

Multiple regression analyses were used in addition to investigate these relationships. On the basis of the results from the bivariate correlation analysis just presented, Total Positive Self, Personal Self, Physical Self, and Social Self were selected as the self-concept measures most likely to be related

Table III. Correlations for Self-Concept, Sexual Knowledge and Attitudes, and Parental Support Variables with Sexual Behavior and Satisfaction Among Disabled Women[a]

Variable	Current frequency of sexual expression	General satisfaction with one's sexuality
Self-concept		
Defensive positive	.24[b]	.37[c]
General maladjustment	.21	.27[b]
Psychoticcism	−.18	−.03
Neuroticism	.15	.04
Psychopathy	.11	.18
Personality integration	−.10	−.09
Physical self	.41[d]	.57[d]
Personal self	.19	.29[b]
Social self	.37[c]	.38[c]
Self-criticism	−.09	−.21
Total positive	.30[b]	.37[c]
Sexual knowledge and attitudes		
Sexual knowledge	.24[b]	.08
Heterosexual attitudes	.36[c]	.15
Acceptance of sexual myths	.11	.02
Abortion attitudes	.12	.00
Masturbation attitudes	.25[b]	.12
Parental support		
Father's support	.02	.06
Mother's support	−.06	.02
Satisfaction with support	−.02	.09
Satisfaction with sex communication	.08	.03
Satisfaction with parents' marriage	.12	.14

[a] df = 51.
[b] $p < .05$.
[c] $p < .01$.
[d] $p < .001$.

to these two sexuality measures. They were consequently entered into a multiple regression system to predict separately current sexual expression and general satisfaction with one's sexuality. Only current sexual expression was significantly predicted by the linear combination of these self-concept measures ($R = .49$, $F(4, 48) = 3.51$, $p < .05$, though only a small amount of the variance was accounted for ($R^2 = .24$). Both Total Positive and Physical Self concept measures contributed significantly and independently to this prediction based on their regression coefficients.

This analysis was repeated with the five sexual attitude and knowledge measures obtained from the SKAT combined to predict the two sexual adjustment measures. In these cases neither sexual adjustment measure would

be significantly predicted by sexual attitude and knowledge measures. Nonsignificant results were also obtained for predictions attempted using measures of parental support for sexual development.

DISCUSSION

This study was designed to investigate the sexual expression and satisfaction of women with early- and late-onset disability and to consider the contribution to these outcomes from self-concept, sexual knowledge and attitudes, and parental support for sexual development. Women with early-onset disability reported less frequent sexual activities, greater dissatisfaction with their current frequency of sexual activities, and larger discrepancy between current and desired enjoyment of sexual activities than did nondisabled women. Women with late-onset disability differed from nondisabled women only in the greater difference they reported between their current and desired enjoyment from sexual activities. On the other hand, disabled and nondisabled women did not differ in reported current level of enjoyment derived from those sexual behaviors in which they did engage. However, compared to nondisabled women, overall satisfaction with one's sexuality was lower for women with early-onset, but not late-onset, disability. Thus generally, sexual adjustment for early-onset disability was definitely poorer than that observed for nondisabled women. Women with late-onset disability appeared to do somewhat better, but still did not seem to achieve the sexual expression and satisfaction of the nondisabled women in this study.

Neither self-concept, sexual knowledge and attitudes, nor parental support for sexual development differed among these groups. However, several aspects of self-concept were positively related to the disabled womens' sexual adjustment, though these relationships were quite weak. Neither sexual attitudes and knowledge nor parental support for sexual development were related to these women's sexual adjustment.

Before drawing implications from these findings, several limitations to this study must be considered. First is the limited generalizability resulting from studying women exclusively from a college population. Within this population disabled women tended to be older, more highly educated, more likely to have been married, and possibly differently motivated to participate in the study than the nondisabled women. Attempts were made however to control for some of these factors through the use of covariance analyses. Second, some of the measures used had not been standardized. Notably, the extension of the Sexual Interaction Inventory, which measures sexual adjustment, was made on conceptual rather than psychometric grounds. Third, whereas this inventory does address participants' current level of experience,

it does not address their total level of sexual experience. It would have been informative also to ascertain the number of partners and duration of relationships in the past, as well as learn more generally about their previous sexual experiences. Finally, the exclusive reliance on self-report must be acknowledged. This is especially true for the section on parental support of the participants' sexuality, as this was also assessed retrospectively. At the same time, it is only through self-report that one may tap issues of satisfaction and personal meaning.

While mindful of these limitations, the obtained findings have several implications. Women from the early-onset group were more likely to cite their disability as a factor that limited availability of partners than were those from the late-onset group. This is consistent with suggestions in the literature that socialization is more difficult for those with early-onset conditions due, in part, to greater experience with stereotyped negative attitudes toward them and by an expectation by others that they are not fully sexual individuals. Comments made by women from the early-onset group to open-ended questions not formally analyzed in this study often pointed to negative expectations from others as a limiting factor in their own self-perception, whereas such comments were never made by women from the late-onset group. Factors cited as limitations to social exposure included transportation and preference to socialize within organized groups for the disabled, in which greater acceptance was felt by women from the early-onset group.

This points to the need to pay more attention to the environmental realities attendant to living as a woman with a disability in this culture. It is possible that those with disabilities must learn superior interpersonal skills in order for others to feel comfortable with them in social interactions, which typically are prerequisite to sexual interactions. Though both groups of disabled women reported less general satisfaction with the sexual aspects of their lives, only the early-onset to nondisabled comparison was significant for dissatisfaction with men's level of sexual interest in them. Perhaps the dissatisfaction felt by both groups of disabled women occurs for different reasons, or perhaps women with late-onset conditions have not yet become sensitized to the social attitudes surrounding disability.

The nonsignificant differences found in the areas of self-concept, sexual attitudes and knowledge, and parental support were in contrast to hypotheses. It appears that, despite specific concerns in the areas of sexual experience and partners' perceptions of them, the disabled women in this study did feel as good about themselves as did the nondisabled women. This finding does not necessarily negate that found in the literature that self-concept can be lower for those with disabilities acquired at or near birth, but indicates that this trend is not necessarily the case. The nonsignificant finding in relation to sexual knowledge and attitudes may be less surprising in view

of the education level of the participants. Perhaps the "sheltering" effects postulated to exist for women from the early-onset group can be negated by their education and exposure. Though nonsignificant group differences were found in relation to parental support for sexual development, participants' written comments revealed less than complete satisfaction with the way in which parents provided sexual education to them. However, only a few of the women from the early-onset group mentioned that their parents did not see them as sexual beings and wanted to protect them by ignoring this area of communication.

Several women from both disabled groups reported that their relationships with men, sexual and otherwise, were happy. Others described factors which were limiting to them in their sexual encounters. These included physical factors such as pain, movement limitations and fatigue; emotional factors such as low self-esteem, poor body image, and fear; and social factors such as limited access to partners and attitudes toward women with disabilities. Despite these perceived limitations, fewer disabled than nondisabled women reported receiving counseling for sex-related issues. Considering the widely acknowledged need for and expected benefits from such counseling for these groups, this is unfortunate. Causes for this lack have been attributed to a lack of professionals trained to offer such services to this population and also to the reticence of disabled women to seek them out (Zwern, 1982). Research is needed to clarify ways of involving these populations in counseling.

From the consideration of these findings, several additional issues seem ripe for further investigation. Though both groups of disabled women cited physical limitations to satisfying sexual encounters, the early-onset group cited social reasons more frequently than did women from the late-onset group. In this vein, it might be helpful to follow the social course of women with late-onset disabilities, starting directly after onset. The widely acknowledged social consequences of disability (Hahn, 1981; Rousso, 1982) seem especially likely to affect women with late-onset conditions.

Also, it seems that social skills are critical in coping with the attitudes of others and that the attributions that one makes about social events can greatly affect social interactions. It should be useful to explore the social skills and cognitions expressed by women from both disability groups who report satisfying social and sexual relations with men and to compare them with those who report limitations. Approaching social interactions from a different perspective, it should be helpful to assess those qualities or skills of able-bodied individuals who have satisfying sexual relationships with disabled lovers or spouses (Hahn, 1981). Not only might this help to illuminate how the components of social stigmatization might be overcome, but it might help those with disabilities to learn more accurately how to identify individuals likely open to relationships with them.

In conclusion, this is a relatively new area of inquiry, and a very complex one. It is made even more complicated by the fact that each physical condition has its own biopsychosocial concomitants. Yet overall similarities can be found which link those with early-onset and late-onset or stable and unstable conditions together. This study was an attempt to integrate empirically some of the recurring focal areas from the literature and to study the aforementioned groups together with a common methodology. It points out strong needs for more research into the sexuality of women with physical disabilities.

REFERENCES

Anderson, T., and Cole, T. (1975). Sexual counseling of the physically disabled. *Postgrad. Med.* 58: 117-123.

Bullard, D., and Knight, S. (eds.). (1981). *Sexuality and Physical Disability: Personal Perspectives,* C. V. Mosby Co, St. Louis, MO.

Cameron, P., Titus, D., Kostin, J., and Kostin, M. (1973). The life satisfaction of nonnormal persons. *J. Consult. Clin. Psych.* 41: 207-214.

Crigler, L. (1974). Sexual concerns of the spinal cord injured. *Nursing Clin. N. Am.* 9: 703-715.

Fitting, M. D., Salisbury, S., Davis, M. H., and Maydin, D. K. (1978). Self-concept of spinal cord injured women. *Arch. Sex. Behav.* 7: 143-156.

Fitts, W. H. (1964). *Tennessee Self-Concept Scale,* Western Psychological Services, Los Angeles, CA.

Gendel, E. S. (1981). Sex and the disabled woman. *Female Patient* 6: 49-53.

Grossman, S. K. (1972). Sexual knowledge, attitudes, and experiences of deaf college students. Unpublished master's dissertation, George Washington University.

Hahn, H. (1981). The social component of sexuality and disability: Some problems and proposals. *Sex. Disabil.* 4: 220-233.

Haring, M., and Mayerson, L. (1979). Attitudes of college students toward sexual behavior of disabled persons. *Arch. Phys. Med. Rehabil.* 60: 257-260.

Hayden, P., Davenport, S., and Kendel, M. (1979). Adolescents with Myelodyspasia: Impact of physical disability on emotional maturation. *Pediatrics* 64: 53-59.

Hetrick, W. R. (1967). Sexuality following transection of the spinal cord. Unpublished doctoral dissertation, University of Houston.

Kriegsman, K., & Celotta, B. (1981). Sexuality in creative coping groups for women with physical disabilities. *Sex. Disabil.* 4: 169-172.

Lief, H. I., and Reed, D. (1972). *Preliminary Manual: Sex Knowledge and Attitude Test* (SKAT), 2nd ed., Center for the Study of Sex Education in Medicine, University of Pennsylvania, Philadelphia, PA.

LoPiccolo, J., and Steger, J. C. (1974). The Sexual Interaction Inventory: A new instrument for assessment of sexual dysfunction. *Arch. Sex. Behav.* 3: 585-595.

Lundberg, P. O. (1978). Sexual function in patients with multiple sclerosis. *Sex. Disabil.* 1: 218-222.

Mac Dougall, J. C., and Morin, S. (1979). Sexual attitudes and self-reported behavior of congenitally disabled adults. *Can. J. Behav. Sci.* 11: 189-203.

Melnyk, R., Montgomery, R., and Over, R. (1979). Attitude Changes Following a Sexual Counseling Program for Spinal Cord Injured Persons. *Arch. Phys. Med. Rehabil.* 60: 601-604.

Minde, K., Hackett, J., Killou, D., and Silver, S. (1972). How they grow up: 41 physically disabled handicapped children and their families. *Am. J. Psychiat.* 128: 104-110.

Rabin, B. (1980). *The Sensuous wheeler: Sexual Adjustment for the Spinal Cord Injured,* MMRC, San Francisco, CA.

Rousso, H. (1982). Special considerations in counseling clients with cerebral palsy. *Sex. Disabil.* 5: 78-88.

Sandoughi, W., Leshner, M., and Fine, H. (1971). Sexual adjustment in a chronically ill and physically disabled population: A pilot study. *Arch. Phys. Med. Rehabil.* 52: 311-317.

Smith, J., and Bullough, B. (1975). Sexuality and the severely disabled person. *Am. J. Nursing* 75: 2194-2197.

Wabrek, A., Wabrek, C., and Burchell, R. (1978). The human tragedy of spina bifida, spinal myelomenigeocela. *Sex. Disabil.* 1: 210-217.

Zwern, J. (1982). Yes we have troubles but nobody's listening: Sexual issues of women with spinal cord injury. *Sex. Disabil.* 5: 158-171.