A descriptive survey was conducted to determine the self-perceived needs of physically disabled persons as a preliminary step toward establishing or designing a knowledge base for occupational therapy intervention at a community college. Demographic and needs data were statistically compared with those from a sample of nondisabled college students. Significant differences in the confidence to perform cognitive/problem-solving, social/recreational, school/vocational, home and community mobility skills were found, with the disabled reporting lowered or less confidence. Confidence in performing basic activities of daily living was the only area in which the difference was not significant. No significant differences were obtained in general interests except that a higher frequency of disabled reported not wanting to participate in sports. The greatest amounts of interest were in crafts/fine arts and in social/recreational activities. Implications were drawn for occupational therapy programming to improve confidence in independent living skills by using the subjects’ predominant interests.

Community-Based and College-Based Needs Assessment of Physically Disabled Persons

(community, college, physical disability, needs, schools)

Sandra E. Burnett  Elizabeth J. Yerxa

Presented at the Annual Conference of the American Occupational Therapy Association, Detroit, Michigan, 1979.

In 1977 the University of Southern California (USC) Occupational Therapy Department received a grant from the Rehabilitation Services Administration to establish a demonstration occupational therapy program for physically disabled, community college students. California community colleges are required by law to provide supportive services for disabled students that will promote “mainstreaming” in academic and vocational programs and general college life. Although 93 California colleges offer such services, only DeAnza College at Cupertino and Cabrillo College at Aptos employ occupational therapists to conduct therapeutic programs.

Since no college-based programs have reported research or program descriptions, it was decided to structure the new occupational therapy program based on data provided by a needs survey of prospective consumers. Consistent with occupational therapy’s philosophy of client self-directedness, the survey was conducted to determine the self-perceived needs of physically disabled persons who might participate and lived near Santa Monica College (SMC). The survey was designed to answer the following questions: What were the demographic characteristics of disabled persons living in the community? How satisfied were they with their lives? How much confidence did they have in performing daily activities? What were their interests? How did their needs compare with those of nondisabled persons from the same location?

Background

Because of the vast numbers of disabled persons and errors inherent in statistical estimation methods, an accurate account of their specific needs related to employment, homemaking, and daily living problems is not available (1). Little research could be found that empirically assessed the community-based needs of disabled persons, especially the severely disabled (2, 3). One study that focused on discharged rehabilitation patients, primarily between 50 and 69 years of age, determined that “the community [failed] to provide meaningful follow-up medical and social care” to the severely disabled, particularly in the areas of community mobility, social-recreation, and occupation (4, p 36).

Most follow-up studies have been done on the spinal cord injured, probably because of the predictability of type and extent of disability and the relative ease in controlling for those variables (5-12). A paucity of research exists about the needs of persons with other types of disabilities.

A few unpublished studies focused on the needs of disabled persons in the community. The Urban Institute’s survey of community-based

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severely disabled persons' needs for services demonstrated that the greatest need for occupational therapy services was identified by those in the sample who were the most dependent physically. But the specific components of the desired treatment were not stated (13). Katz O'Brian's 1977 study of the needs of disabled persons living in the DeAnza College area of Northern California (with 280 respondents) established "independence" and "therapy to accept disability" as the most important needs (14). Seventy-five percent said "yes" when asked if they would like a "well-developed independent living skills program." Jobe, a home economist, studied 27 disabled students at SMC. Ninety percent stated they had not received rehabilitation training in home management tasks. She concluded that these students needed information about work simplification and self-help to assist them toward independent living (15).

No intensive nor extensive research has been performed on the needs of the disabled as they attempt to live in the community (3). Unpublished studies place a high priority on independent living skills. However, the few studies completed employed small samples and asked general questions. Much needs to be learned about what disabled persons in the community see as their specific needs for occupational therapy services.

Methods

Questionnaire. A six-page questionnaire was developed, and its content was based in part on previous surveys and clinical instruments designed to assess independent living skills. Knowledge of the geographical area, the skills of occupational therapy, and the practical considerations of establishing classes at SMC also contributed to the content. Both forced-choice and open-ended questions were included. A draft of the questionnaire was critiqued by health and education professionals, and consumer representatives; it was then field tested through administration to four physically disabled adults.

The self-report is a reliable method of determining rehabilitation needs because it reduces the "specialist effect" in which a professional identifies a patient's needs in terms of his or her own ability to apply treatment (16). Disabled persons are often the most expert sources of information about their own life situations. Also, those responding to a request for participation in the survey could be considered the most interested in using services at the community college.

Data Collection. The questionnaire was mailed or handed to a sample of 518 disabled persons residing in the area near SMC. Sample selection was intended to represent a broad distribution of age groups and disabilities to describe both those who might attend the college following high school and those returning to school for self-development and vocational training.

To obtain maximum representation, the sample of disabled people was selected with the help of six agencies: The SMC Disabled Students Center, the State Department of Rehabilitation, the UCLA Handicapped Student Service, Los Angeles County-California Children's Service, United Cerebral Palsy, Inc., of Los Angeles County, and the Westside Community for Independent Living, Inc., a consumer organization for disabled persons. A nondisabled comparison sample of 36 student volunteers from SMC received the question-
naire during an introductory sociology class.

The agencies determined the preferred methods of contacting their clients. All clients were offered assistance to fill out the forms. Pre-stamped, self-addressed envelopes were enclosed with questionnaires to expedite returns. Several blind and multiply-disabled people were interviewed individually in their homes by an occupational therapy student. A teletypewriter (TTY) phone number was available for deaf respondents. Follow-up letters reminded respondents to return their questionnaires.

Results
One hundred ninety questionnaires returned by the disabled respondents, and all the 36 completed by the nondisabled respondents, were valid for computer analysis. A range of 35-68 percent of those disabled persons contacted from various agencies returned the questionnaires by mail. This result compares favorably with a rate of 37-50 percent found in other surveys of disabled persons (14-17).

The sample will be identified by subgroups: The SMC disabled (N = 61), disabled students attending SMC; the community disabled (N = 129), others with disabilities; the entire disabled (N = 190), SMC and community combined; and the SMC nondisabled (N = 36), able-bodied SMC students. Only when statistically significant differences were evident between the SMC disabled and the community disabled are the two groups reported separately; otherwise, they are combined for analysis.

Demographic Characteristics (Table 1). The SMC-disabled students were significantly older than the nondisabled comparison group. Although the percentage of males to females was comparable, both groups showed a higher percentage of females. A higher percentage of disabled students were married, although 85 percent still reported themselves as "single." The larger number of married students in the disabled sample could be a reflection of a slightly older group.

A slightly higher percentage of disabled students reported that they were living alone; however, both groups reported that more than 60 percent were living with a family or spouse. The ethnic distribution showed that the disabled students' group contained a higher percentage of whites and not as many Asian-Americans. Almost half (48%) of the SMC disabled reported receiv-
In Section 2, the SMC disabled group comprised 51% and the nondisabled group included 28% of the total sample. Interestingly, 16% of the nondisabled comparison group also reported a disability, including cases of spina bifida, visual problems, and hand weakness. Most of the disabled used some type of assistive device, whereas the nondisabled reported only the use of visual aids. Approximately half (49%) of the disabled group had been disabled from birth or most of their lives and the remainder for less than half of their lives.

Life Satisfaction (Table 3). Robinson and Shaver reported that numerous researchers used the following two questions to assess the degree of life satisfaction in general population groups: “Taking all things together, how would you say things are these days—would you say you’re very happy, pretty happy or not happy?” and “In general, how satisfying do you find the way you’re spending your life these days? Completely satisfying, pretty satisfying, or not satisfying?” (18). In the present survey the responses to these questions revealed significant differences between the disabled and nondisabled respondents. A significantly greater percentage (p < .003) in both the community and the SMC disabled groups were “not happy.” A chi-square test showed that the “not happy” responses were statistically different (p < .01). The second question concerning life satisfaction revealed a significantly higher percentage (p < .004) of both disabled groups reporting that their lives were “not satisfying.” A chi-square test demonstrated significant differences in the percentage “not satisfied” (p < .025).

Future Goals (Table 4). Kemp and Vash determined that the ability to formulate goals after a severe disability was indicative of positively directed, productive behavior. They also demonstrated that a high frequency of goals not related to physical restoration was the most predictive of productive behavior by spinal cord-injured persons (19). Interestingly, when asked to report their future goals, a higher percentage in the SMC disabled group named four or more goals. A higher percentage of the disabled also mentioned goals in the vocational, interpersonal, and physical areas when compared to the nondisabled sample.

In relation to their current vocational goal, 65 percent of the disabled wanted work that was different from the job they had performed previously; 23 percent wanted to do some type of work assisting disabled persons, and only 8 percent wanted to do the same type of work they had done previously. Comparative data on the nondisabled sample were not obtained.

Looking at the SMC-disabled samples' satisfaction with previous rehabilitation services, 63 percent reported being satisfied with occupational therapy, 74 percent with vocational rehabilitation, whereas 56 percent were "uncertain" about psychology. The high percentage satisfied with vocational rehabilitation could reflect the presence of an outstanding vocational counseling program on the SMC campus. In contrast, 56 percent of the community disabled reported satisfaction with vocational rehabilitation. But a higher percentage, 54 percent, were satisfied with psychology. Of the 26 disabled students who responded, some had not been offered to them at the most appropriate time, their sense of erroneous timing was close to an even distribution among "too early" (31%), "too late" (31%), and "not at all" (38%). Sixty-seven percent of the SMC disabled thought that they could benefit from rehabilitation services now. However, the specific services desired were so varied that they defied valid classification.

The SMC-disabled students most frequently cited transportation, homework, and money as the expected barriers to class attendance at the college. Only 21 percent thought

<table>
<thead>
<tr>
<th>Type of Goals</th>
<th>SMC Disabled</th>
<th>SMC Nondisabled</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vocational</td>
<td>41</td>
<td>48</td>
</tr>
<tr>
<td>Avocational</td>
<td>41</td>
<td>36</td>
</tr>
<tr>
<td>Interpersonal</td>
<td>17</td>
<td>15</td>
</tr>
<tr>
<td>Physical</td>
<td>7</td>
<td>0</td>
</tr>
<tr>
<td>Material</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

Table 4
Future Goals of SMC Disabled and Nondisabled Students

The SMC-disabled students most frequently cited transportation, homework, and money as the expected barriers to class attendance at the college. Only 21 percent thought...
apply to me. For analyses, the items
demand, than their nondisabled
in doing? or This question does not
you like to develop more confidence
checked: Which activities do you
participation services. A check-
counterparts. A majority thought
come, were college graduates, re-
lives as not satisfying, and named
more goals, especially in vocational,
level of confidence (p < .0005), although the nondisabled showed
the greatest amount of confidence.

Cognitive Problem-Solving Skills
included—manage money, conserve
physical energy, find a place to live,
solve problems/make decisions, and
find what you need. Both the community
and SMC disabled were signifi-
cantly less confident (p < .008) than the nondisabled comparison
group.

Within the Social/Recreational
Skills were—eat at a restaurant, meet
new people, have friends, date, take
a trip, enjoy your spare time. Both
of the disabled groups were signifi-
cantly less confident (p < .0005) than the nondisabled group.
The School/Vocational Skills
"cluster" included—go on a job
interview, fill out forms, find a job,
plan a school program, and talk to
employers/teachers. Both of the dis-
abled groups were significantly less
confident than the nondisabled group (p < .01) on School/Voc-
atinal Skills.

Home Skills included—prepare a
simple meal, shop, hire/train help,
clean your house, clean/iron clothes
and sew/mend clothes. The three
groups were significantly different
(p < .0001) from one another within
the Home Skills "cluster," with the
community disabled the least con-

dent followed by the SMC dis-
abled.

Driving a car/taking a driver's
test and using public transporta-
tion were items included in the
Community Mobility "cluster." Again, the three groups were signi-
ificantly different from one another
(p < .001), with the community dis-

they would have no problems in
attending classes.

In summary, a greater percentage
of disabled students were older, lived
alone, were white, had a lower in-
come, were college graduates, re-
ported not being happy, saw their
lives as not satisfying, and named
more goals, especially in vocational,
interpersonal, and physical areas of
endeavor, than their nondisabled
counterparts. A majority thought
that they could benefit from reha-
bitilation services now.

Needs for Community-Based Occupa-
tional Therapy Services. A check-
list of 30 activities of daily living
was included in the survey to deter-
mine the needs for occupational
therapy services. Respondents
checked: Which activities do you
feel confident doing without help
from others? Which activities would
you like to develop more confidence
in doing? or This question does not
apply to me. For analyses, the items
were categorized into six "activity
clusters," namely: basic activities
of daily living, cognitive/problem solv-
ing, social/recreational, school/voc-
atinal skills, home skills, and
community mobility (Table 5). To
compare the frequencies of responses
by the sample subgroups, an index
of confidence was constructed. The
response "feel confident doing with-
out help from others" was scored 2,
and "would like to develop more
confidence" was scored 1. A mean
response between 1 and 2 was ob-
tained for each subgroup with a
higher score indicating greater con-

dence. Lower confidence was as-
sumed to indicate areas of need for
occupational therapy. Mean scores
of confidence were compared by
analysis of variance between sample
subgroups.

The Activities of Daily Living
"cluster" included—assessment of
capacity in grooming, dressing,
using the bathroom, feeding, and
using the telephone. In comparing
the scores for the basic activities for
daily living, the three groups were
not significantly different in their
level of confidence (p < .0537),
although the nondisabled showed
the greatest amount of confidence.

| Table 5 |

Index of Confidence in Independent Living Skills  

<table>
<thead>
<tr>
<th>Analysis of Variance</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic ADL Skills</td>
<td>Community-Disabled</td>
<td>1.88</td>
</tr>
<tr>
<td></td>
<td>SMC-Disabled</td>
<td>1.93</td>
</tr>
<tr>
<td></td>
<td>SMC-Nondisabled</td>
<td>1.98</td>
</tr>
<tr>
<td></td>
<td>p &lt; .0537</td>
<td></td>
</tr>
</tbody>
</table>
| Cognitive Problem-
Solving Skills  | Community-Disabled | 1.66 | 0.34 |  
|                     | SMC-Disabled | 1.68 | 0.33 |  
|                     | SMC-Nondisabled | 1.85 | 0.20 |  
|                     | p < .008 |  
| Social Recreational
Skills  | Community-Disabled | 1.67 | 0.34 |  
|                     | SMC-Disabled | 1.66 | 0.35 |  
|                     | SMC-Nondisabled | 1.91 | 0.16 |  
|                     | p < .0005 |  
| School Vocational
Skills  | Community-Disabled | 1.64 | 0.39 |  
|                     | SMC-Disabled | 1.61 | 0.38 |  
|                     | SMC-Nondisabled | 1.85 | 0.26 |  
|                     | p < .01 |  
| Home Skills  | Community-Disabled | 1.63 | 0.32 |  
|                     | SMC-Disabled | 1.77 | 0.27 |  
|                     | SMC-Nondisabled | 1.95 | 0.13 |  
|                     | p < .0001 |  
| Community Mobility
Skills  | Community-Disabled | 1.53 | 0.46 |  
|                     | SMC-Disabled | 1.71 | 0.41 |  
|                     | SMC-Nondisabled | 1.95 | 0.15 |  
|                     | p < .001 |  

(Note: Dotted lines indicate statistically
significant differences between sample
subgroups).
abled being the least confident.

In conclusion, on the index of confidence, basic Activities of Daily Living was the only area in which the disabled groups were not statistically significantly less confident than the nondisabled. On Home Skills and Community Mobility, the community disabled were significantly less confident than the SMC disabled and nondisabled students. With Cognitive Problem Solving, Social/Recreational Skills, and School/Vocational Skills, both disabled groups were significantly less confident than the nondisabled group.

Implications of Daily Living Activities Survey. Most of the community-based disabled, both from the community at large and the students attending SMC, appeared to have achieved a relatively adequate degree of confidence with basic activities of daily living. Perhaps previous rehabilitation helped them to attain these “survival skills,” or they trained themselves out of necessity. The community disabled appeared to be less confident in home and community mobility skills before attempting to attend a community college. Community mobility is paramount since disabled students at SMC are not provided with transportation to the college. Even those disabled persons attending the college reported less confidence in community mobility and homemaking skills than their nondisabled counterparts. The community disabled and the SMC disabled both reported low confidence in performing skills in the school/vocational, social/recreational, and cognitive/problem-solving clusters when compared to the nondisabled students.

Needs for occupational therapy intervention might be particularly acute in these areas.

Interests. Interest items for the questionnaire were chosen in consultation with Jennifer Weinstein, OTR, and were an adaptation of Matsutsuyu’s Interest Checklist categories (9, 20). The rank order of percentages of interests of the SMC-disabled students showed the greatest amount of interest in Crafts/Fine Arts, followed by Social/Recreational, Cultural/Religious, Sports, and Homemaking (Table 6). In comparing the disabled with the nondisabled (Table 7), no significant differences were found in interests except in Sports ($p < .0003$). The category of “Do not want to do” accounted for this difference, with the community disabled showing the greatest percentage (31%) reporting not wanting to participate in sports ($p < .005$).

Implications for Occupational Therapy

Since the disabled persons in this survey appeared to have mastered basic activities of daily living skills, the primary needs for occupational therapy appeared to be to increase their confidence in home, community mobility, school-vocational, cognitive problem solving, and social/recreational skills.

Since the highest percentage of interest reported was in crafts/fine arts and social/recreational activities, an occupational therapist who knows the predominant interests could capitalize on these to increase confidence in low confidence activities such as problem solving and decision making, for example, by using selected crafts.

Confidence in home skills and community mobility are necessary before the disabled person can take advantage of opportunities at the college. The community colleges, many with food preparation laboratories available, appear a likely site for home skills instruction by an occupational therapist.

An occupational therapy program for this community college should also be directed toward pre-vocational and vocational skills development in keeping with the high frequency of vocational goals reported. Opportunities for practicing problem-solving activities and life-organization strategies, such as time and money management, are needed by many as preparation for vocational pursuits. The therapist could also focus on the achievement of the next most desired goals: avocational and social-interpersonal pursuits. These goals might be gained by increasing awareness of the opportunities offered by self-help organizations as well as clubs and self-development classes at the college.

The overwhelming evidence of a low degree of life satisfaction by the disabled persons in this study calls for enlightened intervention. No attempt was made to determine the causes of such a low degree of life satisfaction. However, it is clear

Table 6

<table>
<thead>
<tr>
<th>Would Like To Do</th>
<th>Do Not Want to Do</th>
<th>Indifferent</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Percent)</td>
<td>(Percent)</td>
<td>(Percent)</td>
</tr>
<tr>
<td>Crafts/Fine Arts</td>
<td>79</td>
<td>7</td>
</tr>
<tr>
<td>Social/Recreational (games, etc.)</td>
<td>72</td>
<td>11</td>
</tr>
<tr>
<td>Cultural, Political, Intellectual, Religious</td>
<td>64</td>
<td>18</td>
</tr>
<tr>
<td>Sports</td>
<td>61</td>
<td>12</td>
</tr>
<tr>
<td>Homemaking, Domestic arts</td>
<td>50</td>
<td>36</td>
</tr>
</tbody>
</table>
that the provision of traditional rehabilitation services alone does not guarantee life satisfaction. Previous research on the life satisfaction of middle-aged persons determined that self-perception of health strongly influences life satisfaction (21). However, no thorough or controlled examination has been done to explain why it does. The results of this study suggest that multiple-related variables such as subsistence level income, unemployment, and decreased confidence in performing activities may contribute to a lowered life satisfaction.

Conclusion
A survey was conducted to establish the focus of occupational therapy programs within a community college and to provide insight into the demographic characteristics of the population to be served. The findings painted a broad spectrum on the lives of disabled persons residing in the community and how they compared with those of nondisabled college students. An occupational therapy program, based upon this study, is being implemented at SMC. The program emphasizes the mastery of homemaking, cognitive problem solving, social/recreational, and school and vocational skills through classroom instruction and individual consultation. Goal setting to attain future aspirations and the pursuit of disabled students' major interests through step-by-step achievement of goals are among the methods of treatment employed.

The results of this study are also being used to initiate new research to explore other difficulties disabled persons encounter while attempting to live independently in the community, as well as to follow-up on the effects of occupational therapy upon their daily living skills. It is hoped that this research will contribute to greater life opportunities for disabled persons by serving as a model for the development of other occupational therapy programs in community colleges.

Acknowledgments
We express our appreciation to Stan Azen, Ph.D., Diane Moynes, RPT, Sarah Stocking, OT student, and Janice Zelanka, OTR, for their assistance and encouragement with this research; and to the staff of all the agencies involved in the survey.

REFERENCES
15. Jobe B: A needs assessment survey of twenty-seven physically disabled students at Santa Monica College, California. Unpublished Master's Thesis: California State University, Los Angeles, California, November 1977