

OLDER CONSUMERS' EVALUATIONS OF INNOVATIVE BATHING FIXTURES: RESULTS FROM KOREANS LIVING IN AMERICA

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Despite cultural differences, older adults from both Korea and the United States report similar bathroom use-related difficulties. This diffusion research compared mature and older consumers' responses to new U.S. residential bathing fixtures. Highlighted here are the results from the test panel of Koreans living in America. A companion paper (White & Shin, 1998) discusses the findings from the American consumer panel.

For many older Americans, the bathroom presents the risk of falling (Golant, 1992). But in Korea, the bathroom risk is less prevalent. Although in most Korean nursing homes, the private rooms have bathtubs (Shin, 1995), administrators report that more than 90% are unused because residents have difficulty with the height of the tub (Shin, 1996).

Using Rogers' diffusion theory (1995) as the framework, this study compared mature Eastern and Western consumers' responses to innovative bathing fixtures, which can enable greater personal safety and self-sufficiency. The propensity of older adults to accept innovations is increased by familiarity with existing technologies (Moschis, 1994). Furthermore, older persons are interested in remaining independent despite increasing age and potential for long-term chronic illness, disability, and dependency.

The purpose of this research was to introduce a side-entry bathtub/shower and a sit-stand lavatory sink to separate consumer test panels of mature and older Americans and Koreans, living in the United States.

Each subject tested both fixtures in the universal design laboratory at a mid-western U.S. university. Methods included self-administered pre-trial survey, user-simulation, interview, and evaluation of specific product features (see White & Shin, 1998).

The 29 Korean test panel members (all of whom had lived in America for at least five years) were recruited through local Korean and Catholic churches and a Korean grocery store. They ranged in age from 50 to 79, with a median of 60 (mean of

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62) years. Their height ranged from 56 to 64 inches, with a mean of 60.0 (median of 61.5) inches. Over one-half (15 persons) of the subjects lived alone or with a spouse, while over one-third (10 persons) lived with adult children or unrelated persons.

All but one of the subjects' homes were single-family units, nearly one-half (13 persons) of which had two or more bathrooms. Well over three-fourths (83%) of the bathrooms usually used by the Korean panelists included a tub/shower combination, and three-fourths had sinks with vanity storage. Results relative to personal bathing practices and perceptions of the new products are summarized below.

Bathing Practices

Traditionally, Koreans bathed while seated outside the tub then entered the tub to soak and relax. Thus, most bathrooms were the "wash-down" style with a floor drain. At the time of the study, however, the Korean panelists were using western bathroom fixtures. Over one-half (16 persons) usually bathed once a day. Nearly three-fourths (21 persons) usually showered, while over one-fourth (8 persons) most often bathed in a tub. Equal numbers of subjects (38% each) usually bathed sitting down, or alternated between standing and sitting.

Almost three-fourths (21 persons) of the Korean consumers indicated that bathing was easy for them. The bathroom-related difficulty they cited most often (6 persons) was bending to wash the body. Their most frequent health concern (reported by six subjects) was arthritis, followed by low vision (5 persons). Two subjects reported having fallen in their bathroom at least once during the past five years.

Almost 80% of the Korean panel rated the overall safety of the bathroom they usually used as "safe enough" or "very safe." The existing bathroom safety features they cited most frequently were adequate lighting level (66%) and non-slip tub or shower floors (24%). Only four subjects' homes had bathroom grab bars.

Side-Entry Tub/Shower Trials

Three-fourths (22 persons) of the Korean panel reported a positive first impression of the tub/shower, although five subjects expressed uncertainty or concern. All but one rated the product appearance as attractive. One-third (10 persons) of these consumers, however, did not find the tub to be "simple and intuitive" to use.

In simulating the use of the side-entry bathtub, all 29 Korean panelists responded positively to the ease of opening the door and entering the tub. Almost all (28 each) indicated that the side entry was safe and comfortable. Relative to size, 86% of the Korean subjects judged the tub's interior to be smaller (specifically, narrower) than their home tub.

Over 90% of the Koreans expressed a need for a hand-held shower. All but one indicated that the hand-held shower was easy to aim at various parts of the body. The showerhead's height adjust-ability was important to 90% of the panelists, and 79% preferred its middle wall location (vs. at the faucet end of the tub).

Nearly 90% (26 persons) of the Korean consumers indicated that they needed the built-in bathtub seat. Almost one-half (14 persons) reported that the seat was easy to raise and lower, but one-fourth (7 persons) found it difficult to pull up. For 11 Koreans, the tub's one built-in grab bar would not be sufficient to make them feel safe while bathing.

Koreans' responses to the tub/shower control were very positive: 90% or more rated the color-coded temperature control as easy to see, and the lever handle as easy to turn with a closed fist. Both the location and height of the on/off control were acceptable for using either tub or shower.

Sit-Stand Lavatory/Sink Trial

The Korean consumers' evaluations of the motorized, height-adjustable lavatory were also positive. Having an adjustable sink was important to 90% of the group, and 86% rated the sink's overhang design as good (making the faucet easier to reach). All 29 subjects rated the side/rear drain location as suitable, and all but one rated the sink's appearance as "attractive."

Over two-thirds (20 persons) of the Korean panelists stated that having knee space below the sink would be important for seated use, while the remainder indicated a need for shelves below the sink. Over one-half (16 persons) judged the sink depth to be adequate, although 13 persons commented on its shallowness, especially at the front edge.

Asked to evaluate these bathing innovations for use by children under age ten, almost all the Korean subjects (27 persons) said "yes" to the sit-stand lavatory sink, compared to over three-fourths (23 persons) who approved the side-entry tub for children. Finally, the potential purchase decision factors cited most frequently were: "enables me to bathe alone or without assistance" and "makes bathing safer."

Despite living in the United States for several years, the Korean consumers are trying to retain their cultural identity and practices. Through this research, they learned about and responded positively to products that can permit safe and independent continuance of traditional bathing practices despite advancing age and frailty. Joint conclusions, suggestions for culture-specific diffusion, and recommendations for future studies will be presented at the conference.