A.V.V.M. Sri Pushpam College (Autonomous)
Poondi– 613 503, Thanjavur-Dt, Tamilnadu
(Affiliated to Bharathidasan University, Tiruchirappalli – 620 024)

3.7.1 Number of Collaborative activities per year for research/ faculty exchange/ student exchange/ internship/ on –the-job training/ project work

Collaborating Agency:

Mr. S. Mohan Kumar Assistant Professor of Mathematics,
Kongunadu College of Engg. & Technology, Thottiyam, Trichy

Dr. A. VENKATESH
Assistant Professor
PG & Research Department of Mathematics
A.V.V.M Sri Pushpam College (Autonomous)
Poondi-613 503,
Thanjavur Dt. Tamil Nadu, India.

Mr. S. MOHANKUMAR
Assistant Professor
Department of Mathematics
Kongunadu College of Engg. and Technology
Thottiam
Trichy (Dt), Tamil Nadu, India

Date: 01.06.2016

LINKAGE

For the year 2016-2020

Between

1. Dr. A. VENKATESH
Assistant Professor
PG & Research Department of Mathematics
A.V.V.M Sri Pushpam College (Autonomous)
Poondi - 613 503.

&

2. Mr. S. MOHANKUMAR
Assistant Professor
Department of Mathematics
Kongunadu College of Engg. and Technology
Thottiam, Trichy (Dt).

Considering the significance of the noble cause for the student community, we have come forward to collaborate with each other to exchange research knowledge, expertise and library facilities to the process of scientific research and education in the field of Mathematics. The parties (mentioned above as 1. & 2.) have had preliminary discussion in this matter and have ascertained areas of broad consensus. The parties now therefore agreed to enter in writing these avennues of consensus, under a flexible linkage, and this project aims to fill the gap between knowledge demand and subject expertise related to the mentioned field.

Joint Responsibilities

- Sharing of library resources, database etc.,
- Joint Publication of research articles, books, magazines, bulletins etc.,
- Jointly organizing conferences, seminars, symposia and workshops.
- Submitting joint proposals for research funding from agencies like UGC, CSIR, DST and TNSCST

Dr. A. VENKATESH

Dr.A.VENKATESH, M.Sc.,M.Phil.,PGDCA,Ph.D.,
Assistant Professor of Mathematics
A.V.V.M. Sri Pushpam College (Autonomous)
Poondi - 613 503, Thanjavur Dt.

Mr. S. MOHANKUMAR
Assistant Professor
Department of Mathematics
Kongunadu College of Engg and Technology
Thottiam, Trichy (DT),
Tamil Nadu, India.

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Fuzzy Truncated Skew Laplace Distribution Model for Secretion of Vasopressin

A.Venkatesh
Assistant Professor of Mathematics,
A.V. V. M. Sri Pushpam College,
Poondi, Thanjavur (Dt),Tamilnadu.
e-mail: a_venkatesh03@yahoo.co.in

S. Mohan Kumar
Assistant Professor of Mathematics ,
Kongunadu college of Engineering and Technology,
Thottiam, Trichy(Dt),Tamilnadu.
e-mail: mohanmath_13@yahoo.co.in

Abstract-**Thetherotical study to investigate the effect of neurokinin receptor againstsenktite on vasopressin release from hypothalamoneurohypophyseal system explants.In this paper,we give a comparison of Fuzzy mean residual life timem(t) and Fuzzy hazard rate function h(t) of vasopressin release usingTruncated Skew Laplace distribution model.**

***Key words:** Truncated Skew Laplace distribution, Fuzzy Hazard rate, Vasopressin.*

I.INTRODUCTION

The Truncated skewed-Laplace distribution (TSL) is a generalized model of an exponential distribution. The TSL distribution offers more a flexible representation of the pattern of efficiency in the data. This model was first introduced by Aryal and Rao[1] .The skew Laplace distribution as a generalization of the Laplace law should be a natural choice in all real-worldcircumstances in which some skewness is present. Several asymmetric forms of the skewed Laplace distribution have acted in the literature with different formulations. This distribution was developed using the idea introduced by O'Hagan and studied by Azzalini[2].Kozubowski and Inusah [3] proposed a discrete version of the skew Laplace distribution as a generalization of discrete Laplace distribution which is suitable for unimodal data sets. Also, Barbiero [4], Jayakumar and Jacob [5] introduced other discrete distributions based on skew Laplace and wrapped skew Laplace distributions on the integers, respectively.GokarnaR.Aryal and P.Tsokos [6] discussed the application of the Truncated Skew Laplace distribution in the maintenance system.

The object of the present study is to investigate a probability distribution that can be derived from the Laplace probability distribution and can be used to model various real world problems.A number of decades ago, many economists made an effort to analyze and compute the production efficiency by using the models of production, cost, and profit. They began with the model of production function which producers use to maximize the outputs obtainable from a given amount of inputs. In order to achieve the maximum production output level, one needs to minimize the cost function and maximize the profit function.

In particular, different forms of the skew Laplace distribution have been introduced and applied in several areas including medical science, environmental science, communications, economics, stock markets, manufacturing factories engineering and finance, and so on.

The release of Vasopressin with effect onNeurokinin 3 receptors[NK3-R] have been studied by many authors, including Nakajima [7] et al., Ding[8] et al., Eguchi[9] et al., Smith and Flynn[10], Bealer and Flynn[11]among others. Vasopressin [VP] is a hormone produced and released in the posterior pituitary gland, which causes the kidneys to retain water, thus increasing the water content of the body. In high concentrations, it causes the constriction of blood vessels throughout the body and consequent rise of pressure. Vasopressin helps prevent the loss of water from the body by reducing urine output and helping the kidney reabsorbs water in the body. Vasopressin is secreted by the cells of the hypothalamus nuclei and stored in the posterior pituitary for release as necessary.

In this paper, we analyzed the biological data for release of vasopressin and calculated the mean residual life time m(t) and Fuzzy hazard rate function h(t) of Truncated Skew Laplace distribution model

II.FUZZY TRUNCATED SKEW LAPLACE DISTRIBUTION

The cumulative distribution function of Fuzzy truncated skew Laplace distribution is

$$\overline{F}(x,\lambda,\phi)=1+\left(\frac{\exp\left(-\frac{(1+\overline{\lambda})x}{\overline{\phi}}\right)-2(1+\overline{\lambda})\ \exp\left(-\frac{x}{\overline{\phi}}\right)}{(2\overline{\lambda}+1)}\right)$$

where $\overline{\lambda}\in\overline{\lambda}[\alpha]$ *and* $\overline{\phi}\in\overline{\phi}[\alpha]$

and the corresponding pdf is given by

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Special Issue

On Fuzzy Relational Modeling in the Analysis of Food Suitability for Curing Nutrient Deficiency Based on Max - Min Composition

A. Venkatesh[1], G. Sivakumar[2] and S.Mohankumar[3]
[1,2]Department of Mathematics,
A. V. V. M. Sri Pushpam College(Autonomous).
Poondi - 613 503, Thanjavur (Dt), Tamil Nadu, India.
Email : [1]a_venkatesh03@yahoo.co.in, [2]gee.yees@hotmail.com
[3]Assistant Professor of Mathematics,
Kongunadu College of Engineering and Technology,
Thottiam, Tamilnadu,India.
Email:mohansaara@gmail.com

Abstract

Nutrient deficiencies affect more than two billion people of all ages in both developing and industrialized countries. They are the cause of some diseases, exacerbate others and are recognized as having an important impact on worldwide health. So the nutrient deficiency has to be cleared among the people in our world to control some communicable diseases. This paper proposes a methodology to analyze the food suitability in order to cure the nutrient deficiency based on fuzzy relation particularly the concept of max - min composition.

Key Words and Phrases: Fuzzy Relation, Max - Min Composition, Nutrition.