

# Evaluation of acceptability of nutritious ready-to-eat foods for the elderly

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## ABSTRACT

Aging generally changes the relationship with foods as well as what the bodies require from the foods we eat. Relatively little is known about how the nutritional needs of older people differ from those who are younger. With advancing age, the elderly are more likely to suffer from dental problems. Ill-fitting dentures, pain in jaws, mouth sores and missing teeth can make chewing painful. All of these factors create difficulty for the elderly to eat healthy foods. Further during old age, people tend to be disinterested in cooking food everyday and often not keen in opting for variety of foods. In some cases, food becomes monotonous and a few start skipping their meals resulting in malnutrition. But eating a well-planned diet and proper nutrition brings strength and vitality to the elderly. So there is a need for ready-to-eat foods in present day context. Hence a study was carried out on evaluation of ready-to-eat foods for elderly. Some of the ready-to-eat foods like sorghum flakes, wheat flakes, multigrain mix, ragi rawa, Nuchhu, ragi vermicelli and ragi flakes were distributed to 85 elderly respondents. Acceptability of the above mentioned foods was tested using hedonic score method. Results revealed that ragi flakes was liked the most (100%) and ragi vermicelli was liked the least (48%). Also evaluation of nutritious health drinks was also carried out by the elderly. Results revealed that ragi malt was liked by majority (96%) of the respondents followed by ragi ambli (95%), sorghum semolina porridge (87%), horsegram porridge (85%) and sorghum flour porridge (78%). Thus its important to have a balanced diet with proper amounts of nutrients, vitamins and minerals. Seniors should be particularly careful about their diets as they must deal with additional age-related health concerns.

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## INTRODUCTION

The aged or the elderly (more than 60 years of age) belong to post mature adult group of population. It is true that advances in medical science, improved health care and standard of living have helped to stay healthy and prolong their longevity. However, during the aging process,

certain inevitable degenerative changes that occur, result in functional decline. These are mostly influenced by genetics, nutrition, socio-economic, psychological conditions, illnesses and availability of health care facilities. Hence, proper nutrition and health care are necessary for them to lead a normal life.

Aging generally changes the relationship with food

as well as what the bodies require from the foods we eat. In all life stages, food selection is driven by lifestyle needs. Young families tend to be more active and put more energy into food shopping and preparation. Meal-time is an entirely different occasion when there are growing bodies to feed. When the nest is empty many older adults enjoy the freedom in being able to cook for one or two but as time passes, some seniors may find it more and more challenging to prepare balanced meals.

Relatively little is known about how the nutritional needs of older people differ from those who are younger. Although many people enjoy a generally healthy and vital old age, age related health problems do increase with advancing years and often have an effect on eating habits.

The physiological and pathological changes that inevitably accompany ageing result in degenerative processes and lower functional capacity. These in turn, influence nutritional status of old people. Some of the most common reasons for poor nutrition in the elderly are decrease in sensitivity, side effects of medication, poor dental health, financial burden, lack of transportation, physical difficulty, forgetfulness and depression.

Further during old age, people tend to be disinterested in cooking food everyday and often not keen in opting for variety of foods. In some cases, food becomes monotonous and a few start skipping their meals resulting in malnutrition.

On the contrary, there is another group of elderly people who turn obese by overeating a variety of convenient and fast foods and become the victims of over nutrition. Some of the common nutrition related problems among the elderly are diabetes, hypertension, cardiovascular problems, gastrointestinal problems, kidney problems, arthritis etc. This indicates that a proper dietary management is necessary for health and well-being of the elderly.

People of all ages need a healthy balanced diet to maintain healthy status. It's important to have a balanced diet with the proper amounts of nutrients, vitamins and minerals. Seniors should be particularly careful about their diets, as they must deal with additional age-related health concerns. Aging causes change, but eating a well-planned diet and proper nutrition brings strength and vitality to the elderly.

## MATERIAL AND METHODS

The area selected for the study is urban area of

Bijapur taluk of Bijapur district. Eighty five senior citizens who were physically independent were selected for the study. Baseline survey was carried out using questionnaire. Ready to eat foods such as like sorghum flakes, wheat flakes, multigrain mix, ragi rawa, Nuchhu, ragi vermicelli and ragi flakes were prepared from locally available raw materials and distributed to 85 elderly respondents. Similarly nutritious health drinks were also prepared out of locally available raw materials and distributed to 94 elderly respondents. Organoleptic evaluation was carried out and its acceptability was tested using hedonic score method (Swaminathan, 1995) and the scale ranged from 5 to 1 (Highly acceptable-5, moderately acceptable-4, acceptable-3, less acceptable-2 and poorly acceptable-1). Percentage of acceptability was calculated.

## OBSERVATIONS AND ANALYSIS

The baseline survey revealed that the age of the respondents ranged between 61 to 83 years. The family size of majority (59.5%) of the respondents was large *i.e.* seven and above. Majority (95.5%) of the respondents were not re-employed. The educational level of higher percentage (40.5%) of the respondents was high *i.e.* PG and above. The monthly income of majority (91.5%) of the respondents was low.

In oldage, it is difficult for the senior citizens to prepare food for themselves due to various health Problems and poor dentures. In a study conducted by Sandhu *et al.* (2007) showed that more than half of the respondents both in rural (58.33 %) and urban areas (55.42 %) looked pale and slightly sick. A few respondents both in rural (15 %) and urban (7.50 %) areas looked extremely unhealthy. This may be due to very poor diet, self negligence or some sickness. So there is a need for ready-to-cook foods in present day context. These foods should be simple, quick, convenient to prepare and nutritious. A study by Malleshi *et al.* (1989) revealed that cereals and legumes, individually or as composites are the main source of nutrients for weaning children in developing countries. Hence this technology of ready-to-eat foods and nutritious health drinks from locally available raw materials was developed so that it is simple, easy and convenient to prepare. The products like ragi flakes, sorghum flakes, ragi rawa, wheat flakes, pearl millet flakes, sorghum semolina, multigrain mix and ragi vermicelli were distributed to 85 elderly respondents.

Products	Liked	Neutral	Disliked
Sorghum flakes	80(94.18)	5(5.82)	-
Wheat flakes	77(90.59)	8(9.41)	-
Multigrain mix	63(62.35)	8(9.41)	14(28.24)
Ragi rawa	78(91.76)	7(8.24)	-
Nuchhu	73(85.88)	12(14.12)	-
Ragi vermicelli	41(48.24)	5(5.88)	39(45.88)
Ragi flakes	85(100.00)	-	-

Figures in the parenthesis indicate percentage

Product	Liked	Neutral	Disliked
Ragi malt	91(96.8)	3 (3.2)	-
Horsegram porridge	80(85.10)	14 (14.9)	-
Ragi ambli	90(95.74)	4 (4.26)	-
Sorghum semolina porridge	82(87.23)	12 (12.77)	-
Sorghum flour porridge	74(78.72)	20 (21.28)	-

Figures in the parentheses indicate percentage

Acceptability of the above mentioned foods was tested using hedonic score method. Results revealed that ragi flakes was liked the most (100%) and ragi vermicelli was liked the least (48%) (Table 1). Also evaluation of nutritious health drinks was carried out by the elderly. Results revealed that ragi malt was liked by majority (96 %) of the respondents followed by ragi ambli (95%), sorghum semolina porridge (87%), horsegram porridge (85%) and sorghum flour porridge (78%) (Table 2). Thus its important to have a balanced diet with proper amounts of nutrients, vitamins and minerals. Seniors should be particularly careful about their diets as they must deal with additional age-related health concerns.

### Conclusion:

The study concluded that good nutritional health is essential for physical and cognitive function, prevention or management of chronic health conditions and prevention of disability.

Knowing what to eat and how much or little is key to achieving and maintaining good nutritional health. At any time but especially later in life eating the right foods

can help elderly to stay mentally sharp, emotionally balanced, full of energy and maintain a healthy immune system.

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