TESTING THE UNIVERSALITY OF THE GENERIC DETERRENTS TO PARTICIPATION SCALE, DPS-G: A CASE STUDY

By

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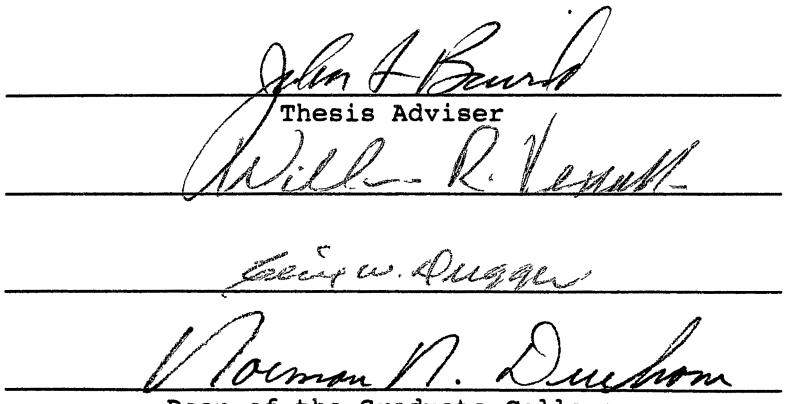

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CHAPTER I

INTRODUCTION

According to Van Dalen (1988, p. 283), experiments must be replicated to establish external validity for a survey instrument and to engender confidence in the hypothesis. This study seeks to help establish the universality of the generic version of the Deterrents to Participation Scale (DPS-G) developed in 1985 by Darkenwald and Valentine.

Most educators agree that we are evolving into a society of lifelong learners. Changing technology and the trend away from lifelong employment with a single employer are two of the major factors that make it mandatory for adults to pursue further education and training. According to Cross (1981, p. 2), "the observation that no education will last a lifetime seems conservative and even mundane." Consider, for example, the intellectual gap between those who are computer literate and those who are not.

Unfortunately, not everyone who has a need for further education gets it. Something, or some combination of things, prevents the adult from obtaining the needed learning. The problem may be that the adult is not motivated to participate in the opportunities that are available to him or her. The problem may also be that one or more barriers to participation, called deterrents, stand in the way of participation.

Before 1984 most research focused on motivation and researchers gave little attention to the study of barriers to participation. The work that had been done on barriers "consisted mostly of descriptive surveys or untested theoretical assumptions" (Darkenwald & Valentine, 1985, p. 178). This lack of empirical data hampered the prediction of participation by motivational theorists and forced them to take a more thorough look at the factors that deter participation (Martindale & Drake, 1989, p. 64).

In 1984, Scanlan and Darkenwald made the first serious attempt to discover and classify barriers to participation. They studied a homogeneous group of health care professionals to determine barriers to participation in continuing professional education. Even though the "results could not be generalized to all health professionals; much less the general adult population," the survey did provide the foundation for later, more generalized research (Darkenwald & Valentine, 1985, p. 178).

In 1985 Darkenwald and Valentine (p. 178) did research designed to: (1) construct a general form of the DPS scale (DPS-G); (2) identify factors that deter the general adult public from participation in adult education, and (3) determine relationships, if any, between deterrent factors and sociodemographic variables. They identified nine factors, six of which are meaningful, that deter participation. While meaningful, the results of a single survey using the DPS-G instrument cannot establish the universality of the DPS-G factors.

> At present . . . no claim to definitiveness can be made for the findings reported here. Much more work is needed to establish the stability and universality of the DPS-G

> factor structure. The only way this can be done is by replication of the present research with different populations . . . . (Darkenwald & Valentine, 1985, p. 187).

The primary purpose of this study is to help establish the external validity of the DPS-G factor structure by using the DPS-G instrument to determine the factors that deter the employees of the Sun Refining and Marketing Company refinery in Tulsa, Oklahoma from participation in adult education.

Objectives of the Study

The objectives of this study were to

1. Distribute and get each maintenance department employee working at the Sun Refinery to complete the DPS-G instrument.
2. Evaluate completed DPS-G survey instruments using the same factor analysis methods used in the original DPS-G study.
3. Determine whether the external validity and universality of the DPS-G instrument should be strengthened by comparing the survey results with the results obtained in previous studies using the DPS-G instrument.

Limitations of the Study

Since this was a case study of a specific population, the maintenance department employees of the Sun refinery in Tulsa, Oklahoma, no generalization of the findings to the general adult population was possible. However, results consistent with the results of previous studies strengthen the universality of the DPS-G instrument and the generalizability of the original hypothesis.

Definitions of the Study

According to Darkenwald & Valentine (1985, pp. 178-179):

Adult - All non-institutionalized persons, 16 or older, not enrolled full-time in school, college, or other educational institution.

Adult Education - Any organized learning activity for adults, including courses, workshops, seminars, and training programs offered by schools, colleges, and other organizations or community groups.

CHAPTER II

REVIEW OF LITERATURE

This review is divided into three parts: (1) Non-participation in Adult Education: Studies prior to the development of the DPS-G instrument, (2) Non-participation in Adult Education: Studies involving the DPS-G instrument, and (3) Non-participation in Adult Education: Studies using instruments other than the DPS-G instrument.

Part One: Studies Prior to the Development of the DPS-G Instrument

Prior to the work done by Scanlan and Darkenwald in 1984, the focus was on the factors that motivate adults to participate in adult education; very little research was done on the factors that deter participation in adult education. A by-product of the research on motivation was often a long list of discrete deterrents to participation (Darkenwald & Valentine, p. 178). Cross (1981) devised a scheme for grouping these deterrents and she divided deterrents into three groups. These groups are: Situational barriers, Institutional barriers, and Dispositional barriers.

Situational Barriers

Situational barriers are, according to Cross (1981), "those

arising from one's situation in life at a given time." Examples include: lack of time, lack of money, and lack of child care. In fact, "The cost of education and lack of time lead all other barriers of any sort by a substantial margin" (Cross, 1981, p. 100).

Institutional Barriers

Institutional barriers are, according to Cross (1981), "all those practices and procedures that exclude or discourage working adults from participating in educational activities." Examples include: scheduling problems and lack of relevant or practical courses. Cross (1981, p. 100) found that institutional barriers, "rank second in importance to situational barriers . . ."

Dispositional Barriers

Dispositional barriers are, according to Cross, "those related to attitudes and self-perceptions about oneself as a learner." Examples include: feeling inadequate or too old to participate in adult learning opportunities. This group of barriers is more important than indicated by past survey results (Cross, 1981, pp. 106-107).

In 1984, Scanlan and Darkenwald designed the Deterrents to Participation Scale (DPS) instrument in an attempt to identify and classify barriers to participation. Scanlan and Darkenwald's DPS data shows that Cross's three groups of barriers are oversimplified. As quoted in Darkenwald & Valentine (1985, p. 183).

> DPS data yielded the following factors:
>
> 1) Disengagement (inertia, apathy, negative attitudes); 2) Lack of Quality (dissatisfaction with quality of available educational opportunities); 3) Cost; 4) Family Constraints; 5) Lack of Benefit (doubts about worth and

need for participation); 6) Work Constraints.

These six factors show, according to Darkenwald (p. 187), "the multidimensionality of the deterrents construct . . ." In other words, non-participants who might overcome one or two deterrents are apt to be overwhelmed by multiple deterrents.

Part Two: Studies Involving the DPS-G Instrument

Darkenwald and Valentine's 1985 research indicated that deterrents might be weighted by sociodemographic variables. Their results confirmed a correlation between deterrents and the following variables: sex, age, highest educational credential, total family income, and employment status (p. 185).

Darkenwald and Valentine (1985) identified nine factors that deter participation. The six factors they selected as meaningful are: (1) Lack of confidence, (2) Lack of course relevance, (3) Time constraints, (4) Low personal priority, (5) Cost, and (6) Personal problems (pp. 183-185). Darkenwald and Valentine tried, unsuccessfully, to force their six factors into Cross's three categories of "barriers." According to Darkenwald and Valentine, one factor, "lack of course relevance," matches Cross's Institutional barrier category (p. 187); one factor, "lack of confidence," matches the Dispositional barrier category; and three factors: "time constraints," "cost," and "personal problems," match the Situational barrier category. They were unable to fit the remaining factor, "low personal priority" into any of the groups. Survey participants assigned a moderate to a high level of importance to items in the

"lack of course relevance" factor while rating items in the one Dispositional factor, "lack of confidence," as "relatively unimportant" (p. 184). Survey participants assigned the most importance to "Time constraints," a factor classified as a Situational barrier (p. 184). A closer inspection of the items within the factor shows, "... a more subtle interpretation - time constraints rather than an absolute lack of time" (p. 184).

Martindale and Drake did the next important study on deterrents to participation in 1986. They used Darkenwald and Valentine's (1985) DPS-G scale to investigate non-participation by off-duty Air Force personnel. Their sample population was younger, less educated, and less affluent than Darkenwald and Valentine's sample population (p. 65). Martindale and Drake (1989) listed their items in order of decreasing importance to survey participants (See Table I). They evaluated the list, using Cross's typology, and found, as did Darkenwald and Valentine (1985, p. 66), that "most dispositional factors crowded towards the end of the scale." Martindale and Drake used the low level of importance assigned to dispositional factors to show that, "deterrents are being measured" (p. 66).

A more recent study using the DPS-G instrument was done in Canada by Blais, Duquette, and Painchaud (1989). These authors revised and translated the Deterrents to Participation Scale (DPS-G). After evaluation and revision by a panel of experts, the instrument was pilot-tested on a group of 16 nurses. The final revision of the survey was then mailed to 2,063 diploma nurses. The researchers divided 600 of the 909 responses into three random samples of 200

TABLE I

MARTINDALE AND DRAKE'S TOP TEN ITEMS

Survey Response	DPS-G rank	Cross's category
Didn't have time for studying	1	situational
Course scheduled at an inconvenient time	2	institutional
Would take away from time with family	3.5	situational
Didn't think I could attend regularly	3.5	situational
Course at an inconvenient location	5	institutional
Time required to finish course	6	situational
Couldn't afford miscellaneous expenses	7	situational
Wasn't willing to give up leisure	8	dispositional
Couldn't afford registration fees	9	situational
Don't enjoy studying	10	dispositional

Source: Martindale and Drake (1989, p. 67)

subjects each and used cluster analysis to evaluate their data.

The researchers, using the SPSSX computer program to do the analysis, reached a six-cluster solution. Only five of the six clusters yielded useful data, these clusters were: (1) Incidental costs, (2) Low priority for work-related activities, (3) Absence of external incentives, (4) Irrelevance of additional formal education for professional practice, and (5) Lack of information and affective support.

Blais, et al. (1989) found some notable differences between their results and the results of previous studies. They concluded that,

> Considering the method of analysis used as well as the unique characteristics of the target population in terms of a number of key variables, it is not unexpected to find notable differences . . . (p. 232).

According to the researchers: (1) Incidental costs and conflicting role demands cause women to assign a low priority to educational activities; (2) Lack of incentives and a stressful work environment deter participation; (3) The variety of courses and methods of instruction may only be important after the decision to participate has been made; and (4) Promoting improved professional practice as a reason for participation may not be sufficient for women facing conflicting role demands.

Part Three: Studies Using Instruments Other Than the DPS-G Instrument

A 1988 study done in Scotland by Munn and MacDonald provides further insight into deterrents to participation. The purpose of the study was to, "discover the extent of adult participation in education and training in Scotland and the factors affecting such participation"

(p. 220). Munn and MacDonald (1988) documented both reasons for participation and reasons for non-participation.

In Munn and MacDonald's (1988) data, "Many of the traditional barriers to education and training, such as entry and admissions procedures and cost, figured hardly at all . . ." (p. 226). Their top four reasons for non-participation were: (1) Haven't got time, (2) Have to look after dependents, (3) Not really interested, and (4) Wouldn't help in my job (p. 223).

It is unclear from the literature whether Munn and MacDonald's survey instrument is better suited than the DPS-G for gathering dispositional barrier data. It may be that the Scottish people are less inhibited than people in the United States about admitting that they just are not motivated to participate in adult education or training.

Summary

Real efforts to identify and classify deterrents to participation in adult education began with Scanlan and Darkenwald's development of the DPS instrument and factor structure in 1984. Darkenwald and Valentine (1985) carried the process one step further with the development and use of a generic version of the DPS instrument, the DPS-G.

While the DPS-G is not the only instrument available for the study of deterrents to participation, it does appear to identify and permit classification of deterrents to participation experienced by the general adult population. Further studies are needed, however, to establish the stability and universality of the DPS-G factors.

CHAPTER III

RESEARCH METHODOLOGY

The primary purpose of this study was to help establish the external validity of Darkenwald and Valentine's (1985) study. Their definitions for "adult" and "adult education" are used in this study to maintain consistency. According to Darkenwald and Valentine (1985, pp. 178-179):

> Adult: All non-institutionalized persons, 16 or older, not enrolled full-time in school, college, or other educational institution.
>
> Adult Education: Any organized learning activity for adults, including courses, workshops, seminars, and training programs offered by schools, colleges, and other organizations or community groups.
>
> Factor: A cause or influence which is in some measure responsible for a given phenomenon (Popham and Sirotnik, 1973).
>
> Factor Analysis: A statistical tool for analyzing scores on a large number of variables in order to determine whether there are a few identifiable dimensions which can be used to describe many of the variables under analysis (Popham and Sirotnik, 1973).
>
> Number Cruncher Statistical System Version 5.02 (NCSS): An integrated set of statistical analysis programs developed by Dr. Jerry L. Hintze of Kaysville, Utah.

Assumptions of the Study

Since the intervals between the five fixed responses used in the

survey were not necessarily uniform, all data collected on deterrents to participation was assumed to be ordinal in nature.

Population of the Study

The population selected for the study was the 118 men and women working in the Maintenance Department at the Sun Refining and Marketing Company in Tulsa, Oklahoma. This group was chosen because of its contrasts with populations used in previous studies (See Table II). While Maintenance Department respondents were about the same age as the respondents in the Darkenwald and Valentine's (1985) study, the percentage of male respondents was much higher and the likelihood of a responder having a college degree was much lower. In comparison with Martindale and Drake's (1989) responders, the Maintenance Department workers were older, more affluent, and about equal in educational attainment. In addition to these documented differences, it is likely that the Maintenance Department employees were a more diverse group than the population previously used to verify the DPS-G instrument. Martindale and Drake limited their study to enlisted Air Force personnel stationed at one of two bases in Alabama. Their research indicated that this population was representative of all Air Force personnel. While this may be true, it is also likely that the common experience of serving in the Air Force decreased the chances of this group having the range of diversity found in the general, adult population.

Collection of Data

A 40 question survey instrument, including all 34 of the DPS-G

TABLE II

COMPARISON OF SOCIODEMOGRAPHIC DATA AMONG STUDIES USING THE DPS-G SURVEY INSTRUMENT

	Darkenwald & Valentine		Martindale & Drake		Doray	
Category	$\bar{X}$	%	$\bar{X}$	%	$\bar{X}$	%
Mean Age of Respondents	42.6		29.5		43.3	
Sex						
Male		37.7		68.1		92.3
Female		62.3		31.9		7.7
Education						
High School Graduate		32.2		68.9		66.7
Associate Degree		9.8		23.0		20.5
Bachelor of Science Degree		28.5		6.5		9.0
Advanced Degree		24.8		1.4		2.6
Income						
< $15,000		6.6		*		2.6
< $25,000 $15,000-$29,999		23.2				35.9
$25,000-$39,999 $30,000-$44,999		30.8				
$40,000-$54,999						32.1
> $45,000		39.3				
> $55,000						29.5

*While specific percentages were not given, Martindale indicated that incomes were significantly less than those reported by Darkenwald & Valentine.

items and six sociodemographic questions, was distributed to each of the 118 Maintenance Department employees (See Appendix). The survey form clearly indicated that respondents were to remain anonymous. Using self-addressed envelopes and collection boxes placed in high visibility locations around the Maintenance Department, survey forms were collected over a one-week period. Some supervisors collected completed surveys from their workers and returned them directly to the researcher.

Factor Analysis

To be consistent with previous studies, several methods of factor analysis were used to evaluate the DPS-G data. The steps involved in factor analysis are complex and would be difficult, at best, without the help of a computer and a good statistical program. In general, the first step in the analysis is to construct a table of intercorrelations among the variables being studied. This "correlation matrix" is analyzed until most of the intercorrelations can be described by the resulting factors. After all significant factors are identified, they are rotated until the most satisfactory fit between variables and factors is found. These rotated factors are then interpreted in terms of the variables they describe. All statistical analyses in this study were done using Version 5.02 of the NCSS statistical program. A principal components' analysis identified ten factors, Darkenwald and Valentine (1985) found nine, having an eigenvalue greater than 1.0. As in the case of previous studies, a less complex and more useful solution was pursued. A Varimax rotation of the factor solution was done using four, five, six, seven, eight,

and ten factors. The results were compared with the results of previous studies and a six factor solution was chosen as the most meaningful. Three of the six factors were very similar to three of Darkenwald and Valentine's (1985) six factors. Darkenwald called these factors: "Lack of Course Relevance", "Time Constraints", and "Low Personal Priority." Two additional factors, when combined, are equivalent to Darkenwald and Valentine's "Lack of Confidence" factor. The remaining factor may be split into Darkenwald and Valentine's two remaining factors: "Cost" and "Personal Problems."

Limitations of the Study

No attempt was made to select a sample that was representative of the general adult population. The intent was to help establish the external validity of the DPS-G survey instrument, not to predict deterrents to participation in adult educational opportunities. The results of this survey were also limited by the complexity of the factor analysis process. "The position of the factors as a result of the factor extraction process is quite arbitrary" (Popham and Sirotnik, 1973).

CHAPTER IV

ANALYSIS OF THE DATA

Thanks to excellent cooperation from the Maintenance Department managers and supervisors, 90 of the 118 survey forms were distributed over a two-day period. Twenty-eight additional forms were held back for distribution to Maintenance Department personnel attending a pump maintenance class. Those 28 survey forms distributed in class were completed and immediately returned. Fifty-six of the other 90 forms were either collected by the supervisors or were placed in a collection box. These efforts resulted in a 66 percent return rate (78 useable returns). Six of the survey forms were returned but were incomplete and unusable. Of the six, two had all the "not important" choices circled; two had "does not apply to me" written in and no choices circled; one was blank; and one had only the sociodemographic data portion filled in.

Data Summary

Survey results aligned closely with Darkenwald and Valentine's (1985) results. This further strengthens the argument for the general validity of the DPS-G survey instrument. Table III compares the survey item means calculated in this study with the means calculated by Darkenwald and Valentine and by Martindale and Drake (1989). Once again, the items related to time pressure had the six highest mean

TABLE III

COMPARISON OF DORAY, MARTINDALE AND DRAKE, AND DARKENWALD AND VALENTINE SURVEY ITEM MEANS

Survey Questions	Doray 1990		Martindale & Drake 1986		Darkenwald & Valentine 1985	
	Rank	Mean	Rank	Mean	Rank	Mean
Time required to finish course	1	2.87	6	2.07	6	2.40
Didn't have the time for studying	2	2.83	1	2.83	3	2.93
Would take away from time with family	3	2.82	3/4	2.28	5	2.47
Didn't think I could attend regularly	4	2.53	3/4	2.28	4	2.54
Course scheduled at an inconvenient time	5	2.51	2	2.71	1	3.02
Wasn't willing to give up leisure time	6	2.45	8	1.81	7	2.03
Course at an inconvenient location	7	2.44	5	2.18	2	3.00
Wanted something specific	8	2.19	17/18	1.50	12	1.83
Courses did not seem interesting	9	2.12	12	1.62	11	1.94
Didn't think course would meet my needs	10	2.10	19	1.49	8	2.00
Courses didn't seem useful or practical	11	2.09	16	1.52	9	1.98
Didn't know about available courses	12	2.04	29	1.24	13	1.82
I felt unprepared for the course	13	2.01	13	1.61	28	1.56
I don't enjoy studying	14	1.96	10	1.71	17	1.49
Courses available were poor quality	15/16	1.95	24	1.38	21	1.44
Courses not on right level for me	15/16	1.95	17/18	1.50	15	1.52
Couldn't afford registration fees	17	1.85	7	1.83	20	1.41
Not that interested in taking courses	18	1.80	9	1.80	13	1.62
Education wouldn't help me in my job	19/20	1.76	23	1.43	22	1.73
Because of family problems	21/22	1.73	26/27	1.27	25	1.63
I prefer to learn on my own	21/22	1.73	14/15	1.55	30	1.55
I didn't meet requirements for course	23	1.69	22	1.27	24	1.52

TABLE III (Continued)

Survey Questions	Doray 1990		Martindale & Drake 1986		Darkenwald & Valentine 1985	
	Rank	Mean	Rank	Mean	Rank	Mean
Not confident of my learning ability	24	1.68	20/21	1.48	19	1.62
I had trouble arranging childcare	25	1.54	14/15	1.55	16	1.73
Didn't think I would be able to finish	26	1.53	11	1.69	18	1.63
Employer wouldn't give financial aid	27	1.50	25	1.28	23	1.55
Family didn't encourage participation	28	1.47	28	1.26	26	1.47
Felt I was too old to take the course	29	1.46	33	1.12	29	1.42
Course offered in an unsafe area	30	1.45	30	1.19	10	1.95
Couldn't compete with younger students	31	1.42	31/32	1.14	26	1.47
Because of transportation problems	32	1.33	20/21	1.48	32	1.37
Friends didn't encourage participation	33	1.26	34	1.10	33	1.22
Because of personal health or handicap	34	1.13	31/32	1.14	34	1.19

scores. Even Item Number Seven "The course was held at an inconvenient location" is likely related to the time it takes to get to and from the class location. These results are consistent across the three studies and seem to indicate that the DPS-G instrument reliably captures adults' sense of time pressure. The overall mean for all items was 1.91; just slightly higher than the 1.82 reported by Darkenwald and Valentine (1985) and still roughly equivalent to the scale descriptor "Slightly Important."

Results of the Analysis

A factor loading of greater than or equal to 0.45 was required for inclusion of an item in a factor. Of the 34 items, five failed to load on any factor, three loaded on two factors each, and the remaining 26 items each loaded on one factor.

Factor Number One: Lack of Course Relevance

Table IV consists of seven items loaded on this factor which is named for and equivalent to Darkenwald and Valentine's (1985) Factor Number Two. The factor mean of 2.06 is somewhat higher than the overall mean.

Factor Number Two: Lack of Convenience

Six items loaded on this factor as illustrated in Table V. Although it contains most of Darkenwald and Valentine's Factor Number Three "Time Constraints", it more closely resembles and is named for Martindale and Drake's (1989) fifth factor. It too shows that any inconvenience, not just time constraints, will influence the decision

TABLE IV

ITEMS LOADING ON FACTOR NUMBER ONE: LACK OF COURSE RELEVANCE

Survey Questions	Loading	Doray 1990 Rank	Doray 1990 Mean	Darkenwald & Valentine 1985 Rank	Darkenwald & Valentine 1985 Mean
Factor #1: Lack of Course Relevance					
Courses didn't seem useful or practical	0.7895	11	2.09	9	1.98
Courses available were poor quality	0.7535	15/16	1.95	21	1.57
Didn't think course would meet my needs	0.7184	10	2.10	8	2.00
Wanted something specific	0.7140	8	2.19	12	1.83
Courses did not seem interesting	0.6844	9	2.12	11	1.94
Courses not on right level for me	0.4866	15/16	1.95	15	1.78
Didn't know about available courses	0.4532	12	2.04	13/14	1.82

TABLE V

ITEMS LOADING ON FACTOR NUMBER TWO: LACK OF CONVENIENCE

Survey Questions	Loading	Doray 1990 Rank	Doray 1990 Mean	Darkenwald & Valentine 1985 Rank	Darkenwald & Valentine 1985 Mean
Factor #2: Lack of Convenience					
Courses at an inconvenient location	0.7970	7	2.44	2	3.00
Course scheduled at an inconvenient time	0.7438	5	2.51	1	3.02
Time required to finish course	0.7053	1	2.87	6	2.40
Didn't think I could attend regularly	0.6647	4	2.53	4	2.54
Couldn't afford miscellaneous expenses	0.5464	17	1.85	20	1.60
Courses not on right level for me	0.5460	15/16	1.95	15	1.78

to participate in adult educational opportunities. The factor mean of 2.36 is considerably higher than the overall mean.

Factor Number Three: Cost and Other Personal Problems

Table VI shows six items loaded on this factor. It is a combination of Darkenwald and Valentine's (1985) Factor Number Five "Cost" and Factor Number Six "Personal Problems." The factor mean of 1.82 is slightly lower than the overall mean.

Factor Number Four: Lack of Encouragement

Four items loaded on this factor which is one of two parts that together are equivalent to Darkenwald and Valentine's (1985) Factor Number One "Lack of Confidence" (See Table VII). The factor mean of 1.48 is considerably lower than the overall mean.

Factor Number Five: Low Personal Priority

Five items loaded on this factor (See Table VIII). It is equivalent to and named for Darkenwald and Valentine's (1985) Factor Number Four. The factor mean of 2.36 is equal to the "Lack of Convenience" factor mean and considerably higher than the overall mean.

Factor Number Six: Lack of Confidence

Four items loaded on this factor which is the other half of Darkenwald and Valentine's (1985) Factor Number One "Lack of

TABLE VI

ITEMS LOADING ON FACTOR NUMBER THREE: COST AND OTHER PERSONAL PROBLEMS

Survey Questions	Loading	Doray 1990 Rank	Doray 1990 Mean	Darkenwald & Valentine 1985 Rank	Darkenwald & Valentine 1985 Mean
Factor #3: Cost and Other Personal Problems					
Because of family problems	0.8335	21/22	1.73	30	1.44
Employer wouldn't give financial aid	0.6747	27	1.50	23	1.55
I had trouble arranging childcare	0.6675	25	1.54	16	1.73
Would take away time with family	0.5690	3	2.82	5	2.47
Couldn't afford miscellaneous expenses	0.5468	17	1.85	20	1.60
Course offered in an unsafe area	0.5186	30	1.45	10	1.95

TABLE VII

ITEMS LOADING ON FACTOR NUMBER FOUR: LACK OF ENCOURAGEMENT

Survey Questions	Loading	Doray 1990 Rank	Doray 1990 Mean	Darkenwald & Valentine 1985 Rank	Darkenwald & Valentine 1985 Mean
Factor #4: Lack of Encouragement					
Family didn't encourage participation	0.6881	28	1.47	26/27	1.47
I prfer to learn on my own	0.6666	21/22	1.73	24	1.52
Friends didn't encourage participation	0.6151	33	1.26	33	1.22
Felt I was too old to take the course	0.5922	29	1.46	29	1.42

TABLE VIII

ITEMS LOADING ON FACTOR NUMBER FIVE: LOW PERSONAL PRIORITY

Survey Questions	Loading	Doray 1990 Rank	Doray 1990 Mean	Darkenwald & Valentine 1985 Rank	Darkenwald & Valentine 1985 Mean
Factor #5: Low Personal Priority					
Wasn't willing to give up leisure time	0.6714	6	2.45	7	2.03
Not that interested in taking courses	0.6324	19/20	1.76	22	1.56
Didn't have the time for studying	0.5846	2	2.83	3	2.93
Wouldn't take away from time with family	0.5417	3	2.82	5	2.47
I don't enjoy studying	0.5386	14	1.96	17	1.64

Confidence" (See Table IX). The factor mean of 1.70 is somewhat lower than the overall mean.

TABLE IX

ITEMS LOADING ON FACTOR NUMBER SIX: LACK OF CONFIDENCE

Survey Questions	Loading	Doray 1990 Rank	Doray 1990 Mean	Darkenwald & Valentine 1985 Rank	Darkenwald & Valentine 1985 Mean
Factor #6: Lack of Confidence					
Not confident of my learning ability	0.8289	24	1.68	19	1.62
Couldn't compete with younger students	0.7501	31	1.42	26/27	1.47
I felt unprepared for the course	0.6263	13	2.01	28	1.46
I didn't meet requirements for the course	0.4982	23	1.69	31	1.41

CHAPTER V

SUMMARY, FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

Summary

Chapter I of this study provides an overview of the research into deterrents to participation in adult education. It describes the development of the generic version of the Deterrents to Participation Scale (DPS-G) and states that the purpose of this study is to help verify the external validity of that instrument. Chapter II is a three part review of the literature. Part one describes the research into non-participation in adult education prior to the development of the DPS-G instrument and reviews subsequent DPS-G studies. Part three discusses studies that also explore the reasons for non-participation in adult education but do not use the DPS-G instrument. Chapter III describes the population chosen for the study and compares it to populations used in previous studies. This chapter also describes the factor analysis methods used to analyze the raw survey data. Chapter IV documents the factors found to be representative of the majority of the survey items and describes the strengths of each factor mean relative to the overall item mean. Chapter V includes this summary, findings, conclusions, and recommendations supporting the claim for strengthening the external validity of the DPS-G instrument.

Findings

The information in Table X illustrates the comparison of Factor Number One, Number Two and Number Five of the DPS-G instrument. Factor Number One "Lack of Course Relevance" includes all of Darkenwald and Valentine's (1985) items plus "Didn't know about available courses." Since adults do not feel that relevant courses are available, they do not look for them. As a result, adults often do not know what is available. Factor Number Two "Lack of Convenience", as noted by Martindale and Drake (1989), should not be limited to time constraints. Other items, such as location and miscellaneous expenses are also inconveniences and should be included in this factor.

Factor Number Five "Low Personal Priority" adds the item "Didn't have time for studying" to Darkenwald and Valentine's factor. Making time for study is bound to be difficult if education is not a priority.

Table XI compares Factor Number Three, Number Four, and Number Six. Factor Number Three is best described as "Cost and Other Personal Problems". Based on the income levels of the survey respondents, cost should not deter participation in educational opportunities. This factor, including cost, could be called "Excuses for Non-participation." Many adults would rather find an excuse than admit not being interested in additional education.

Factor Number Four "Lack of Encouragement" is a subset of Darkenwald and Valentine's (1985) "Lack of Confidence" factor. Adults with low self-confidence tend to look to external sources of motivation. Lack of external encouragement serves as a deterrent to

TABLE X

COMPARISON OF DORAY'S FACTORS ONE, TWO, AND FIVE WITH DARKENWALD AND VALENTINE'S FACTORS TWO, THREE, AND FOUR

Survey Questions	Doray 1990 Loading	Doray 1990 Mean	Darkenwald & Valentine 1985 Loading	Darkenwald & Valentine 1985 Mean
*D: Factor #1 Lack of Course Revelance				
Courses didn't seem useful or practical	0.79	2.09		
Courses available were poor quality	0.75	1.95		
Didn't think course would meet my needs	0.72	2.10		
Wanted something specific	0.72	2.19		
Courses did not seem interesting	0.68	2.12		
Courses not on right level for me	0.49	1.95		
Didn't know about available courses	0.46	2.04		
**D & V: Factor #2 Lack of Course Relevance				
Courses didn't seem useful or practical			0.82	1.98
Courses available were poor quality			0.70	1.57
Didn't think course would meet my needs			0.74	2.00
Wanted something specific			0.64	1.83
Courses did not seem interesting			0.70	1.94
Courses no on right level for me			0.62	1.78
*D: Factor #2 Lack of Convenience				
Course at inconvenient location	0.80	2.44		
Course scheduled at an inconvenient time	0.74	2.51		
Time required to finish course	0.71	2.87		
Didn't think I could attend regularly	0.66	2.53		
Couldn't afford miscellaneous expenses	0.55	1.85		
Courses not on right level for me	0.55	1.95		

TABLE X (Continued)

Survey Questions	Doray 1990 Loading	Doray 1990 Mean	Darkenwald & Valentine 1985 Loading	Darkenwald & Valentine 1985 Mean
**D & V: Factor #3 Time Constraints				
Course at an inconvenient location			0.52	3.00
Course scheduled at an inconvenient time			0.64	3.02
Time required to finish course			0.77	2.40
Didn't think I could attend regularly			0.65	2.54
Didn't have the time for studying			0.64	2.93
*D: Factor #5 Low Personal Priority				
Wasn't willing to give up leisure time	0.67	2.45		
Not that interested in taking courses	0.63	1.76		
Didn't have the time for studying	0.56	2.83		
Would take away from time with family	0.54	2.82		
I don't enjoy studying	0.54	1.96		
**D & V: Factor #4 Low Personal Priority				
Wasn't willing to give up leisure time			0.64	2.03
Not that interested in taking courses			0.65	1.56
Would take away from time with family			0.52	2.47
I don't enjoy studying			0.56	1.64
Education would not help me in my job			0.52	1.49

*Doray's Factors
**Darkenwald and Valentine's Factors

TABLE XI

COMPARISON OF DORAY'S FACTORS THREE, FOUR, AND SIX WITH DARKENWALD AND VALENTINE'S FACTORS FIVE, SIX, AND ONE

Survey Questions	Doray 1990 Loading	Doray 1990 Mean	Darkenwald & Valentine 1985 Loading	Darkenwald & Valentine 1985 Mean
*D: Factor #3 Cost & Other Personal Problems				
Because of family problems	0.83	1.73		
Employer wouldn't give financial aid	0.67	1.50		
I had trouble arranging childcare	0.67	1.54		
Would take away from time with family	0.57	2.82		
Couldn't afford miscellaneous expenses	0.55	1.85		
Course offered in an unsafe area	0.52	1.45		
**D & V: Factor #6 Cost				
Because of family problems			0.54	1.44
I had trouble arranging childcare			0.57	1.73
Course offered in an unsafe area			0.46	1.95
Personal health problem or handicap			0.46	1.19
**D & V: Factor #5 Cost				
Employer wouldn't give financial aid			0.50	1.55
Couldn't afford miscellaneous expenses			0.87	1.60
Couldn't afford registration fees			0.86	1.82
*D: Factor #4 Lack of Encouragement				
Family didn't encourage participation	0.69	1.47		
I prefer to learn on my own	0.67	1.73		
Friends didn't encourage participation	0.62	1.26		
Felt I was too old to take the course	0.59	1.46		
**D & V: Factor #1 Lack of Confidence				
Family didn't encourage participation			0.50	1.47
Friends didn't encourage participation			0.61	1.22

TABLE XI (Continued)

Survey Questions	Doray 1990 Loading	Doray 1990 Mean	Darkenwald & Valentine 1985 Loading	Darkenwald & Valentine 1985 Mean
Felt I was too old to take the course			0.77	1.42
*D: Factor #6 Lack of Confidence				
Not confident of my learning ability	0.83	1.68		
Couldn't compete with younger students	0.75	1.42		
I felt unprepared for the course	0.63	2.01		
I didn't meet requirements for course	0.50	1.69		
**D & V: Factor #1 Lack of Confidence				
Not confident of my learning ability			0.83	1.62
Couldn't compete with younger students			0.81	1.47
I felt unprepared for the course			0.75	1.46
I didn't meet requirements for course			0.60	1.41

*Doray's Factors
**Darkenwald and Valentine's Factors

participation. Factor Number Six "Lack of Confidence" is the internal half of Darkenwald and Valentine's (1985) "Lack of Confidence" factor. Feelings of low self-worth and fear of risk-taking can easily stand in the way of participation in adult educational opportunities.

Conclusions

Diverse populations have been studied and the same factors have emerged. The DPS-G instrument's external validity remains strong regardless of the populations being studied. It has been used successfully with homogeneous as well as heterogenous populations, with affluent as well as low to middle income populations, with primarily female as well as primarily male populations and with highly educated as well as less educated populations. The DPS-G instrument is an effective tool for evaluating deterrents experienced by any group of adults to participation in adult education.

Recommendations

Since the conclusions of this study strengthened the external validity of the DPS-G instrument without resolving the differences found in previous studies concerning the number and names of relevant factors, further study is recommended on different adult populations. Possible populations for future study include: populations with a higher percentage of minority members, populations of recognized high achievers and populations of recognized low achievers. More importantly a study should be done with a population of adults currently participating in adult education. This study would measure factors that deter but not prevent participation.

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APPENDIX

ADULT LEARNING QUESTIONNAIRE [PAGE: 1 OF 3]

Your answers are strictly confidential.
Federal law forbids revealing your identify.

DIRECTIONS: Every year, more and more adults participate in some kind of educational activity. Examples include courses, workshops, seminars, and training programs offered by schools, colleges, and other organizations or community groups. However, adults sometimes find it hard to participate in these activities, even when they want to. Try to think of something -anything at all -that you wanted to learn in the past year or two, but never did. Then look at the reasons below and decide how important each one was in your decision not to participate in an educational activity. (Please note: in the questions below, the word "course" refers to <u>any</u> type of educational activity, including courses, workshops, seminars, etc.)

PLEASE CIRCLE ONLY ONE RESPONSE NUMBER FOR EACH REASON. IF A REASON IS NOT APPLICABLE FOR YOU, CIRCLE NUMBER 1.

REASONS	How important was <u>each</u> reason in your decision <u>not</u> to participate? NOT IMPORTANT	SLIGHTLY IMPORTANT	SOMEHWAT IMPORTANT	QUITE IMPORTANT	VERY IMPORTANT
1. Because I felt I couldn't compete with younger students	1	2	3	4	5
2. Because I don't enjoy studying	1	2	3	4	5
3. Because of a personal health problem or handicap	1	2	3	4	5
4. Because I didn't think I would be able to finish the course ...	1	2	3	4	5
5. Because I didn't have time for the studying required	1	2	3	4	5
6. Because I wanted to learn something specific, but the course was too general	1	2	3	4	5

ADULT LEARNING QUESTIONNAIRE [PAGE: 2 OF 3]

REASONS	NOT IMPORTANT	SLIGHTLY IMPORTANT	SOMEHWAT IMPORTANT	QUITE IMPORTANT	VERY IMPORTANT
7. Because I didn't meet the requirements for the course .	1	2	3	4	5
8. Because the courses available did not seem interesting	1	2	3	4	5
9. Because the course was offered at an inconvenient location .	1	2	3	4	5
10. Because I couldn't afford the registration or course fees .	1	2	3	4	5
11. Because I felt I was too old to take the course	1	2	3	4	5
12. Because I didn't know about the courses available for adults	1	2	3	4	5
13. Because of the amount of time required to finish the course.	1	2	3	4	5
14. Because the course was scheduled at an inconvenient time	1	2	3	4	5
15. Because my family did not encourage participation	1	2	3	4	5
16. Because of transportation problems	1	2	3	4	5
17. Because the courses available were of poor quality.....	1	2	3	4	5
18. Because I was not confident of my learning ability	1	2	3	4	5
19. Because of family problems ..	1	2	3	4	5
20. Because I'm not that interested in taking courses .	1	2	3	4	5

ADULT LEARNING QUESTIONNAIRE [PAGE: 3 OF 3]

REASONS	NOT IMPORTANT	SLIGHTLY IMPORTANT	SOMEHWAT IMPORTANT	QUITE IMPORTANT	VERY IMPORTANT
21. Because participation would take away from time with my family	1	2	3	4	5
22. Because I had trouble arranging for childcare	1	2	3	4	5
23. Because the available courses did not seem useful or practical	1	2	3	4	5
24. Because I wasn't willing to give up my leisure time	1	2	3	4	5
25. Because the course was offered in an unsafe area ...	1	2	3	4	5
26. Because education would not help me in my job	1	2	3	4	5
27. Because I felt unprepared for the course	1	2	3	4	5
28. Because I couldn't afford miscellaneous expenses like travel, books, etc.	1	2	3	4	5
29. Because the course was not on the right level for me ...	1	2	3	4	5
30. Because I didn't think I could attend regularly	1	2	3	4	5
31. Because my employer would not provide financial assistence or reimbursement	1	2	3	4	5
32. Because I didn't think the course would meet my needs ..	1	2	3	4	5
33. Because I prefer to learn on my own	1	2	3	4	5
34. Because my friends did not encourage my participation...	1	2	3	4	5

PLEASE ANSWER THE FOLLOWING SIX QUESTIONS ABOUT YOURSELF. REMEMBER THAT YOUR ANSWERS ARE COMPLETELY CONFIDENTIAL.

35. What is your sex? (circle one number)
    1 Female
    2 Male

36. What is your age? (write in number of years) _____ years

37. What is your highest level of education ? (circle one number)
    1 Have not completed high school
    2 High school diploma
    3 Associate degree
    4 Bachelor's degree
    5 Graduate degree

38. What is your approximate total family income before taxes? (circle one number)
    1 Less than $25,000
    2 $25,000 to $39,999
    3 $40,000 to $54,999
    4 $55,000 or more

39. What is your current employment status? (circle one number)
    1 Employed full-time
    2 Employed part-time

40. What is your home zip code? (write in the number) _____

VITA

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