Because money management is often a problem for lower-level military personnel, a resource management educational program called Money Sense was started by the University of California Cooperative Extension at Edwards Air Force Base in 1985. Volunteers for Money Sense were recruited at the base; they attended eight sessions on teaching techniques and a variety of financial management subjects. From the fall of 1985 to the fall of 1986, a total of 47 Money Sense Advisors (MSAs) were trained. The MSAs provided money management help to about 300 clients; 60 of them were available to complete an interview about the Money Sense program. Of the 60 persons interviewed, most were married, had an average of two dependents, and had been in the military 4.1 years. Only 25 percent had two wage earners in the family; 56 percent reported income of less than $15,000 per year. Half of the respondents felt they had no money problems before participating in Money Sense, whereas 44 percent reported having had financial problems at least monthly. After participation in the Money Sense program, 68 percent reported no money problems, whereas the rest felt they had problems rarely or no more than monthly. About 90 percent of the respondents believed their current financial status to be good or excellent. Only 35 percent of the clients interviewed had a budget before Money Sense compared with 93 percent who had a budget after the program. More than one-fourth had reduced the proportion of monthly income spent on credit. The findings of the study indicate that clients can be enabled to change their resource management behavior in a positive direction and that these changes can be lasting. The Money Sense program is being used at other military installations. (KC)
EMPOWERING VOLUNTEER MONEY SENSE ADVISORS AT A MILITARY INSTALLATION

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Studies conducted by the various armed services (e.g. Edwards, 1974; Croan, Katz, Fischer, & Smith, 1980) have consistently revealed that a primary problem of enlisted personnel and their families is financial management, particularly for the lower ranks (E-1 through E-5). The average debt load of the military is high when compared with the general population (Thoresen, 1985); financial irresponsibility or chronic indebtedness are grounds for administrative discharge, which is a drain on taxpayers estimated at $15,000 per lost recruit (Nogami et al., 1986). Financial problems and heavy indebtedness also take their toll on the military families involved, with tensions frequently erupting in spousal and child abuse, divorce, and alcoholism (Lester, 1978).

The personnel at Edwards Air Force Base, located in California's Mojave Desert, are no exception to the situation described above. As a result of a memorandum of understanding (1983) between the Extension Service--USDA and the Department of Defense, the Air Force requested help for their young enlisted personnel who were having financial problems. In the fall of 1985, the University of California Cooperative Extension started a resource management educational program, called Money Sense, at the base.

Money Sense was designed as a doubly empowering program. Defining empowering as enabling, the program was expected to empower two groups of learners. The first is the group of volunteers who were trained to become Money Sense Advisors, peer counselors on family resource management. The second is the ultimate clientele, persons who learn how to manage their resources so that they establish more control—power—over their financial well-being and thus over the quality of their lives.

This paper will first describe the program—i.e., the training of the master volunteers (Money Sense Advisors) and their role in working with clientele at Edwards Air Force Base. Then it will describe the way in which the program was evaluated, and what was learned from the evaluation.

Program Description

Volunteers for Money Sense were recruited at Edwards Air Force Base through the Family Support Center and the commanding officers. Both sources of volunteers are familiar with the prevalence and impacts of financial problems on families and the military command. The volunteers, military and civilian, were generally highly committed to prevention of financial crises. They attended eight sessions on teaching techniques and a variety of financial management subjects, including values, goals, choices, budgeting, check-writing, credit, savings, meal planning, and food shopping. The volunteers were trained to deal with the

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immediate problems of their clientele and to progress to the "lesson" part of the counseling after immediate financial problems were addressed. Throughout the training program case studies and examples of poor as well as good financial management were emphasized. Role-playing was used to illustrate techniques for working with Money Sense clients.

After completing the sessions and passing a final exam, each volunteer was expected to return at least 30 hours of community service by teaching a minimum of 10 clients. At the completion of their payback, volunteers were certified as Money Sense Advisors (MSAs). This approach created a continuing teacher-multiplier effect (Runyan & Schnittgrund, 1987).

From the fall of 1985 to the fall of 1986, a total of 47 MSAs were trained. Clients were referred to the MSAs by the Family Support Center or a commanding officer, or were self-referred after hearing about the program from word-of-mouth. In spite of some MSAs being transferred or otherwise unable to complete their payback time, these peer counselors reached more than 300 individuals or families. For the majority of cases, "reaching" meant covering the content of seven lessons plus helping the client find a solution to any particular resource management problems. Lessons on food shopping and meal planning were often omitted for single enlisted personnel who lived in the barracks.

Program Evaluation

Money Sense did enable the 47 volunteers to perform as peer counselors. Their test scores are evidence of content mastery. Feedback from focus group interviews with each graduating class is evidence of the confidence with which MSAs approached their payback commitment. Client records provide evidence that the MSAs did work with clients.

Whether the program fully lived up to its empowerment expectations, however, was ultimately assessed by examining the extent to which Money Sense clientele were enabled to improve their overall financial status and their resource management skills. A retrospective study was designed for this purpose.

Method: The base commander agreed to allow Money Sense clientele, on a voluntary basis, to respond to questions from a trained and trusted interviewer. Of the nearly 300 anonymous clientele reported by the MSAs, it was hoped that 100 might be reachable and willing to be in a pool from which 60 would be randomly selected for interviews. This proved to be an unwarranted hope; only 63 clients were still at Edwards and willing to be in the pool. The schedules of three identified clients did not permit their being interviewed. While the 60 interviewees are not a random sample of actual clients, the distribution of age, rank, ethnicity, gender, and family status approximates that of the current population of E-1 to E-5 military personnel on the base.

Instrument: The interview had five parts: (1) the client's experience with Money Sense, including which lessons were completed, how useful each was, and

The design of this study was seriously constrained by the project being conducted on a military installation. Since the base population is highly mobile, it is impossible to conduct a longitudinal study. In addition, there is no access to military records, and privacy is strictly protected. It was therefore not feasible to set up a control group that did not have access to a Money Sense Advisor.
whether the client had been able to use and/or share the information; (2) money problems that the client may have had before or after participation in the program, and what the client was doing to prevent future financial problems; (3) the client's food buying activities (for those not housed in the barracks), including average weekly food costs before and after Money Sense, food shopping skills used before and after Money Sense, and whether the client ate more, less, or the same amount of a specified list of foods; (4) the client's financial status, including perception of overall financial status, money management skills used before and after Money Sense, and the proportion of monthly income going toward payments on credit; and (5) personal information such as marital status, number of dependents, income level, rank, and time in service.

Because the data are all self-reported, they are susceptible to exaggeration in a socially desirable direction. The interviewer was trained to be non-judgmental and questions were worded to be as neutral as possible in order to minimize such effects. Nevertheless, it is a limitation of the study.

Data Analysis: Data on behavior change were reduced by the creation of indices (Table 1). From the food shopping items a retrospective food shopping skill index was created for "before MS" and a current one for "after MS." Each item was scored "0" if not done, "1" if sometimes done, and "2" if done. (Scoring was reversed for those items in which "good" is in the negative direction.) The scores were summed and divided by the number of applicable items (those behaviors which the respondent had ever used), resulting in an index with a possible range of 0 to 2. A change score for each client was obtained by subtracting the before MS food shopping skill index from the after MS index. Similarly, before and after money management skill indices were created from the money management skills, along with a change score for each client.

From the list of foods about which respondents were asked whether they now ate more, less, or the same amount, a food index was constructed. Each food was scored "1" if eaten less, "2" if the same, and "3" if eaten more, with appropriate reversals for foods (e.g. candy, salty foods) which should be eaten less often. The sum was divided by the number of applicable foods (those which the respondent had ever eaten), with a resulting possible range of 1 to 3.

In order to create data comparable for large and small families, the amount of money clients reported they spent on the average each week for food was divided by the number of people they had fed. This provided an average per person weekly food cost before MS, one after MS, and the difference between the two.

Findings: Of the 60 persons interviewed, most (67%) were married, 28 percent were single, and 5 percent were no longer married at the time of the survey. On the average, the respondents had 2 dependents and had been in the military 4.1 years. Most (60%) had been at Edwards from 1 to 4 years. Only 25 percent had two wage earners in the family; 56 percent reported income of $14,999 or less before taxes.

While half of the respondents felt they had no money problems before participating in Money Sense, 44 percent reported having had financial problems at least monthly. After participation in the program, 68 percent reported no money problems, while the rest felt they had problems rarely (25%) or no more than monthly (7%). Only 2 of the respondents perceived their financial status to be excellent prior to participation in Money Sense, and only 33 percent felt their fi-
nancial status had been good. Currently, 90 percent of the respondents believe that their financial status is good or excellent.

Only 35 percent of the clients interviewed had a budget before Money Sense as compared with 93 percent who have a budget now. More than a fourth (27%) had reduced the proportion of monthly income committed to payments on credit; only 4 persons (7%) had increased the proportion of monthly income spent on credit.

The average weekly food cost per person reported by respondents decreased by 19 percent, going from $30.62 before to $24.70 after participation in the program. This is a mean change of $5.60 in weekly food costs per person.

### TABLE 1. COMPONENTS OF INDICES

#### MONEY MANAGEMENT PRACTICES
- Use a checking account for paying bills
- Have a savings account
- Have financial goal(s)
- Save every month toward goal(s)
- Have an interest-bearing checking account
- Pay credit bills when due
- Reconcile bank statements each month
- Keep track of important papers
- Prepare a budget for each household when TDY
- Use credit cards
- Use credit cards frequently for purchases under $10
- List all credit cards by number
- Keep written records of how money is spent
- Reevaluate spending on a regular basis
- Shop around for best buys before purchasing
- Before making a purchase, evaluate on needs & values

#### FOOD SHOPPING SKILLS
- Write down how much you are going to spend each month on food, rent, etc.
- Plan the meals you are going to prepare for a few days or a week ahead
- Make a list of the foods that you need to buy before you go to the store
- Buy generic foods (plain labels)
- Buy store brand foods
- Buy foods in bulk, not packaged
- Buy TV dinners
- Buy macaroni & cheese packages
- Buy large packages instead of small ones
- Prepare your own master mixes (for biscuits, pancakes, etc.)
- Check the unit prices of foods
- Buy Manager's Specials in the commissary

#### FOOD CONSUMPTION ITEMS
- milk/cheese
- margarine/butter
- soda pop
- vegetables
- candy
- fruits
- syrup/jelly
- vegetable oil
- sugar
- mayonnaise
- salad dressing
- shortening (lard/Crisco)
- potato & tortilla chips
- ice cream
- salty foods (high in sodium)
Positive changes were noted for most of the 16 specific money management practices about which respondents were questioned. Greatest improvement was reported in having financial goals, reevaluating spending on a regular basis, shopping around for best buys, keeping written records of how money is spent, and evaluating needs and values before making a purchase.

When looking at the money management practices index, it is clear that there was room for growth. Before participating, 32 percent of the respondents had used at least three-fourths of the practices taught in Money Sense, while 13 percent of the respondents had used no more than one-fourth of the money management practices prior to their Money Sense involvement. On the average, the clients interviewed reported that they were now using 27% more of the money management practices than they had before participating. Ninety percent of the respondents were now using three-fourths of the practices taught, and all reported using more than half of the practices taught.

Participants also tended to change their food shopping behavior. The behaviors that were most frequently changed following Money Sense were writing down how much they planned to spend each month on food, rent, etc.; making a list of the food needed before going to the store; and checking the unit prices of foods. Of the 56 clients for whom these data were available, 35 (66%) reported use of half or less of the listed skills before they participated in Money Sense; now 51 (91%) use more than half the skills taught in Money Sense. On the average, the respondents reported a 29% increase in the number of food shopping skills practiced. Some (24%), however, reported no changes; one person changed in the negative direction.

Learning to buy food economically is not entirely satisfactory if food shoppers choose food of questionable nutritive value. The Money Sense curriculum pointed out the relationship between cost and nutrient density of food purchases, and stressed the high cost of some non-healthful food choices. On the average, respondents made desirable changes in the consumption of 36 percent of selected foods (mean food consumption index score = 2.32). The most important changes were decreased consumption of soda pop, candy, sugar, potato and tortilla chips, ice cream, and salty foods; and increased consumption of milk, fruits, and vegetables.

Correlation coefficients were computed to examine the relationship among variables. Of the five variables (income level, rank, marital status, number of lessons studied, and time since completion of the program) that were expected to influence the respondents' reported behavior, only one exhibited no significant relationship with any changes in the four measures of outcome (money management practices index, food shopping skills index, food consumption index, and weekly per person food cost). Time since completion of the program, which varied from 3 to 18 months, did not make a difference. Income level and marital status were negatively related to change in score on the money management practices index. Persons at a higher income level made less change than those at a lower income level (r=-.29, p <.05), and married persons made less change than unmarried persons (r=-.28, p <.05). In one instance, rank appeared to make a difference. Persons of higher rank were more likely to have changed their food consumption pattern in a positive direction than were persons of lower rank (r=.25, p <.05). The number of lessons studied was significantly related to food shopping skills (r=.25, p <.05) and changes in food consumption (r=.30, p <.05). Since the major variation in number of lessons completed was whether the respondents had participated in the Food Shopping and Meal Planning lessons, it is appropriate
that those who studied these lessons exhibited greater changes in the food-related outcome measures. Persons who were married were more likely than unmarried persons to make positive changes in their food consumption patterns (r = .23, p < .05).

Using paired comparisons for the money management practice and food shopping skill indices and weekly food costs, the t values of the differences between before and after measures were computed. In the case of the food consumption index, each individual's index score was compared to a no change score of 2. For all four measures the difference between means was significant (Table 2).

### Table 2. Differences between Means of Before and After Measures of Behavior

<table>
<thead>
<tr>
<th>Measure</th>
<th>Difference</th>
<th>t Value</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Money Management Skills Index</td>
<td>.2700</td>
<td>8.24</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Food Shopping Skills Index</td>
<td>.2913</td>
<td>7.87</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Food Consumption Index</td>
<td>.318</td>
<td>13.6</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Weekly Per Person Food Cost</td>
<td>$5.60</td>
<td>5.17</td>
<td>&lt;.001</td>
</tr>
</tbody>
</table>

**Conclusions**

Overall, the Money Sense program did help the participants to make positive changes in their resource management behavior. The fact that the participants perceived that their financial status had improved as a result of participation in the program is worthy of note. Past research (Davis & Helmick, 1980; Mammen et al., 1986) found that the family's positive perception of their financial status is more important in determining their economic well-being than any other item, even income. Based on this finding alone, we might assume that Money Sense has had an empowering effect on clients.

This assumption can further be supported by the positive changes that occurred in the clients' money management practices, food shopping skills, and food consumption habits, as well as the decrease in financial problems reported. Food costs were reduced significantly, without sacrificing good nutrition. A large share of the participants were also able to decrease the proportion of income they were devoting to credit payments.

Questions are often raised about the efficacy of educational intervention for all segments of the potential client population. The military is by no means homogeneous; volunteers were successful in reaching a representative subgroup of the population at Edwards, and outcome measures do not appear to be related to race or gender. It is interesting to note that in this study those persons with lower income and lower scores on the before Money Sense measures of resource management skills were most likely to have made changes. It is reassuring to find out that in this case those who needed it most were enabled—empowered—by the program. Judging by testimony of participants, however, even those who were doing a pretty good job of managing resources before involvement in Money Sense felt that the program had helped them.

The findings of this study indicate that clients can be enabled to change their resource management behavior in a direction that gives them greater control over their lives, and that these changes persist for longer than the duration of an educational intervention. In the absence of a control group and an experimental design, these changes cannot be unquestionably attributed to the work of the
Money Sense Advisors. However, the results of this study are supported by an independent survey conducted by staff at Edwards Air Force Base. According to the Base Commander, Money Sense has helped to reduce the number of persons who repeatedly have financial problems. Eighty percent of those who have requested financial assistance from Family Support and received help from a Money Sense Advisor have not returned for additional help.

This successful effort at empowerment has spread in California. Currently Money Sense programs are planned or underway in four additional military installations and at least six civilian applications. A statewide study will monitor the feasibility of these adaptations and assess the extent to which they are able to replicate the effects of the program at Edwards Air Force Base.

REFERENCES


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