

AN ANALYSIS OF COUNTRY OF ORIGIN EFFECTS  
FOR HYBRID (BI-NATIONAL) PRODUCTS

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The present study extends previous country of origin research by considering an emerging trend in the international marketplace -- the hybrid (bi-national) product. A 2<sup>5</sup> x 2 factorial design was used to simultaneously assess the effects of six product attributes, including country of origin and brand, on consumers' evaluations of two products where hybrids are common -- compact disc players and automobiles. The results indicate that, for both products, country of origin had a significant effect on participants' decision-making. However, its impact was small relative to other attributes. Brand was also found to have a small effect relative to other attributes. Contrary to expectations, few if any significant interactions emerged between country of origin and brand. Apparently, consumers are not concerned that a product's place of manufacture is different from the country associated with the product's brand name.

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The globalization of today's marketplace has led to a renewed interest in the effect of a product's country of origin on consumer decision-making. The results from a substantial body of research generally support the conclusion that country of origin affects consumers' evaluations of both durable and non-durable products (Dickerson, 1982; 1987; Dornhoff, Tankersley, & White, 1974; Festervand, Lumpkin, & Lundstrom, 1985; Gaedeke 1973). However, the results from these studies may be limited by the use of potentially biased research procedures that overestimate country of origin effects (Bilkey & Nes, 1982). An additional concern not yet addressed in the research literature is an emerging trend in the international marketplace -- the hybrid or bi-national product. A hybrid product is defined here as a product manufactured overseas and branded by a domestic marketer, or one that is manufactured and marketed in the U.S. and branded by a foreign firm. Examples include General Electric VCRs made in Taiwan, Chevrolet Spectrums made in Japan, Sony televisions made in San Diego, and Honda Accords made in Ohio, among a long list of others.

The purpose of this exploratory study is to examine the role that country of origin, brand

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name, and the potential interaction between these attributes, play in consumers' evaluations of products. Specifically, two research questions are addressed: 1) what role does country of origin and brand play in consumers' decision-making?; and 2) to what extent are consumers' decisions affected by the interaction between a product's source country ("Made in \_\_\_\_\_") and its brand name (U.S. or foreign)? Two products are considered where hybrids are common -- compact disc (CD) players and automobiles. In addition, a research approach -- conjoint analysis -- is employed that avoids several of the methodological limitations inherent in previous country of origin research.

#### BACKGROUND

##### Country of Origin and Consumer Decision-Making

Since the 1960's, researchers have examined the role played by country of origin in consumers' evaluations. Many early studies examined consumers' attitudes toward American- and foreign-made products in an attempt to better position imported goods in the American market (Reiersen 1966; 1967). In general, it was found that across a wide range of categories, consumers' attitudes were more positive toward American-made goods than if the same product were manufactured in a foreign country. Based on these findings, it has been argued that, in the consumer's mind, domestically-produced products have an advantage over imports, and that country of origin information should be presented as an information cue to help consumers make purchase decisions (Dickerson 1982; 1987).

More recent studies continue to document the American consumer's preference for domestically produced goods (Bruskin 1985; Dickerson 1982; 1987; Elrick & Lavidge, 1985; Gallup 1985; Opinion Research, 1987; Roper 1985). Paradoxically, during this same time, imports in a wide range of product categories, including autos, home electronics, and apparel, have enjoyed an ever-increasing share of the American market. Apparently, consumers report a positive attitude toward "American-made" products but willingly purchase imports. Thus, the question remains -- what role does country of origin information play in consumers' evaluations of products?

There are several reasons to suspect that the results of previous research are of limited value in understanding the effect of country of origin on consumers' decision-making. First, most country of origin studies have involved the

manipulation of only a single product attribute; e.g., "Made in Korea" vs. "Made in USA." Therefore, social pressure to appear patriotic could easily inflate consumers' professed attitudes toward U.S.-made goods. Perhaps of even greater concern is the fact that consumers in those studies based their evaluations on country of origin alone, in isolation from the product's brand name, as well as the other attributes that typically define a product.

Second, many previous studies placed consumers in the unfamiliar situation of evaluating vaguely defined product categories (e.g., electronic goods), instead of considering a specific product (e.g., a CD player). Consequently, the country of origin effects found in those studies may or may not generalize to specific products. A final limitation of previous country of origin research is the failure to consider the emergence of the hybrid product.

### The Hybrid Product

A growing number of domestic and foreign companies are taking a decidedly multi-national approach in their manufacturing, assembly, and marketing operations. As a result, hybrid products have become extremely common in the American marketplace. Consumers are now confronted with a bewildering array of products that are produced abroad and imported by a U.S. company whose brands they bear. Similarly, there is an ever-increasing number of foreign-branded products that are made in the USA.

There are two major reasons behind the proliferation of hybrid products. First, there have been a growing number of joint ventures in the last 15 years by manufacturers from different countries. The automobile industry is one example where several would-be competitors have joined manufacturing and marketing efforts. General Motors and Toyota have entered into a 50-50 partnership in New United Motor Manufacturing Inc. (NUMMI), a California-based operation that manufactures Chevrolet Novas and Prisms, and Toyota Corollas. General Motors also has an arrangement with Daewoo Motor Co. to manufacture the Pontiac LeMans in Korea. The Ford Festiva is the result of a joint manufacturing and engineering agreement among Ford Motor Company, Mazda Motor Corp. of Japan, and Kia Motor Corp. of Korea. Diamond Star Motors, whose first model is expected to roll out of its Bloomington, Indiana plant in 1989, represents the combined efforts of the Chrysler and Mitsubishi Motors Corporation. In fact, Chrysler is the fifth largest importer of autos behind Toyota, Nissan, Honda, and Mazda, and was the first to market a hybrid in the American automobile market. Its Mitsubishi line of Chrysler products, all made in Japan, were first introduced here in 1971.

A second reason for the proliferation of hybrids is the desire of foreign firms, particularly in the auto and home electronics industries, to

reduce or eliminate U.S. tariffs or quotas placed on imports. Consequently, many foreign manufacturers have established manufacturing operations or "transplants" in the U.S. Two of the four major Japanese auto importers now have permanent manufacturing plants in the U.S., while the other two plan to open facilities in the near future. Hondas have been rolling off the production line in Marysville, Ohio since 1982. In fact, Honda is both the #3 auto importer and the fourth largest U.S. automobile manufacturer. Nissan has been operating a manufacturing facility in Smyrna, Tennessee since 1985. Toyota soon will be operating a wholly-owned factory in Georgetown, Kentucky, while Mazda plans to take-over a Ford plant in Flat Rock, Michigan.

Transplant operations, particularly by the Japanese, have also been established in the electronics industry. The San Diego California plant of the Japanese giant Sony opened in 1972 and was the first transplant facility in the U.S. Since then, Sony has added manufacturing plants in Pennsylvania, Alabama, Indiana, and Florida. Another Japanese giant, Sharp, produces televisions and microwaves at its plant in Nashville, Tennessee, while Panasonic operates a manufacturing facility in Ohio. The Japanese firm Sanyo operates a plant in Arizona, while giant Matsushita, will produce televisions at its Vancouver, Washington plant under the General Electric brand name.

There is no doubt that hybrid products have provided both domestic and foreign firms with new international opportunities. To the American consumer, however, a new factor has been introduced in the marketplace. No longer are there clear distinctions between U.S.-made and imported products. Hybrids have blurred a product's origin and the brand name which it bears. Research suggests that brand name is often used to infer other product attributes, and may be one of the more important cues consumers use in making product evaluations (Jacoby, Olson, & Haddock, 1971; Jacoby, Szybillo, & Busato-Schach, 1977). Thus, if a product's place of manufacture is inferred from its brand name, hybrid products have the potential to confuse and/or mislead consumers.

### Overview of Study

The present study used conjoint analysis to assess the separate and combined effect of country of origin and brand name on consumer decision-making. Specifically, two product categories are considered where the proliferation of hybrid products has been particularly acute -- automobiles and consumer electronics. The conjoint approach, which has rarely been used to study country of origin, is based on the assumption that consumer decision-making involves the evaluation and combination of multiple product attributes (Anderson 1981; Green & Srinivasan, 1978). In order to provide a realistic product bundle, it was necessary to present consumers with a attributes, as well as country of origin and

brand name, were combined to create descriptions for each of the two products. The present study therefore represents the consumer's purchase environment more realistically than previous studies that considered only the single product cue -- "Made in \_\_\_\_\_."

METHOD

Product Stimuli and Design

Compact disc players and automobiles were included here for several reasons. First, they represent different types of goods where consumers might reasonably expect to find hybrids. Second, CD players and autos are products that are relevant to the purchase behavior of our sample -- college students. Third, both products are reasonably expensive, and represent what is typically assumed to be a high involvement purchase decision (Assael, 1987).

Each product was described by six attributes -- country of origin, brand name, and four functionally-oriented attributes. The functional attributes were obtained by selecting important dimensions used in Consumer Report's assessment of CD players and autos. Product stimuli were created by combining the four functional attributes and brand name at two levels each and country of origin which was varied at four levels. Tables 1 and 2 provide a list of the attributes and their associated levels for CD players and automobiles, respectively.

Combination of these levels yielded a 128 cell, full factorial design for each product. In addition to the 128 product descriptions determined by the experimental design, subjects made judgments for five practice products. These were shown first and acquainted the subjects with the procedure. In addition, the practice products exposed subjects to more extreme levels than were used in the experiment to minimize floor and ceiling effects.

Participants

Participants were 49 advanced undergraduate students attending a major midwestern university. They received course credit for participating. Twenty-five participants evaluated CD players and 24 evaluated automobiles. While our sample was small by traditional standards, this posed no particular problem since individual-subject analyses were performed on the data.

Procedure

The bulk of the experiment was conducted using a Burrough's networked micro-computer system. Subjects participated in groups of no more than 11. Each participant was seated in front of a terminal and given basic instructions for

TABLE 1: Attributes and Corresponding Levels for COMPACT DISC PLAYERS

Attribute	Level 1	Level 2		
1) Price	\$200	\$325		
2) Speed of tracking	Above average	Below Average		
3) Remote control	Complete control	On/off only		
4) Programming ability	up to 27 selections	12 selections		
5) Brand name	General Electric	Toshiba		
6) Country of Origin (at four levels)	Japan	United States	Taiwan	France

TABLE 2: Attributes and Corresponding Levels for AUTOMOBILES

Attribute	Level 1	Level 2		
1) Price	\$6,800	\$13,000		
2) Handling	Better than avg.	Below avg.		
3) Driving Comfort	Better than avg.	Below avg.		
4) Gas Mileage	35 mpg	27 mpg		
5) Brand name	Honda	Chevy		
6) Country of origin (at four levels)	Japan	United States	Taiwan	France

using the program. No difficulty was encountered with the computer procedure, presumably because the students all had prior experience using micro-computers for class assignments.

After entering some basic demographic information, subjects were given the opportunity to practice using the response scale. Use of this scale consisted of pressing the right and left arrows on the keyboard to move a cursor over a response bar on the screen. The bar was labelled "Very Low Quality Product" on the left and "Very High Quality Product" on the right. Although the response scale appeared continuous to the subjects, the bar had 50 response values recorded from 0 to 49. After becoming comfortable using the response system, subjects judged the five practice products and were encouraged to ask questions if any problems arose. A supervisor was always available during the course of the experiment. The subjects were then presented with the actual experiment. The order of the product descriptions and the attributes was varied randomly among subjects by the computer program. The experiment concluded with an exit questionnaire which assessed participant's knowledge of different foreign and domestic electronics and automobile brands, and the countries and place of manufacturer they associated with those brands.

## RESULTS

The decisions made by each participant were analyzed using an individual-subject analysis of variance (ANOVA). This made it possible to assess which of the six attributes had a statistically significant effect ( $p < .05$ ) on each subject's evaluations for both the CD player and autos. The results from the ANOVA were also used to determine the significance of 2-way interactions between attributes (e.g., country of origin x brand). An additional analysis, Hays' omega squared ( $w^2$ ), was also calculated to determine the relative importance (i.e., variance explained) for each attribute and interaction (Hays 1973).

### Compact Disc Players

Use of the Attributes. The results from the individual-subject ANOVA and Hays' omega squared ( $w^2$ ) for the CD players are presented in Table 3. As can be seen, country of origin had a significant effect for 64% of the participants, while brand name was significant to only 25% of the participants. Other attributes were used more frequently when evaluating CD players. Speed of the selecting track was significant for 88% of the participants, followed by price (80%), programming ability (76%), and remote control (64%). Of the 25 participants evaluating CD players, only six had a significant interaction between country of origin and brand name. Overall, very few significant interactions were obtained between any of the attributes.

Relative Importance of the Attributes. Although several attributes may emerge from the ANOVA as significant, it is unlikely that they will be of equal importance in a consumer's decision-making. Therefore, Hays' omega squared ( $w^2$ ), a measure of explained variance, was used to assess the relative importance of the attributes in evaluating CD players. The average of these values, shown in right half of Table 3, indicates that country of origin and brand each accounted for 7% of the variance in consumers' decision-making, fourth in importance out of the six attributes considered. Functional attributes appeared to dominate consumers' evaluations of CD players. Speed of the selecting track was most important, accounting for 28% of the explained variance. Price was next in importance, accounting for 11% of the variance, followed closely by programming ability at 10%. The remote control feature accounted for only 4% of subjects' variance. The 2-way interaction of particular interest here, country of origin x brand, accounted for less than 1% of the variance in the participants' evaluations.

TABLE 3: Percentage of Significant Effects and Hays' Omega Square ( $w^2$ ) Values for CD Players

Attribute	% of Main Effects (n=25)	$w^2$
Price	80%	.11
Speed of Tracking	88%	.28
Remote Control	64%	.04
Programing Ability	79%	.10
Brand Name	25%	.07
Country of Origin	64%	.07

### Automobiles

Use of the Attributes. The results from the individual-subject ANOVAs and Hays' omega squared ( $w^2$ ) are presented in Table 4. As can be seen, country of origin and brand were significant for 67% and 29% of the participants, respectively. However, handling and driving comfort were the attributes used most frequently when evaluating autos; each had significant effects on the decision-making of 96% of the participants. Price was significant for 67%, followed by miles per gallon (50%). Surprisingly, there were no significant interactions between country of origin and brand for any of the participants evaluating automobiles.

Relative Importance of the Attributes. The right half of Table 4 shows the average omega square ( $w^2$ ) values for each of the six automobile attributes. As can be seen, country of origin and brand had relatively small effects on consumers' evaluations. Country of origin accounted for 5% of the variance, and brand 2%. Driving comfort and handling dominated participants' decision-making, accounting for 25% and 23% of the explained variance, respectively. Price was next most important, accounting for 11% of participants' variance. Miles per gallon accounted for 3%. The interaction between an auto's country of origin and brand accounted for less than 1% of the variance in participant's decision-making for autos.

TABLE 4: Percentage of Significant Effects and Hays' Omega Squared ( $w^2$ ) for AUTOMOBILES

Attributes	% of Main Effects (n=24)	$w^2$
Price	67%	.11
Handling	96%	.23
Driving Comfort	96%	.25
Gas Mileage	50%	.03
Brand Name	29%	.02
Country of Origin	67%	.05

## DISCUSSION

Three findings emerged from this investigation. First, country of origin appears to have an effect on participants' evaluations for both compact disc players and automobiles. Approximately two-thirds of the participants in both product categories had significant effects for this attribute. Examination of the marginal utilities associated with each country indicated that CD players made in the USA were evaluated slightly better than those made in Japan, followed by France and Taiwan. For automobiles, made in the USA was evaluated most favorably, followed in order by Japan, France and Taiwan. While apparently supporting previous research which indicates that country of origin, and "made in the USA," does affect consumers' evaluations (Dickerson 1982; 1987; Dornhoff, *et. al.*, 1974; Festervand, *et. al.*, 1985; Gaedeke 1973), the implications of this result must be qualified by the size of its effect. Relative to the "functional" attributes of CD players and autos, the importance of country of origin (as indicated by the  $w'$  analyses) was small. Meeting the criterion for statistical significance does not necessarily imply that an attribute will have an important effect on consumers' decision processes. As argued by Bilkey and Nes (1982), the results from studies which manipulate only country of origin information may need to be reevaluated. It would appear that country of origin may not have the effect described in previous research.

A second and somewhat surprising finding was the relatively few number of participants having an effect for brand name. Only 24% of those evaluating CD players, and 29% evaluating autos showed significance for this attribute. In addition, the relative importance of brand for both products was minimal compared to other attributes. This result contrasts with previous studies which found that brand to be one of the more important cues consumers use in evaluating products (Jacoby, *et. al.*, 1971; Jacoby, *et. al.*, 1977). We suspect this occurred because of the positive images<sup>3</sup> carried by the brand names used in this study. For a majority of participants, the image portrayed by General Electric and Toshiba CD players, and Chevrolet and Honda automobiles, are not much different. This may be viewed as good news for the U.S. brand names since the recent increase in market share enjoyed by imports in consumer electronics and autos is popularly thought to be a result of the higher quality associated with imported brands. However, this also means that if domestic brands are to remain competitive they cannot lag behind imports in quality and/or

<sup>3</sup> We purposely selected brand names the pretests had indicated were of similar perceived quality. This was done to prevent a spurious results due to a negative view of one of the brands (e.g., Yugo) that would be confounded with country of origin.

innovativeness of the functional attributes important to consumers.

The third finding of this study was the virtual lack of interactions between country of origin and brand name. The fact that a U.S.-brand (General Electric or Chevy) was made in Japan, or that a Japanese-brand (Toshiba or Honda) was made in the USA, had little if any impact on participants' decision-making. The lack of an interaction effect between country of origin and brand name was contrary to our expectations, but is consistent with the idea that consumers may not attribute a great deal of importance to the country that manufactures a product. Another possibility is that consumers may not be aware of a company's origin and, as a result, evaluate brand names independent from considering whether or not the firm is American or foreign. However, analysis of participants' responses from the exit questionnaires indicates that a large majority were aware of the origin of the brands used here; 73% considered General Electric to be American-made, and 88% associated Toshiba with Japan. Similarly, 92% associated Chevy with the USA while 88% considered Honda to be Japanese. This suggests that brand names may give rise to country of origin effects. Another explanation is that participants in this study were not convinced by our manipulations of country of origin and brand. In other words, they did not believe that, for example, General Electric products are made in Japan or that Hondas are made in the U.S.A. However, this explanation seems less tenable given the results from the exit questionnaires; 96% of the CD player participants and 88% of the auto participants reported that they were aware that hybrid products are available in the marketplace.

## CONCLUSIONS

The results from this study have implications for researchers conducting country of origin and hybrid (bi-national) product research. First, the effect of specific countries, as well as the countries associated with certain brands, differed between CD players and autos. This suggests that country of origin and/or brand effects are product specific. In addition, although no demonstrable effects were found for the hybrid combinations considered here, it is quite possible that different countries and brands would have different consequences on consumers' evaluations in other product categories. Future country of origin research should evaluate potential differences across product classes, as well as examining different brands and countries with a larger and more representative sample of consumers.

A second implication is that consumers' decision-making in this study was dominated by functional attributes -- speed of tracking and programming ability for CD players, and handling and driving comfort for autos. Apparently, when functional product information is readily available, the role played by country of origin

and/or brand may be negligible. If a product has a distinct advantage in an important functional attribute(s), consumers are unlikely to pay much attention to the fact that the product was manufactured in a country different from the country associated with its brand name. This should be viewed as encouraging to consumer educators since the participants in this study based their decisions on meaningful product differences.

It is unlikely that the trends toward increased direct foreign investment, transplant operations, and overseas sourcing will abate any time soon. The hybrid product is therefore destined to become even more prevalent in the American marketplace. Considerably more remains to be known about the separate and combined effects of country of origin and brand name on consumers' decision-making. Although tentative and specific to these products and subjects, the results from this study are seen as a step in that direction.

#### REFERENCES

- Anderson, Norman H. (1981), Foundations of Information Integration Theory, New York, NY: Academic Press.
- Assael, Henry (1987), Consumer Behavior and Marketing Action (3rd ed.), Kent, Belmont, CA.
- Bilkey, Warren and Erik Nes (1982), "Country-of-Origin Effects on Project Evaluations," Journal of International Business Studies, (Spring/Summer), 89-99.
- Bruskin Report (1985), A Market Research Newsletter (Report No. 132), Aug., New Brunswick, NJ.
- Dickerson, Kitty (1982), "Imported Versus U.S. - Product Apparel: Consumer Views and Buying Patterns," Home Economics Research Journal, 10, (March), 241-252.
- Dickerson, Kitty (1987), "Relative Importance of Country of Origin as an Attribute in Apparel Choices," Journal of Consumer Studies and Home Economics, 11, 333-343.
- Dornoff, Ronald, Clint Tankersley, and Gregory White (1974), "Consumers' Perceptions of Imports," Akron Business and Economic Review, (Summer), 25-29.
- Elrick and Lavidge, Inc. (1985), Topline Summary: Benchmark Consumer Survey, (Report No. 06-2096) September, Atlanta, GA.
- Festervand, Troy, James Lumpkin, and Welham Lundstrom (1985), "Consumers' Perceptions of Imports: An Update and Extension," Akron Business and Economic Review, (Spring), 31-36.
- Gaedeke, Ralph (1973), "Consumer Attitudes Toward Products 'Made in' Developing Countries," Journal of Retailing, 49, 2, (Summer), 13-24.
- Gallup (1985), In: Key Results of Consumer Preference Research Studies by Four Independent Polling Organizations, (available from [Crafted with Pride in USA Council, Inc., 1045 Avenue of the Americas, New York, NY 10018]).
- Green, Paul, and V. Srinivasan (1978) "Conjoint Analysis in Consumer Research: Issues and Outlook," Journal of Consumer Research, 5, September, 103-123.
- Hays, William (1973). Statistics, Holt Rinehart and Winston, Inc.: New York.
- Jacoby, J., Olson, J., and Haddock, R. (1971) "Pride, Brand Name and Product Composition Characteristics as Determinants of Perceived Quality," Journal of Applied Psychology, 55, 470- 479.
- Jacoby, Jacob, George Szybillo, and Jacquelline Busato-Schach (1977), "Information Acquisition Behavior in Brand Choice Situations," Journal of Consumer Research, 3, 209-216.
- Opinion Research Corporation (1987), "The Public Voices a Preference for U.S. - Made Consumer Products," ORC Issue Watch, Princeton, N.J.
- Reierson, Curtis (1966), "Are Foreign Products Seen as National Stereotypes?" Journal of Retailing, (Fall), 42, 33-40.
- Reierson, Curtis (1967), "Attitude Changes Toward Foreign Products," Journal of Marketing Research, 4, (November), 385-387.
- Roper (1985), In: Key Results of Consumer Preference Research Studies by Four Independent Polling Organizations, (available from [Crafted With Pride in U.S.A. Council, Inc., 1045 Avenue of the Americas, New York, NY 10018]).

REFEREED PAPERS SESSION:  
NEW ISSUES IN CONSUMER DEMAND

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These remarks will analyze the following research papers:

\*Catherine Halbrecht, Lesa Sterling, William Stoughton/University of Delaware and Wojciech Florkowski and Chung Liang Huang/University of Georgia, "Consumer Attitudes Toward Pork Produced with Recombinant PST"

\*Daigh Tufts, University of Utah, "Differential Response in Food Demand of Low-Income and Non-Poor Households to Changes in Household Composition"

\*Richard Ettenson/University of Maryland and Gary Gaeth/University of Iowa, "An Exploratory Analysis of Country of Origin Effects for Hybrid (Bi-National) Products"

#### INTRODUCTION

As the title of this session suggests all of these papers examine some aspects of consumer demand, more specifically the papers explore how the consumer reacts to the new changes in the market-place or in household composition change. These changes can be relative to food products or food demand, in the case of the first two papers or CD players and automobiles in the third paper. Even though these papers use quite different approaches and methodologies, each individual paper is very complete and clear in the presentation of concepts and procedures. In each case, the reader could easily decipher the purpose of the research analyses and the discussions of previous research was well written and complete in most cases. Although these papers have commonalities, each paper is quite different in its specific topic, method of analyses and, of course, subsequent findings and implications.

The first paper by Halbrecht and others concerns the attitudes of consumers toward pork products given the use of genetically-engineered products such as recombinant in PST used to produce leaner pork. The effects of and consumer reactions to new biotechnological advancements will, no doubt, provide many future areas of marketing research such as this paper. This paper, could be improved if the reader knew more about other studies and research using a similar emphasis or

approach. The authors could have housed their research work within a general setting of consumer attitude formation and provided a more general discussion of conceptual frameworks or theories in this area. The research analyses performed by the authors would then have informed theory development as well as general marketing concerns.

The emphasis of this paper was heavily weighted toward the survey work inherent in such a study. A 1988 mail questionnaire was used, with an 11 percent response. Such a response rate might have been improved with the use of various "follow-up" techniques suggested by Dillman and others. Some discussion of the response rate, the lack of weighting technique and related sample selection bias is need in the paper.

The bivariate analyses performed by the authors offer some glimpse of the consumer's reaction and attitudes toward such food products. The respondents level of concern about biotechnology methods and food products showed a clear lack of information on the part of the consumer. The authors might consider the consumer education implications of this as they did with other findings in their research. Also, the analyses would have been enhanced if some indexes of attitudes were developed and studied. Then, multivariate techniques could have teased out the separate effects of respondents characteristics and other independent variables. In sum, this analysis has an interesting focus and begins to reveal the consumer's reactions to a new and growing area of the food marketplace. The researchers should be commended for their interdisciplinary approach to this important survey work.

Tufts provides us with another investigation in the area of food demand. Using the 1977/78 Nationwide Food Consumption Survey, he examined in detail the different responses by households in two income groups to household composition changes. Tufts clearly lays out his research purpose and the food demand modeling issues he was trying to examine. Four strategies are delineated. The empirical analyses are very adequate and appropriate to the research questions. In addition the results are discussed in a clear manner with many specific interpretations of the empirical findings.

These analyses could be redone using a more recent Food Consumption Survey. In addition, specific tests for differences could be performed across the two food expenditure equations for each income group. Possibility more than two income groups could be studied. Food

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expenditures within and among major food expenditure groups could be discussed and linked to these findings.

The third paper by Ettenson and Gaeth examines the specific effects of "country of origin" and "brand name" on the consumer's evaluation of products specifically two products, CD players and automobiles. The authors provide us with an excellent review of literature in the area of product attributes and how consumers evaluate these attributes. Background information of actual figures for the extent of bivariate products in the marketplace would be a valuable addition to this paper.

The authors used a student sample of 49 upper level undergraduates at a major midwestern university. While such a sample is an adequate place to start preliminary analyses such as these, it would be interesting and appropriate to repeat the analyses on a broader and more nationally representative sample.

A factorial design was used to simultaneously assess the effects of six product attributes, including country of origin and brand name, for each product studied. This research is unique in its examination of a combination of product attributes and of the interactions between country of origin and brand name effects. The authors found significant but small effects and few significant interaction effects. It would appear that such distinct products characteristics have become blurred in the "bi-national" or multi-national marketplace. Hence, the consumer quite naturally looks to other products attributes for information. More research work is needed with a larger sample of consumers and with different products.

In sum, as we continue to explore changes in consumer demand, these papers are examples of how researchers can go beyond just marketplace trends and examine specific details about the effects of such changes.



# AGING-IN-PLACE: ARE RESPONSES IN THE BEST INTEREST OF ELDERLY CONSUMERS?

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This study examines dimensions of quality which influence responses to the phenomenon of aging-in-place in housing for the independent elderly. On-site managers (160) responded to a written survey exploring responses to aging-in-place residents. Results suggest a lack of independent living policies and procedures, a need for training of managers in critical skill areas, liability concerns, and limited services for the elderly in rural areas. Implications for elderly consumers include concerns about safety and a lack of information and choice when selecting long term care.

## INTRODUCTION

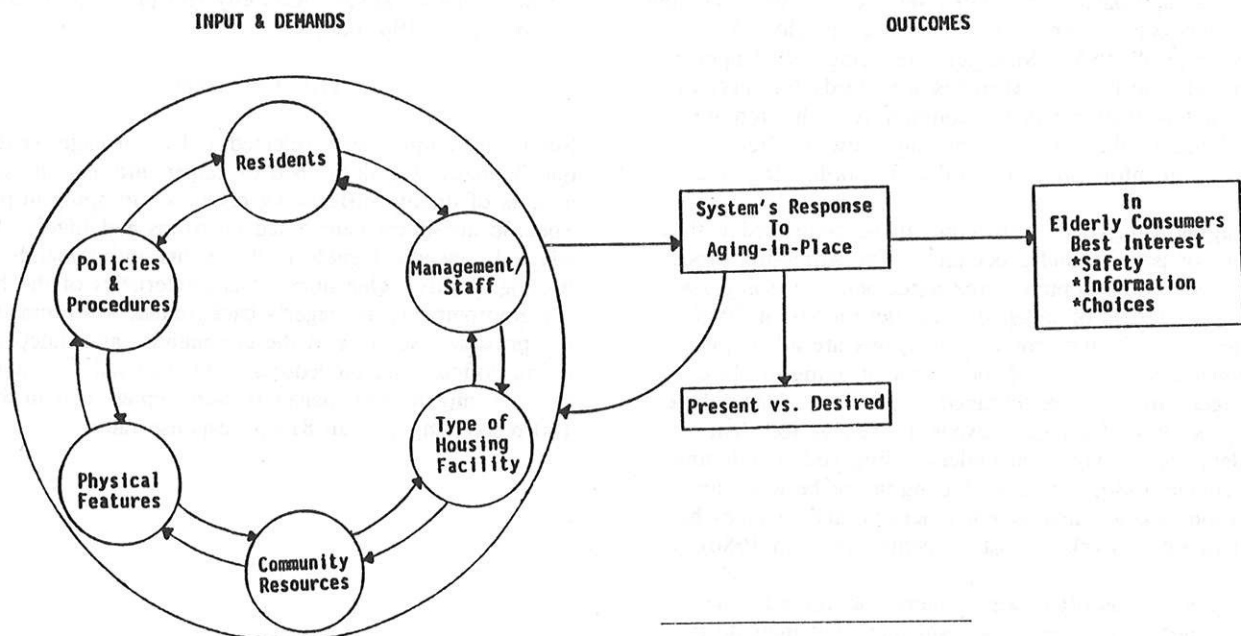
The aging-in-place phenomenon that is occurring in subsidized housing for the independent elderly raises several issues concerning quality of life for elderly housing consumers. The process of aging-in-place is when residents continue to grow older in the place where they have spent earlier years. While this process is not unusual or new, it has become a concern in apartment housing settings because of the large number of older persons who are aging-in-place in environments not intended to meet their increasing service needs.

Managers in a variety of housing settings are finding that the average chronological age of their residents is steadily

increasing. Average resident ages in the late 70's to early 80's are not uncommon (Heumann, 1988, Lawton, 1985). As residents age, service needs begin to change, and the ability of residents to remain independent in the same environment that served them well 10-15 years ago may become questionable. The aging-in-place process raises various questions regarding the safety of residents, availability of services on-site and in the community, management's ability to deal with aging residents, and a lack of established policies and procedures to guide responses to aging-in-place residents.

The purpose of this study was to describe present and desired responses to the aging-in-place phenomenon and explore implications for elderly consumers and long term care decision making (see Figure 1). The quality of life for elderly housing residents is influenced not only by the physical environment, but also the type of housing facility, management and staff, residents in aggregate, policies and procedures, and surrounding community resources (Lewin, 1935, Moos and Igra, 1980). All of these features interact and serve as inputs and demands influencing the whole system's response to aging-in-place. The research questions in the study examined selected dimensions of quality that can impact responses to aging-in-place. As the following literature review reveals, current responses to aging-in-place may or may not be in elderly housing consumers best interest.

FIGURE 1. Housing Aging-in-Place Elderly: A System's Perspective of Quality



Quality model adapted from Lemke & Moos (1986).

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## LITERATURE REVIEW

### Responses to Aging-in-Place

Elderly residents themselves may choose to respond to their own aging-in-place and changing needs in a variety of ways. Reliance on family or friends for informal support is extremely common (Kane & Kane, 1987). Some residents may try to conceal developing problems as they do not want to be forced to relocate. Other residents may see no viable options in the community, and therefore exist "at risk" due to a lack of congruence in needs and the environment (Carp, 1977). Contracting for existing services may be an option if the services are available on-site or in the community, accessible, and affordable. For other residents, choosing to move to a more supportive environment may be an option. Regretfully, for others a premature move to a nursing home may be the result of a gap in the continuum of care between independent living and nursing homes in many communities (Bernstein 1982; Brody 1982).

Studies of congregate housing facilities are finding that most environments are following an "accommodating" model and changing to accommodate the increased service needs of residents (Lawton et al 1980; Lawton et al, 1985; Malozemoff et al 1978). There are many variations of the accommodating model, especially the extent of accommodation and how it is accomplished. Bernstein (1982) and Barker et al (1988) have explored the amount of aging-in-place allowed in units designed for independent living. Managers tend to tolerate physical health condition changes more readily than behavioral or psychiatric problems. The guiding philosophy for many facilities appears to be that of helping people remain in the least-restrictive environmental alternative while providing an adequate spectrum of services (Lawton et al 1985).

A typical approach to providing services to meet changing needs has been referred to as a "service patchwork" (Lawton et al 1985). Managers are being called upon to coordinate the links between resident needs for services and what is available in the community. This requires knowledge of the aging network and how to effectively serve in an information, referral and coordinating role.

The aging-in-place phenomenon can be controlled with a variety of policies and procedures. Pre-admission procedures, admission contracts and agreements, ongoing resident assessments of independence, definitions of "independent living", and retention decisions are all major administrative controls of the extent of aging-in-place. Managers are being encouraged to establish clear policies and procedures for legal reasons as well as for basic resident and management understanding and functioning (Bergmann 1986). A lack of congruence between termination policies, assessment practices, and services has been found to work against residents (Sheehan 1986).

Management has often been reluctant to formally state which specific changes in a resident would indicate the necessity for a re-evaluation of residency (Bernstein

1982). If policies are open-ended, management has the flexibility to consider a variety of circumstances, options, family support, and long-term outlook for the individual consumer. On the other side, residents and their families do not then have clear cut answers as to what changes will be tolerated and lack guidance to plan ahead for long term care. A compromise has been to have some specific policies about problem areas that involve issues of safety and liability and other policies not stated and left flexible in delicate areas needing a case-by-case consideration.

A key person involved in initiating and/or developing responses to aging-in-place and influencing the quality of life of elderly residents is the on-site manager of a housing facility. As with many other direct service areas for the elderly, training programs for housing managers have often been put aside. When structured training does occur, it is often as a property manager, and not as a people and service manager as well (Heumann, 1988, McIves, 1982). The importance of knowledge, attitudes and skills in relation to elderly people, housing and services, and the interrelationships appear essential to quality management.

## METHODOLOGY

### Sample

To focus the study, only those who were most directly involved in the day to day management of apartment housing units designed primarily for the independent elderly were involved to gather their perceptions on the aging-in-place situation. Two major organizations are involved in providing a majority of housing for the elderly in the state of Wisconsin. A sample consisting of all managers from the Wisconsin Association of Housing Authorities (non-profit) and the Wisconsin Housing and Economic Development Authority (for-profit) were asked to participate (196 total).

### Data Collection

Survey techniques were selected and a ten page written questionnaire was developed to gather information on aspects of quality influencing responses to aging-in-place. Specific questions were based on Moos and Inge's (1980) adapted conceptual guide to the inputs and demands impacting quality. Questions on characteristics of the housing environments, manager's background, roles and training priorities, services in the community, and independent living policies and procedures were included. A diversity of environments and managers were represented in the 160 responding (for an 81.6% response rate).

## RESULTS

### Environments for Elderly Housing Consumers

#### Housing Facilities.

As expected, housing environments for the elderly are diverse in size, location, and in the number and type of supportive services offered. Housing units were most likely to consist of less than 50 units per site (37.4%), but those of 50-99 units (29.1%) or 100+ (21.5%) were not uncommon. Most of the housing was located in an urban area (60.4%), with fewer units in larger urbanized areas (25.2%), and fewer yet located in rural areas (15%). Slightly over half of the units in this study were for-profit operations (57.5%).

#### Residents.

Housing environments were experiencing aging-in-place of residents determined when mean ages of residents were compared upon occupancy of the building to current resident ages. Mean ages of residents had increased 6.6 years from 69.5 to 76.1 years of age. The majority were housing residents with mean ages between 75 and 79 years of age, with approximately one-fourth of the sites having residents with mean ages of 80+ years.

#### Services for elderly.

A majority of housing managers indicated high levels of services for the elderly being available in their local community. Over three-fourths reported meal services (96.8%), transportation (87.7%), homemaker assistance (88.3%), health care options (96%), and social activities (89.9%) as being available. A diversity of service sources or providers also existed in most communities. As expected, rural areas were most likely to report fewer community service options for the elderly when compared to urban or urbanized areas.

Housing environments in this study were providing or allowing some services on-site with a mean number of 5.5 out of a possible 12 services being reported as available. More than half for the environments indicated on-site availability of home delivered meals (80.9%), a special bus for the elderly (69.3%), home health aides (67.8%), social activities (56.9%), and public transportation (57.7%). Services not as available included: a resident council (52%), housekeeping (49%), congregate meals (37%), social worker (30.5%), health clinic (23%), and nurse (7.4%).

As expected, housing units located in communities with lower levels of services for the elderly were more likely to also have lower on-site services for the elderly. These units were typically smaller in size, and located in rural areas. Managers would like to have more health services, more social services, and more activities in their facilities to improve environments for residents as they age.

#### Management.

Managers of housing units for the elderly in the state of Wisconsin were primarily females (63.5%) between the ages of 40-59 years of age. Demographic information

revealed that while the mean age of the managers was 50.9 years, managers ranged from 24 to 82 years of age. Therefore, while housing managers span the age range many are older themselves. A diverse range of experience levels in management was offered, with a mean time in the position of 6.3 years.

As expected, managers had received more hours of housing management training than specific training in aging and aging residents. Less than one-third (29%) of the managers were certified in housing management.

#### Position Knowledge Needed.

Housing managers were asked to respond to a list of 29 knowledge or skill areas and rank each one on a scale of 1-5 as to the degree of importance to their position. The 29 skills listed represented a combination of skills relating to aging residents, human relations, problem solving, and services and activities. Managers overwhelmingly agreed that a majority of the items were important to their position, with the most frequent responses on most of the items being "very important."

After indicating how important the skill items were to their position, managers were also asked to identify their "felt knowledge gaps" among the items. That is, which of the items did they want to know more about and specifically which were major personal priorities. Those skill items which were ranked as being most important to their position were also those that they indicated the most need to know more about. The first six training priorities for the respondents were (in rank order): 1) conflict resolving; 2) setting policies and procedures to clarify and define the limits of independent living; 3) understanding potential liability issues when dealing with residents; 4) the ability to recognize residents who are "at risk" of losing their independence; 5) the ability to deal with personality changes or confusion of some older residents; and 6) awareness of agencies and programs available to help other people.

Managers were overwhelmingly receptive to improving their knowledge and skills in managing housing for the elderly, with 87% responding positively. Managers new to their positions and younger in age were especially interested in further training to reduce their knowledge gaps.

#### Aging Knowledge.

Housing managers were assessed on their aging knowledge using a 25 item Facts on Aging Quiz (FAQ) (Palmore, 1977) covering physical, mental and social facts and the most common misconceptions about aging. A score of how knowledgeable housing managers were about aging was determined by the percentage of items answered correctly on the FAQ. The mean percentage correct score for this sample was 62.8%. While not particularly high, the results are similar to other studies of various groups having similar educational backgrounds (61.7%). Managers with more time in the position and more training in aging were more likely to receive higher scores on the FAQ.

### Role in Assessments.

While a majority of housing managers were assessing incoming or new residents for their ability to live independently (82%), just over half (56.5%) were doing periodic assessment of abilities to live independently once someone has become a resident. When assessments are being done for current residents most are on a very informal observation basis or by reaction when a problem is reported. Only one-fourth of those managers doing periodic assessments relied on referrals to family or other professionals.

### Liability Concerns.

Slightly over two-thirds of the respondents (68.3%) indicated being concerned about liability issues as residents become more frail. Specific liability concerns focused on accidents and fall of residents for 37% of the housing managers. Under 10 percent indicated liability concerns revolving around the appropriate use of first aid in emergencies, fear of lawsuits from residents and families, and fires and individual apartments and the building overall.

## DISCUSSION OF RESULTS

### Responses to Aging-in-Place

The housing environments in this sample are experiencing service need changes as the ability of residents to remain independent in the same environment can become questionable. A pattern of accommodation and changing of environments to meet increased service needs of residents appears to be true for a majority of housing environments in this study, just as has been found in other settings (Heumann, 1988, Lawton et al, 1985, Sheehan, 1986).

A "service patchwork" system also appears to be at work in the housing environments surveyed with a combination of community and on-site services being available for the elderly. The overall high level of community services for the elderly is supportive of managers desire to accommodate changes. Lower levels of community services were found in rural areas and therefore residents in such areas, typically in smaller units, may have fewer options available to assist in accommodating aging-in-place.

Most managers agree that there are limitations to accommodation and that extensive services such as personal health care should not be provided. The type of on-site services available in housing environments in this study suggest that most are not involved in health clinics, nursing care, or in the provision of a social worker. Lawton et al. (1980) and other studies have found that housework assistance is a great service need of aging residents due to problems with shopping, heavy housework and laundry. In this study, less than half of the sites indicated availability of housekeeping services on-site. Transportation and meal services did appear to be available both on-site and in the community.

Defining, providing, and managing the degree of accommodation is a concern of managers in this sample. This

is reflected in skills needed for the position, training priorities, roles in assessments, and liability concerns. Training priorities specifically reflected managements desire to address aging-in-place issues and react with the ability to recognize residents who are experiencing problems. Training in physical and personality changes as one ages, likely service need changes, and in assessment options is linked to identifying those "at risk."

It appears that if managers are assessing residents for their ability to live independently, it is done by relying primarily on informal day to day contact with residents or reports from other residents. Formal and consistent needs assessments of residents are consistently suggest as the best way for managers to identify those "at risk," residents needing services, and enforce retention policies (Carp, 1977). In addition, management needs training to define their facility's role and establish limits of independent living through admission and retention policies and procedures. Closely associated with independent living limitations and concerns is the need for training in liability issues when dealing with aging residents. Overall, a clearer understanding of potential approaches to independent living and the limitations of the accommodation model appear to be needed.

Other top priorities for training reflect the need to develop skills in working with problem residents and conflict resolving. Such content is a much broader management skill, but also reflects the need to cope with residents who may not recognize their independent living limitations, and those who resist the use of recommended services. Conflict resolving skills also relate to working out conflicts between residents, as well as residents and their families.

Additional learning priorities reflect managements' recognition of the need to learn about making linkages with support services for the elderly in the community and expand their role in integrating aging residents with services and housing. While managers were knowledgeable about the availability of community services in general, most indicated a need for training on how to actually obtain supportive services, and develop referral skills.

### Implications for Elderly Consumers

Results of this study support the continuing need to ask further questions about aspects of housing environments which influence such consumer rights as safety, choice, and information. The quality of life and safety of residents will be influenced not only by the physical environment, but also the surrounding community resources, policies and procedures of the facility, management training, and make-up of the residents. A lack of independent living policies and procedures, managers needing training in critical skill areas, and increasing ages of residents present major challenges to the system.

The trend of expanding the role of housing to include the integration of people, services, and shelter calls for consistent education of management to help protect the quality of life of residents. The results of this study support

Heumann's (1988) results and raise specific questions as to the appropriate role of a housing manager and the necessary background and training required for such a position. Developers and others in the industry are encouraged to review the expectations being placed on managers in light of the corresponding training being offered and current position benefits. Management training is in demand by managers. Concerns about liability issues, how to develop policies and procedures, making service linkages, and understanding aging processes can be addressed.

The study results were consistent with previous studies of aging-in-place responses in raising concerns about the ability of elderly consumers and their families to make appropriate long term care decisions, given the information and choices available. Policies and procedures in housing facilities may or may not be in writing, consistent, or available to consumers. Specific policies and procedures relating to pre-admission, admission, assessment for independent living, definitions of independent living, and retention should all be clearly understood and agreed upon by the housing consumer, management, and developers. Consumers have the right to such information in clear and understandable form, before making a housing decision. More appropriate housing and long term care decisions could be made if consumers were aware of expectations for independent living and changes in needs that would be allowed. How such decisions will be made and by whom is also important information for consumers to understand before making a housing decision. Elderly consumers and their families could benefit from overall education on aging-in-place and what questions to ask to evaluate housing facilities in relation to expected changes over time.

#### FUTURE DIRECTIONS

Further research should continue to explore responses to aging-in-place from a quality perspective and the implications for elderly housing consumers. Obtaining input from elderly residents, owners and developers of housing facilities, as well as managers could provide valuable verification of results and additional insights into potential problems and solutions.

Aging-in-place will continue to develop as a concern for elderly consumers, families, managers, and communities. Educators can begin to help improve the quality of life of many elderly consumers by developing appropriate training for managers and housing developers. Increasing consumer awareness of aging-in-place issues and concerns, especially from a quality perspective should help to improve responses to the phenomenon and family long term care decision making.

Government policymakers and private developers can also benefit from increased awareness of aging-in-place and how to develop more appropriate responses for housing and service consumers. As the number of elderly consumers increase, and the desire to remain independent for

as long as possible continues, the aging-in-place phenomenon will challenge our approaches to long term care.

#### REFERENCES

- Barker, J.B., L.S. Mitteness and S. Wood (1988). Gate-Keeping: Residential Managers and Elderly Tenants. Gerontologist. 28(5): 610-619.
- Bergmann, P.G. (1986). Aging in place in federally subsidized housing for the elderly: Legal and administrative solutions. New York: Cadwalader, Wichersham & Taft.
- Bernstein, J. (1982). Who leaves-who stays: Residency policy in housing for the elderly. Gerontologist. 22(3): 305-313.
- Brody, E.M. (1982). Service options in congregate housing. In R.D. Chellis, J.R. Seagle, Jr. & B.M. Seagle (Eds.), Congregate housing for older people: A Solutions for the 1980's (pp. 161-176). Lexington, MA: D.C. Heath and Co.
- Carp, F.M. (1977). How great is the need for shelter and services among older people? In W.T. Donahue, M.M. Thompson, & D.J. Curren (Eds.), Congregate housing for older people: An urgent need, a growing demand (pp. 63-72). Washington, D.C.: DHEW.
- Kane, R. and B. Kane (1987). Long Term Care: Principles, programs & policies. New York: Springer Publishing Co.
- Heumann, L.F. (1988). Assisting the Frail Elderly Living in Subsidized Housing for the Independent Elderly: A Profile of the Management and its Support Priorities. Gerontologist. 28(5): 625-630.
- Lawton, M.P., M. Greenbaum and B. Biebowitz (1980). The lifespan of housing environments for the aging. Gerontologist. 20(1): 56-64.
- Lawton, M.P., M. Moss and M. Grimes (1985). The changing service needs of older tenants in planned housing. Gerontologist. 25(3): 258-264.
- Lemke, S. and R. Moos (1986). Quality of residential settings for older adults. Journal of Gerontology. 41(2): 268-276.
- Lewin, K. (1935). A dynamic theory of personality. New York: McGraw Hill
- Malozemoff, I.K., J.G. Anderson and L.V. Rosenbaum (1978). Housing for the elderly: Evaluation of the effectiveness of congregate residences. Boulder, CO: Westview Press.

McLver, D.L. (1982). A management overview. In R.D. Chellis, J.R. Seagle, Jr. & B.M. Seagle (Eds.), Congregate housing for older people: A solution for the 1980's (pp. 170-188). Lexington, MA: D.C. Heath and Co.

Moos, R. and A. Igra (1980). Determinants of the social environments of sheltered care settings. Journal of Health and Social Behavior. 21(3): 88-98.

Palmore, E. (1977). Facts on aging: A short quiz. Gerontologist. 17(4): 315-320.

Sheehan, N.W. (1986). Aging of tenants: Termination policy in public senior housing. Gerontologist. 26(5): 505-509.

FINANCIAL DEPENDENCY AND ABUSIVE ELDERS:  
FINANCIAL COUNSELORS AS AGENTS OF CHANGE

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This study examines the impact of financial dependence in those cases in which family caregivers are the victims of abuse perpetrated by their elder kin. Regression analysis revealed that the elder's perception that being financially dependent caused caregiver stress was significantly related to five of the six categories of abusive behaviors. It is suggested that financial counselors have unique skills which can be used to help those generationally inverse families experiencing abuse.

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### INTRODUCTION

Almost all studies of elder abuse which occurs in family settings have three things in common. First, they focus on caregivers' abuse of the elderly. Second, they are written from a sociological, psychological or medical perspective. Third, approaches to the problem usually call for intervention from adult preventative service agencies in combination with family psychological counseling (Block and Sinott 1979; Cantor 1983; Douglas, Hickey and Noel 1980; Hwalek, Sengstock and Lawrence 1984). Little study has been made of elders' abusive behaviors directed against family caregivers and no study has specifically examined the role that financial counselors might have in preventing or reducing abuse in families in which an elderly parent lives with the caregiving adult child.

This study attempts to fill that gap by examining the impact of financial dependence in those cases in which family caregivers perceive that they, not the elder kin for whom they are providing care, are the victims of abuse perpetrated by the elder kin. It is suggested that financial counselors have unique skills which can be used to help those generationally inverse families experiencing abuse.

#### Elder Abuse in families: Background and Hypotheses

Family members predominate as informal caregivers of the elderly. Nationally, less than 5% of the elderly are institutionalized (Aging America 1985-86), and about half of those who are, have outlived their available relatives. So when we speak of abuse, generally defined as behaviors or actions purposefully designed to inflict harm on another person, for the most part we are not speaking about people victimized by uncaring or exploitive strangers, but rather people victimized by close family members.

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Some form of dependency is thought to be a contributing factor towards abuse of family members. Usually dependency is defined as the elder being increasingly reliant upon the caregiver to provide emotional, physical and/or financial support. But why aren't all dependent elders abused?

Some studies suggest that elder abuse may result not because of the dependency per se, but only if the dependency is perceived as stressful by the caregiver (Steinmetz 1986). Furthermore, emotional dependencies are viewed as much more stressful than those involving physical and financial needs (Cantor 1983). Others have proposed that abuse may result not when the elder is dependent upon the caregiver, but when the caregiver is dependent upon the elder (Hwalek, et. al, 1984).

Traditional studies have tended to demonstrate that the additional financial burden involved in caring for an elder has little, if any, relationship to abuse. However, there is increasing evidence (Wolf et.al. 1982; Pillemer 1985) that abuse, particularly physical abuse, is related to financial dependency of the abuser upon the abused.

Although the abused in all the above studies is the elder and the abuser is the caregiver, it is possible to use those findings to form hypotheses relating to families in which the abused is the caregiver and the abuser is the elder. It is hypothesized in this study that abuse directed against caregivers is a function of perceived dependency stress; that is, elders who perceive themselves as dependent and the cause of stress to caregivers may seek to increase their power by engaging in abusive behaviors. Further, it is hypothesized that the perception of financial dependence is a greater predictor of abuse directed against caregivers than is generally revealed in the elder abuse literature.

### METHODOLOGY

#### Sample

Sample selection<sup>2</sup>. The data used in this analysis

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<sup>2</sup>The data used in this study was collected by the Delaware Elder Project. Suzanne K. Steinmetz, Professor of Family Studies at the University of Delaware, was the project Director. The Delaware Division of Aging funded the study. Appreciation is expressed to Dr. Steinmetz for allowing the use of the data and for the description of the sampling method.

was collected throughout the state of Delaware. The sample was selected non-randomly, using advertisements and contacts to obtain leads about middle-aged children in Delaware who lived with and were responsible for the care of their elderly parents. Prospective interviewees were contacted by telephone to explain the project, and obtain their participation if they were qualified. Criteria for inclusion in the study were:

1. The family must have shared a residence with the elder for sometime during the past three years.
2. The adult child was required to perform some tasks for the elder, so that a degree of dependency was involved.
3. The elder was over 55 years of age.
4. The caregiver was the adult responsible for the household.

Although the focus was originally on the elderly parent, it soon became evident that caregivers defined "parent" in many different ways, including grandparent. As long as the caregiver considered the elder a member of the family and met the other criteria, he or she was accepted into the sample. Personal interviews were conducted with the caregiver. In addition to completing the questionnaire, the interviewer was encouraged to engage in conversation with the caregivers, which was taped. Indeed, these conversations reveal much more about the qualitative aspects of the caregiving experience than the data collected. See Table 1 for a description of the sample's demographic characteristics.

TABLE 1. Characteristics of Caregivers and Elders (%).

Race		
Black		4
White		96
Length of Caregiving		
12 months or less		18
13-16 months		16
37-108 months		35
109-168 months		12
over 168 months		19
Relation		
Mother		62
Father		11
In-law		19
Other		8
Caregiver Marital Status		
Married		69
Unmarried		31
Caregiver Sex		
Males		6
Females		94
Caregiver Age		
39 or less		12
40-49		25
50-59		44
60 and over		19
Elder Sex		
Males		16
Females		84
Elder Age		
69 or less		10
70-79		23
80-89		46
90 and over		21

Caegivers. One hundred and four individuals responsible for the care of 119 elders took part in this study. The majority were female (94%), white (96%), and married (69%). While the ages of the caregivers ranged from 23 to 72, the mean age was 51.3 and the median age was 52. Forty-four percent were in the 50-59 age group, and nearly 20% were over the age of 60. For the most part, these caregivers were living with their elders for a considerable amount of time, ranging from two months to 55 years. Sixty-six percent were responsible for their elder's care for at least three years; 20% had been caregiving for more than 14 years.

Elders. Of the 119 elders, 100 were female. Their ages ranged from 59-103, with a mean and median age of 82. Only 10% were younger than 70 and more than 20% were over the age of 90. Of the elders, 73% were the caregiver's parents, 19% were in-laws and 8% were other relatives, most usually an aunt.

Suitability of sample. Because the sample was selected in a non-random manner, numerous tests of significance were performed when the data was first collected to determine the suitability of the sample. Data analysis indicated that differences in race, residence, length of caregiving, relationship, and marital status were statistically insignificant. The demographic characteristics most related to elder abuse, dependency or stress were age and sex. Studies indicate that the vast majority of caregivers are female (Sengstock, Barrett and Graham 1984; King 1983), which is in keeping with this sample. Caregivers in other surveys have generally been slightly younger (Steinmetz 1986).

Thus, there is reason to believe that despite the fact that this is a non-representative sample, the findings from this study could be applicable to other family caregivers who share their residence with dependent elders. However, due to the almost non-existent number of male and Black caregivers, the researcher or practitioner should be cautioned against using these findings to explain or predict behaviors of Black and/or male caregivers.

#### Variables

Dependency Stress Measures (Independent Variables). The addition of a family member into an existing household, no matter how wanted, often requires additional time, energy, and monetary outlays. There is an opportunity cost associated with these additional resources and caregivers often find it difficult to manage all their family obligations. Caregivers were asked to rank the amount of conflict or stress produced by taking on additional responsibilities for the elder's welfare. Response categories were never bothers me (0), hardly ever bothers me (1), sometimes bothers me (2), usually bothers me (3) and bothers me all the time (4). Stress could result from the elder being financially dependent (FINDEP), from the elder needing help with personal grooming (GROOMDEP), from the elder being dependent upon the caregiver for



help with household management such as cleaning, cooking, and running errands (HOUSEDEP), from the elder having a severe mental disability requiring emotional subtenance from the caregiver (EMOTDEP), and/or the elder being physically dependent upon the caregiver because of a severe physical disability (PHYDEP).

Abuse Measures (Dependent Variables). Certain behaviors could be considered abusive if they result in physical harm or cause emotional discomfort and distress. The latter could be caused through such things as deliberate manipulation, public embarrassment, invasion of privacy, or the refusal to cooperate in behaviors designed for one's own good. Caregivers were asked how often their parents attempted to obtain control by engaging in behaviors which caused distress. Response categories were never (0), almost never (1), sometimes (2), most of the time (3), all of the time (4). Caregiver abuse could result from the elder: putting and withdrawing to his/her room, yelling at the caregiver, and imposing guilt by acting the role of the martyr (EMOTIONAL); refusing to eat and refusing medical treatment (REFUSAL); hitting, slapping, or throwing objects (PHYSICAL); using their physical or emotional disability to gain control (DISABILITY); calling police or other help for imagined threats such as being held captive or having their money stolen by the caregiver (EMBARRASS); and manipulating family members and disregarding their privacy (INTERFERENCE). Scores were summed across all abusive behaviors to obtain a total abuse measure.

## RESULTS

Multiple regression analysis was performed to discover the extent to which the independent stress dependency variables were associated with variations in the dependent abuse measures. Standardized beta coefficients were used to reveal the relative influence of the independent variables upon the dependent variable. The results of the regression analysis are discussed in the following sections and summarized in Table 2.

### Total Abuse

As indicated in Table 2, the dependency stress variables included in the multiple regression analysis explained 23% of the variance in elder's abusive behaviors towards caregivers. The F value for financial dependency, grooming dependency, household management dependency, physical dependency and emotional dependency was 8.055, significant at the .0001 level. According to the beta coefficients, the perceived stress caused by the elder being financially and emotionally dependent was more important in accounting for the elder engaging in abusive behaviors toward the caregiver than the other dependency stress measures.

### Emotional Abuse

The dependency stress measures accounted for 10%

of the variance in emotional abuse directed towards caregivers. The F value of 3.512 was significant at the .005 level. Once again, the perception of financial dependency was the most important predictor, closely followed by emotional dependency. As we saw in the preceding case, grooming and physical dependencies remain negatively related, although not significantly.

### Refusal to Eat or Take Medication

Eighteen percent of the variance in the dependent variable refusing to take essential care of oneself was accounted for by the dependency stress variables. The F value of 6.236 was significant at the .0001 level. The pattern of the significant independent variables remains unchanged from the previous cases of abuse. Again, we note that the elder's uncooperative behavior is largely influenced by the perception that the elder's financial dependency is stressful to the caregiver.

### Physical Abuse

The dependency stress measures accounted for 18% of the variance in physical abuse directed towards caregivers by elders. The F value was 6.055, significant at the .0001 level. Emotional dependency is the only independent variable which is statistically significant. This is the only type of abuse in which the financial dependency variable is not a significant predictor of abusive behavior. Perhaps this is viewed as a more "serious" form of abuse and elders who feel themselves financially dependent upon the caregiver for their well-being may not be willing to inflict what they may consider to be such serious damage upon the relationship.

### Using Disability to Gain Control

Very little of the variance in this dependent variable was explained through the dependency stress measures ( $RS=.11$ ,  $ARS=.07$ ). Still the equation was significant with an F value of 2.769 with a probability of .02. The only significant independent variable was again financial dependency with a t of 2.93 at a significance of .004. The Beta coefficient was .29; the next most important predictor was emotional dependency with a beta of .14.

### Public Embarrassment

The dependency stress measures accounted for 15% of the variance of the elder abusing the caregiver by publicly embarrassing him or her. Examples of this type of behavior would be the elder calling the police and claiming to be held captive, or complaining to the police, friends and other relatives that the caregiving family is stealing his or her money. The equation was significant with an F value of 5.015 and a probability of .0004. Financial dependency was again the only highly significant independent variable.

### Interference

The independent variables accounted for 16% of the variance. Financial dependency stress was the most important predictor of the elder's manipulative behavior.

TABLE 2. Results of Multiple Regression Analysis

DEPENDENCY STRESS MEASURES	TYPES OF ABUSE PERPETRATED BY ELDER						
	Total	Emotional	Refusal to Eat	Physical	Control	Embarrass	Interfere/Privacy
	Betas						
Financial	.33 (3.68)***	.22 (2.26)**	.34 (3.59)***	.05 (.57)	.29 (2.93)***	.25 (2.65)***	.28 (2.92)***
Grooming	-.08 (-.80)	-.04 (-.34)	-.09 (-.63)	.16 (1.62)	-.02 (-.18)	.06 (.56)	-.21 (-2.10)**
Household	.13 (1.49)	.09 (1.00)	.01 (.08)	.08 (.85)	-.04 (-.50)	.16 (1.74)	.23 (2.57)**
Physical	-.02 (-.27)	-.02 (-.26)	-.05 (-.58)	-.03 (-.28)	-.02 (-.19)	-.12 (-1.23)	.04 (.41)
Emotional	.29 (3.11)***	.22 (2.14)**	.30 (3.07)***	.32 (3.37)***	.14 (1.33)	.17 (1.76)	.18 (1.85)
F	8.06***	3.51***	6.24***	6.06***	2.77**	5.02***	5.46***
RS	.26	.13	.22	.21	.11	.18	.20
ARS	.23	.10	.18	.18	.07	.15	.16

SIGNIFICANCE LEVELS \*\*\* <.01 \*\*<.05

### DISCUSSION

The results demonstrate that the previously stated hypotheses can be supported. Regression equations measured how much the perception of dependency by the carer and the resultant stress contributed towards caregiver abuses. All of the equations were statistically significant and, overall, the family's perception of dependency stress was a highly significant predictor of the elder engaging in abusive behaviors directed against the family caregiver. The perception that the elder's financial dependency caused caregiver stress was significantly related to five of the six categories of abusive behaviors, and was the most important contributor to total abuse. The next most important variable, emotional dependency, was only related to three of the categories. Therefore, the important role that financial dependency may play in the issue of caregiver abuse is substantiated.

#### The Accuracy of the Carer's Perception: Is the Elder's Financial Dependency Stressful to Caregivers?

Only 8% of the elders required, or received, no help from the caregiver family and only 2% were totally dependent upon the family for financial needs. Caregivers were more likely to assist the elder in managing his or her own money than provide direct financial aid. While nearly half of the caregivers reported they always wrote checks or paid bills for the elder and helped the elder manage resources, over 60% said they never provided financial support and nearly half reported they never paid for luxury items. Still, approximately half of the caregivers were indeed contributing money towards essential and luxury items for their elder dependents.

The large majority of caregivers indicated that they didn't seem to mind these additional financial and/or managerial responsibilities. Over 70% reported that financial problems were of no concern to the family. Indeed, almost 80% reported no stress resulting from the elder's financial dependency.

The correlation analysis, however, seems to indicate that the relationship between these financial dependencies and stress is stronger than the percentages might first lead us to believe. Financial dependency exhibits a strong, significant relationship to total stress ( $r=.48$ ). Of the individual financial responsibilities, paying bills ( $r=.27$ ) and managing the elder's resources ( $r=.23$ ) proved to be most stressful, although there was also a more moderate relationship between stress and providing financial support ( $r=.19$ ), and stress and paying for luxury items ( $r=.18$ ). Most interestingly, of the five specified financial tasks, paying for essentials was the only one to exhibit a non-significant relationship with stress.

Clearly, a possible perception on the part of elders that their financial dependency is a source of stress to their caregivers is grounded in reality, and is perhaps being communicated to them more than the caregivers are aware.

#### Implications for Financial Counselors

Thirty percent of all caregivers in the sample indicated that financial problems are a source of family stress. However, 55% of the caregivers who physically abused the elders cited financial problems as a source of stress. On the other hand, abusive behaviors towards caregivers were not at all unusual: 63% of the elders abused their caregivers emotionally; 54% violated the family's privacy and interfered with on-going family processes; 32% used their disability to gain control and manipulate family members; 24% refused food and medical treatment; 18% physically abused their caregivers; and 6% publicly embarrassed their families. As our results demonstrated, the perception that their financial dependence was causing their families stress was the prime predictor of the elder engaging in abuse.

It seems obvious that both caregivers and elders would benefit from financial counseling. Financial counselors could help these families understand the role that money, and particularly the sharing of financial resources, plays in family dynamics. Studies have indicated that abuse can result from feelings of powerlessness and dependency (Finkelhor 1983; Wolf et.al. 1982; Pillemer and Finkelhor 1985). The elderly have lived decades in a society in which self-esteem is measured, in some part, by monetary worth. Many elderly have spent a lifetime providing for themselves and their children. They were the one's responsible for the economic support of the family, making appropriate financial decisions and, in general, managing the financial resources necessary for the family's well-being. In many families, those functions have been usurped by their caregiving children.

Adult children may find it easier to co-mingle their parent's economic resources, such as the social security check, into their own accounts. There may be tax advantages to providing economic care to their parents who are living with them

rather than having their parents remain financially dependent. The elder may not fully appreciate the added financial burden they may represent to the family, just in terms of having to keep the house warmer than usual in the winter, and/or buying special foods that the rest of the family may not share.

All of these may increase the elder's feelings of economic powerlessness and dependency. However, the elder may be reluctant to discuss them, not wanting to appear ungrateful for what they view as necessary support; or if they do discuss them, the adult children may brush away the comments with a familiar "but this is what's best--don't worry about it". The elder's feelings may turn into resentment which manifests itself as abusive behavior. Meanwhile, neither the adult children nor the elder may fully understand the root cause of the abuse.

The financial counselor is ideally suited to explore the symbolic and psychological meanings of money and economic independence with all family members. If all members can realize that financial management may be more than a matter of what's expedient--that it can be viewed as a controlling mechanism, whether it's actually used that way or not--then it's possible that abusive behaviors can be understood as a means of reacting against perceived powerlessness. This understanding can be instrumental in reducing this mode of behavior.

Second, and relatedly, the financial counselor may help the family communicate about money. Much of the problem arises because elders may perceive that their financial dependency is a source of stress to the caregivers. There is a question as to whether their perception is correct and if the caregivers, themselves, are aware of the attitudes they are communicating toward their elderly parents. If these concerns could be brought out into the open and discussed without the adult children worrying that their parents would feel that they are a burden to them and without the parents worrying that they will offend their children and be sent away somewhere else to live, there is a possibility again that the feelings of resentment which appear to lead to abusive behaviors can be reduced.

Finally, the financial counselor may be able to suggest methods by which the elder's finances can be handled to both increase the elder's feelings of control, and therefore self-esteem without straining the economic resources of the caregiving family. Sources of community aid may be suggested that provide needed services at low-cost, as well as advice about establishing trusts which provide the elder with economic security and the family with certain tax advantages.

#### CONCLUSION

The elder abuse literature has generally ignored the contribution that financial counselors can make in alleviating the incidence of abuse in caregiving families. Although it is acknowledged

that family problems and stress can lead to incidents of abuse, and that family psychological counseling may be an integral part of the solution, the specific role of the financial counselor has not been articulated. Perhaps this is because most studies of elder abuse approach it from the sociological, psychological and/or medical perspectives. To date, abuse in generationally inverse families has not been addressed by those in family financial management.

However, it is hoped that this study has demonstrated that financial counselors do have a role to play in helping families victimized by abuse. It is doubtful that many of these families will seek out the assistance they need from financial counselors, as the traditional agencies that do reach out to these families are not aware themselves of the psychological power of financial dependency and, therefore, the possible need for financial counseling. Financial counselors need to make their skills known to Divisions of Aging and protective service agencies that are usually the first places of contact for families experiencing abuse.

They may also need to more directly market the assistance they can offer to caregiving families. Demographic trends indicate that the problem of abuse in generationally inverse families is likely to increase.

Right now, there are approximately 26 million people over the age of 65; that number is expected to grow by 10 million by the year 2000 and reach 67 million by the year 2040, comprising 21% of our population.

The number of frail elderly is also increasing tremendously. In 1980, there were 2.2 million people age 85 or older, comprising 1% of the population. That number will double by the year 2000--just 12 years from now--and by 2040, the projected numbers will reach 13 million (U.S. Congress 1987).

A combination of better health, medical advances, and the greater use of life-sustaining technology is enabling more and more people to live more than 100 years. The number of centenarians in 1980 was 15,000. Twelve years from now, it is projected that there will be 100,000 people older than 100 (Spencer et.al. 1987)

The vast majority of these people will be unable to live independently, and will be poor. Nationally, 90% of all centenarians have incomes of \$5,000 or less (Spencer, et.al. 1987). The median income of single persons who are age 85 or older is \$5,912 (Aging America 1985-1986).

Most importantly, if trends remain the same, it is likely that these frail elderly will be taken care of by their children WHO WILL BE ELDERLY THEMSELVES. In fact, currently, 1 in every 10 elderly has a child over 65. These caregivers, then, will not only be in a somewhat precarious position themselves, but will be responsible for perhaps decades of care for their aging parents (Stein 1987). Meanwhile both child

and parent will be growing more frail and more dependent. Based on this alone, an increase in both elder and caregiver abuse seems inevitable. The need for financial counseling and assistance, in conjunction with the more traditionally recommended services, will be paramount if these families are to function productively and provide a quality of life that is satisfactory for all.

#### REFERENCES

- Aging America: Trends and Projections (1985-1986 edition). U.S. Senate Special Committee on Aging.
- Block, M.R., and J.D. Sinnott (1979). The Battered Elder Syndrome: An Exploratory Study. Final Report to the United States Administration on Aging. The University of Maryland Center on Aging, November.
- Cantor, M. (1983). "Strain among Caregivers: A Study of Experience in the United States," The Gerontologist 23 (No. 6): 597-604.
- Douglas, R., T. Hickey, and C. Noel (1980). A Study Of Maltreatment of the Elderly and Other Vulnerable Adults. Final Report to the United States Administration on Aging and the Michigan Department of Social Services, The Institute of Gerontology, The University of Michigan.
- Hwalek, M., M. Sengstock, and R. Lawrence (1984). "Assessing the Probability of Abuse of the Elderly," paper presented at the Annual Meeting of the Gerontological Society of America (November).
- Lau, E.A., and J.I. Kosberg (1979). "Abuse of the Elderly by Informal Care Providers," Aging (September-October): 10-15.
- Finkelhor, D. (1983). "Common Features of Family Abuse." In David Finkelhor, Richard Gelles, Gerald Hotaling, and Murry Straus (eds.), The Dark Side of Families: Current Family Violence Research, Beverly Hills, CA: Sage.
- King, N. (1983). "Exploitation and Abuse of Older Family Members: An Overview of the Problem," Response to Violence in the Family and Sexual Assault (March/April): 3-11.
- Pillemer, K. and D. Finkelhor (1985). "Domestic Violence Against the Elderly: A Discussion Paper." Presentation at the Surgeon General's Workshop on Violence and Public Health, Leesburg, Virginia (October 27-29).
- Sengstock, M., S. Barrett, and R. Graham (1984). "Abused Elders: Victims of Villains or of Circumstances?" Journal of Gerontological Social Work, 8 (No. 1/2): 101-111.
- Spencer, G., A. Goldstein, and C. Taeuber (1987). America's Centenarians: Data from the 1980 Census. Washington, D.C.: U.S. Department of Health and Human Services (June).
- Stein, K. (1987). "Abuse of the Elderly: Epidemiology and Risk Factors." Presentation at U.S. Public Health Service Conference, Philadelphia, Pennsylvania (November 16).
- Steinmetz, S. (1986). "Family Violence: Past, Present, Future." In M.B. Sussman and S.K. Steinmetz (eds.), Handbook of Marriage and the Family. New York: Plenum Publishers.
- Wolf, R., K. Pillemer and M. Godkin (1984). Elder Abuse and Neglect: Report from Three Model Projects. Worcester, MA: University of Massachusetts Medical Center, Center on Aging (December).
- Wolf, R., C. Strugnell, and M. Godkin (1982). Preliminary Findings from Three Model Projects on Elderly Abuse. Worcester, MA: University of Massachusetts Medical Center, Center on Aging (December).
- U.S. Congress, Office of Technology Assessment (1987). Life Sustaining Technologies and the Elderly. Washington, D.C.: U.S. Government Printing Office (July).

LOW INCOME ELDERLY IN HEALTH MAINTENANCE  
ORGANIZATIONS: ENROLLMENT, SATISFACTION, & UNDERSTANDING

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Low income elderly enrollees (N=472) in a Wisconsin HMO Subsidy Project were surveyed as a case study of HMO enrollment decisions, satisfaction, and understanding. Decisions to enroll were influenced by financial incentives provided by the HMO and the financial subsidy. An overwhelming majority (86.4%) were satisfied with their HMO coverage, especially the lack of paperwork. Over two-thirds appeared to understand the major differences in HMO and fee-for-service health care. Improvement is needed in helping consumers understand HMOs' relationship to the Medicare system and other supplements.

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## INTRODUCTION

The health care marketplace is becoming increasingly diverse, offering new forms of delivery, coverage, and financing strategies. In part, these developments reflect concerns about the cost, quality and accessibility of health care for the elderly. Policymakers are particularly concerned about rising Medicare expenditures for the increasing number of those over 65 in the U.S.

Elderly consumers themselves are experiencing rising health care costs, gaps in Medicare coverage, and fragmented health care services (U.S. Senate, 1988). The potential for high out-of-pocket costs for the elderly induces more than 70 percent of aged Medicare enrollees to purchase supplementary private insurance to cover these costs (Christensen, et al., 1987).

Health maintenance organizations (HMOs) are increasingly viewed as a health care structure to potentially reduce Medicare costs and out-of-pocket costs for consumers while maintaining or even broadening coverage for older persons (Iglehart, 1985). HMOs assume a contractual responsibility for delivery of services to an enrolled population, with fixed periodic payments independent of service use. By 1985, nearly one-half of all HMOs offered coverage to Medicare enrollees, although the number of elderly in HMOs continues to be a small minority of the older population and of HMO members (Polich et al., 1985).

HMOs continue to be a relatively unfamiliar model of health care for most Americans. Harris and Associates (1986) found that only 41 percent of nonmembers were very or somewhat familiar with HMOs. This unfamiliarity with HMOs offers an opportunity to explore elderly

consumer responses to changes in the health care marketplace.

Research on HMO's has primarily focused on economic or financial feasibility concerns and medical issues. Studies have included some description of enrollees characteristics and satisfaction levels but almost exclusively on the population under 65 years of age, so that much less is known about elderly consumer behavior and HMO's. As policy changes are made, it seems appropriate to explore HMO's from the elderly consumer's perspective.

This case study contributes to an understanding of elderly HMO enrollees by assessing various aspects of enrollment decisions, satisfaction with HMOs, and understanding of HMOs versus fee-for-service care.

## LITERATURE REVIEW

### Enrollment Decisions and Satisfaction with HMOs

HMO enrollment decisions will depend upon both delivery characteristics (quality, comprehensiveness, accessibility) and insurance characteristics (price, benefit package) according to Berki and Ashcraft (1980). Studies have confirmed that HMO enrollees, both young and old, are attracted by and especially satisfied with comprehensive coverage, financial protection, and availability of care (Harris and Associates, 1986; Luft, 1981; Ward, 1987; Ward and Bryant, 1986).

The tangible advantages of HMO enrollment for the elderly have been discussed in recent literature (AARP, 1986; Luft, 1981; Ward & Bryant, 1986; Wolfson et al., 1984). HMOs may offer a variety of features serving as incentives to enroll, and which lead to increased consumer satisfaction. A summary of such features includes: a) the elimination of confusing, anxiety-provoking bills and forms, b) the ability to budget and plan for health care expenses, c) a guaranteed set of comprehensive one-stop health services, d) continuity of care, e) no Medicare assignment problems, f) preventive health care and g) extra benefits and coverages. In addition to these advantages, HMO members are less likely to need private supplemental insurance plans (Medicare Supplements or Medigap) as members have few if any deductibles, copayments or unmet expenses. In most cases, continuing to pay for a Medigap policy in addition to an HMO would mean duplication of benefits for additional financial outlays (AARP, 1986).

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Features of HMOs may also present difficulties for elderly consumers, disincentives for enrolling, and reasons for being dissatisfied. Barriers to selecting HMOs have been found to include limitations on the choice of providers, limited coverage when traveling, lack of exposure to information about HMOs, and the difficulty of integrating new with old insurance patterns (AARP, 1986; Berki & Ashcraft, 1980; Titus, 1982). Additional studies have found HMO members less satisfied with aspects of the patient/provider relationships and administrative aspects such as waiting for appointments and referral procedures (Polich et al., 1985, Ward, 1987). The Medicare Demonstration project findings indicate that older adults will enroll in HMOs and change their physicians as a tradeoff for other desirable features (Salisbury et al., 1983).

### Understanding of HMOs

As the health care marketplace becomes more differentiated, consumers face more unfamiliar choices. Elderly consumers are in the position of needing to make an informed choice that is appropriate to his or her needs and preferences. Older people do not tend to be very knowledgeable about Medicare benefits, the provisions of supplemental insurance, or HMOs as a delivery/financing system (Harris and Associates, 1986; McCall, Rice and Sangl, 1986; Titus, 1982). If the decision to enroll in an HMO is based on incomplete or incorrect information, expectations may not be met, and satisfaction among Medicare enrollees reduced. Inadequate information may lead consumers to evaluate the economic costs and benefits of HMOs without understanding the structure of HMOs compared to fee-for-service. Ward (1987) found that elderly HMO members perceived understanding of HMO coverage and procedures was the best predictor of satisfaction.

Elderly consumer enrollment decisions, satisfaction, and understanding of HMOs become critical factors in whether or not HMOs will be acceptable to consumers. Without an understanding of elderly consumer behavior in the health care marketplace, policymakers and providers may or may not be pursuing a viable option.

### THE SETTING

This research involved a case study of low income elderly HMO enrollees in a pilot project in the state of Wisconsin. In 1986, the Wisconsin HMO Elderly Subsidy Project was funded by the legislature to offer incentives to low income elderly consumers in selected Wisconsin counties to enroll in HMOs. The project involved negotiating with HMOs to offer coverage to Medicare beneficiaries and then focused on encouraging low income Medicare eligible people to join HMOs. The rationale for the pilot from a state's perspective was the potential of reducing the number of elderly who did not have sufficient health coverage, and who may become impoverished from medical expenses and therefore eligible for Medicaid (primarily a state financed program). Specific incentives provided to low income elderly consumers to enroll in an

HMO included: 1) a financial subsidy of half the monthly HMO enrollment fee or \$20, whichever was less; and 2) increased education and awareness of health care options.

The Department of Health and Human Services contracted with the Coalition of Wisconsin Aging Groups to provide consumer education on HMOs. The Coalition provided group training sessions (nutrition sites, etc), a booklet, A Senior Citizen's Guide to HMOs in Wisconsin, and one-to-one contact by phone, and for some, in person visits by outreach workers.

As a result of the educational outreach efforts, 613 low income elderly consumers signed up for the HMO subsidy for up to 12 months.

### THE SAMPLE AND INSTRUMENTATION

The sample for this case study included all persons (613) who enrolled in the subsidy program. Four months after enrolling, each person was mailed a written questionnaire designed to gather information on standard sociodemographic information, enrollment decisions, satisfaction levels, and their understanding of HMOs as a health care system.

Ward and Bryant's (1986) instruments from a study of Medicare enrollees in HMOs were initially used to assist in the survey development. Questions on enrollment decisions were designed to gather information on reasons for selecting HMO coverage and the influence of the subsidy in enrolling in an HMO. Respondents were asked to note their general level of satisfaction and to list specific likes or dislikes. Additional reviews of the literature and an understanding of the differences in fee-for-service and HMO health care approaches provided the basis for the 13 item HMO knowledge evaluation. Pilot testing of the evaluation occurred with 40 elderly consumers considering HMOs as a health care option.

Questionnaires were returned by 472 for a 77% response rate. This high rate increased the confidence that respondents were representative of enrollees for that time period. Results are presented based on N=472 unless numbers and rates are presented.

### RESULTS

#### Characteristics of HMO Enrollees.

HMO enrollees responding were more likely to come from the older age groups when compared to the statewide elderly population in Wisconsin. Eleven and one-half percent of the enrollees were 85 or older, compared to just 9.6% of the elderly population in the state; and 44.3% were 75-84 compared to just 31.8% of the elderly population. Those in the 65-74 age group made up 44.2% of the respondents compared to 58.6% of the statewide elderly population. Recent studies of the elderly population in Wisconsin were used as the basis for comparison (WI Department of Health and Social Services,

1987). Approximately three-fourths of the respondents were female (76%), and one-fourth (24%) male; approximately comparable to the gender distribution in the over-65 population statewide.

Eligibility requirements for participation included meeting established income limitations. Nearly all respondents (75.4%), had incomes between poverty and 140% of poverty. Twenty percent of the respondents had incomes below poverty with the remaining 4.5% above 140% of poverty due to declining incomes in 1987. The 1986 federal poverty income guidelines were used to establish income eligibility (\$7240 for a two member household and \$5360 for a one member household) (WI Department of Health and Social Service, 1987).

Slightly over one-third (40.1%) of the respondents did not go beyond eighth grade in their educational background, 19.2% had some high school, 26.5% had completed high school, and 14.2% had gone beyond high school.

HMO enrollees responding consistently rated their own health poorer than the comparable general elderly population statewide. For example, 5.4% of the oldest enrollees (75 and older) rated their health excellent while 18.1% of the general elderly population 75 or older rate their health as excellent.

#### What factors influence enrollment of the low income elderly in an HMO Subsidy program?

Respondents were asked a series of questions to examine what factors influenced their decision to enroll in the HMO Subsidy program. When responding to a list of reasons for enrolling in an HMO, 47.6% (225) indicated the lack of paper work, 47% (222) the additional benefits that the HMO would provide when compared to their Medicare supplement insurance, and 43.4% (205) no more deductibles, coinsurance or charges above Medicare. A smaller number of respondents indicated that reasons for selecting the HMO included getting prescriptions covered (13.2%), their doctor was already affiliated with the HMO (3.9%), and the location of the HMO (3.4%).

It should be noted that almost one-third of those responding (31%) were already HMO enrollees before signing up for the subsidy. When asked directly about the role of the subsidy in their enrollment decision, only 8% replied that it was not important. In an additional question exploring reasons for enrolling, 63.9% indicated that the subsidy meant that they can afford health insurance. Almost one-third (32.6%) did not have a Medicare Supplement policy. Respondents were asked in an open-ended question to add any comments about the subsidy program at the end of the questionnaire. A significant number (40.3%) stressed the need for aid for those on limited incomes and their increased ability to afforded Medicare Supplement coverage with the subsidy.

#### Are elderly consumers satisfied with HMOs as a health care delivery/financing option?

A majority of the respondents in this study were satisfied with the medical care at their HMO. When asked, on the

whole how satisfied they were with the HMO, 86.4% (368) were very satisfied, 13.4% (37) somewhat satisfied and only one respondent was not satisfied. Almost three-fourths (72.2%) agreed with the statement that the quality of care provided by HMOs equals or exceeds other health care options. When asked in an open-ended question to list specific likes about their HMO coverage, over half (54.4%) listed the lack of paperwork and the cashflow advantages of not having to file claims and be reimbursed. Additional aspects of the HMO that were especially satisfying included the affordability of the option and everything that is covered (12%) and good service (5.1%).

Respondents were also asked in an open-ended question to list their dislikes with the HMO coverage. Dislikes were not frequent but a lack of drug coverage was mentioned by 7.4% having to change doctors when joining by 5.5%, and the referral process to other providers by 4.0%. Almost one-fourth (23.7%) noted that they had no dislikes at this time.

#### Do elderly consumers understand the differences in HMOs form fee-for-service health care?

Respondents were directly asked how well they felt they understood the benefits and coverage available to them in the HMO. A majority felt that they understood benefits and coverage fairly well 69.4% (310), and 22.6% (101) very well. The additional 8% (36) did not feel that they understood the benefits and coverage.

A 13 item evaluation was designed to more objectively determine if enrollees understood the differences in HMOs and fee-for-service types of care. Respondents were asked to respond agree, disagree, or not sure to each statement. As Table 1 indicates, over two-thirds of the respondents to the whole survey recognized the following: 1) restriction to HMO doctors and pharmacies (84.1%), 2) cost being the same for 1 or 6 visits (82.4%), 3) elimination of filing claims (80.3%), 4) referral and emergency processes (77.8%), and 5) no deductibles or co-payments (73.7%). Non response rates are intentionally listed in Table 1 as some indication of which questions were perhaps more difficult or areas of less understanding.

Respondents had less understanding of some aspects of HMO coverage. For example, almost half of the survey respondents (47.1%) agreed with or were not sure if they should carry a Medicare Supplement policy in addition to their HMO coverage. HMO coverage plans typically provide a wide range of benefits beyond Medicare covered services but 54% disagreed or were not sure about this feature. Just over half (53.8%) were not sure about the limitations of coverage out of the area for those who travel or spend winters elsewhere.

TABLE 1. Elderly Consumer Response Rates to HMO Understanding Evaluation.

Statements	Responses			
	Agree	Disagree	Not Sure	No Response
1. The choice of providers are limited	55.9	15.7	21.2	7.2
2. Filing of claims is eliminated in HMO's	80.3	4.9	10.2	4.6
3. An HMO is a good choice for those who spend winters in Florida	8.7	25.2	53.8	12.3
4. The more expensive the HMO, the better the benefits	14.9	40.0	38.1	7.0
5. Most HMO's will allow care from providers outside the HMO if a referral is made or in an emergency	77.8	1.5	17.4	3.3
6. As HMO member, I pay monthly premiums but do not have expensive deductions and co-payments	73.7	3.0	13.0	10.3
7. If I decide to leave the HMO, I may not be able to get the same insurance coverage and rates as before.	54.7	4.7	34.3	6.3
8. HMO members should plan on seeing doctors and going to pharmacies connected with their HMO	84.1	3.4	6.6	5.9
9. I should carry a Medicare Supp policy in addition to my HMO coverage	29.7	46.0	17.3	7.0
10. Many HMO's provide benefits which are in addition to Medicare covered services	35.7	13.4	40.6	10.3
11. As an HMO member, I submit Medicare claim forms and wait for reimbursement	16.9	58.9	12.5	11.7
12. MY HMO costs will basically be the same whether I visit the doctor one or six times	82.4	1.1	9.3	7.2
13. HMO's allow for planned health costs due to fixed payments	43.5	5.7	42.4	8.4

Total n = 472

## CONCLUSIONS

### Enrollment Decisions

Elderly low income consumers in the HMO Subsidy program enrolled for additional financial protection such as no more deductibles or coinsurance, expanded coverage and benefits, and the ability to afford supplementary coverage to Medicare. The subsidy allowed additional protection to be obtained for those not carrying any supplement and expanded coverage for those with other types of supplements. These results are consistent with other studies of all age groups in understanding what draws consumers to HMOs. Financial protection advantages, comprehensive coverage and accessibility are major incen-

tives in enrollment decisions (Berki and Ashfoft, 1980; Harris and Associates, 1986; Ward and Bryant, 1986). No paperwork was also viewed as a major incentive for enrollment. MCall (1986) has suggested that Medicare beneficiaries may enroll in an HMO partly to avoid the confusing Medicare procedures, because the HMO handles paperwork and coordination of benefits.

### Satisfaction with HMOs

The satisfaction results were consistent with other findings (Titus, 1982; Ward, 1987) in that elderly consumers have high expectations of HMOs and that consumers appear to be very satisfied with how HMOs are meeting those expectations. As in the HMO Demonstration projects,



consumers appear to be willing to trade some of the fee-for-service features, such as choice of physician, for additional coverage and financial protection (Salisbury et al., 1983).

#### Understanding of HMOs

How well HMO consumers understand the differences in HMOs and fee-for-service will likely impact current satisfaction and future use. Respondents in this study were very satisfied and the majority also appear to understand the major differences in HMOs and fee-for-service health care.

Elderly consumers are not typically familiar with HMOs and are confused about coverage offered by Medicare and the supplemental insurance options available (McCall, 1986; Titus, 1982). While these enrollees, many with less than an 8th grade education, appear to be different, it is critical to recognize the educational resources used to reach the potential subsidy participants. Those involved in the educational process, from nutrition site programming, developing written materials, to phone calls with those eligible, confirm that a majority of the elderly were not initially familiar with HMOs and were also very confused about Medicare coverage. Such educational efforts, as well as the experiences of enrollees in HMOs appear to have greatly improved levels of understanding, especially as to the differences in fee-for-service and HMO care.

There is room for improvement in several areas of understanding. These areas of confusion were more likely to be relating to how HMOs relate to the larger Medicare system than with understanding the differences in HMOs and fee-for-service care. Duplication of coverage by having multiple policies and/or an HMO beyond Medicare is a continuing waste of personal resources, especially for the low income.

#### IMPLICATIONS

If the goal is to assist elderly consumers in meeting rising health care costs, in reducing out of pocket expenses, all without reducing coverage, HMOs may offer an acceptable health care delivery and financing option from the consumers's perspective. The high levels of consumer satisfaction that have been found need to continually be evaluated given concerns with affordability and quality of care features (Luciano, 1988, Stickney, 1985).

Educators, policymakers, and those marketing HMOs will be challenged to help elderly consumers make informed choices about health care coverages that appropriately match needs and preferences and help set realistic expectations. The need to help consumers understand differences in HMOs and traditional fee-for-service health care, and how such coverage relates to the ever-changing Medicare program will be an ongoing challenge.

#### REFERENCES

- American Association of Retired Persons (AARP) (1986). More health for your dollar. (D 1195) Washington, D.C. AARP.
- Berki, S.E. & M. Ashcraft (1980). HMO enrollment: Who joins what and why: A review of the literature. Milbank Quarterly/Health and Society, 58, 588-632.
- Christensen, S.; Long, S., & J. Rodgers (1987). Acute Health Care Costs for the Aged Medicare Population: Overview and Policy Options. Milbank Quarterly, 65 (3), 397-425.
- Harris, L. and Associates (1986). A report card on HMOs: 1980-1984. Menlo Park, CA: Henry J. Kaiser Family Foundation.
- Iglehart, J. (1985). Medicare turns to HMOs. New England Journal of Medicine, 312(2), 132-136.
- Luciano, L. (1988). HMO, yes or no? Money, July, 111-120.
- Luft, H.S. (1981). Health maintenance organizations: Dimensions of performance. New York: John Wiley.
- McCall, N., Rice, T. & J. Sangl (1986). Consumer knowledge of Medicare and supplemental health insurance benefits. Health Services Research, 20, 633-57.
- Polich, C., Iversen, L. & M. Parker (1985). Health maintenance organizations: The Medicare experience in the 1980's. Paper presented at Annual Meeting of the Gerontological Society of America, New Orleans, LA.
- Salisbury, P.A., Koppersmith, D.A., & D.L. Kodner (1983). Give up my doctor? yes/no: Older adults and HMO's. (unpublished paper). Brooklyn, NY: Elderplan (S/HMO Demonstration).
- Stickney, J. (1985). Health care: Two cheers for HMOs. Money, May, 155-160.
- Titus, S.L. (1982). Barriers to the HMO for the over age 65's. Social Science and Medicine, 16, 1767-1774.
- U.S. Senate Special Committee on Aging (1988). Developments on aging: The long term care challenge 1987. (Rept 100-291, Vol. 3). Washington, D.C., U.S. Government Printing Office.
- Ward, R. (1987). HMO satisfaction and understanding among recent Medicare enrollees. Journal of Health and Social Behavior, 28 (December), 410-412.