

Perceptions on Wellbeing among Small Pelagic Dried Fish Processors in South and West Coasts of Sri Lanka: A Qualitative Analysis

Sujani A. Adikary* and Dilanthi N. Korlagama

Abstract

Background: Wellbeing, the renowned term is now being used worldwide to assess the living standard of people, which goes beyond the development measurement indices, including the human development index. The notion of wellbeing described over three dimensions; material, relational, and subjective is a widely used concept in assessing wellbeing in development studies. This study aims to explore on three dimensions of wellbeing parameters valued by small pelagic dried fish processors in Negombo, Kalpitiya and Matara, which remain as the main small-pelagic dried fish producing areas in the South and West coast of Sri Lanka.

Methods: Qualitative data collection methods including in-depth interviews (n = 20) key informant discussions (n = 06) and participant observations were employed to gather primary data. Snowball sampling was used to select small pelagic dried fish processors from Negombo, Kalpitiya, and Matara Districts. Contextual data analysis was applied for interpretation, while field observations and transcripts were coded and analysed using Atlas.ti software.


Results: Income level and profit, education and skills, possessions, resource availability, food availability and healthy lifestyle were recognized as the key determinants of material wellbeing valued by the respondents. Life satisfaction with happiness, aspirations, mental serenity, leisure time and entertainment, time spent in places of worship were identified as the key determinants under the subjective dimension. Family, relatives and community, customer interactions, relationships with traders, co-worker and other processors were found to be the key drivers of relational wellbeing in male and female dried fish processors.

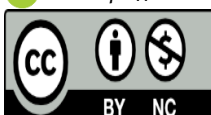
Conclusions: The dried fish processors were able to acquire all three dimensions of well-being aspects, either differently or similarly. However, the achievement of these aspects was at different levels depending on their gender and religion. Despite, the material aspects are towards their occupation and accessibility, the relational aspects are mostly focused on family and the community.

Keywords: Dried Fish, Material, Relational, Small Pelagic, Qualitative Analysis

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INTRODUCTION

“Wellbeing” is a broad term that encompasses a variety of outcomes, including material goals of food supplies, economic output, employment and non-material concerns such as secured life, decent and non-discriminatory work conditions [1]. McGregor [2] has defined wellbeing as,

“A state of being with others that occurs when human needs are met, where people and organizations may act meaningfully to accomplish their goals, and where they are content with their way of life”.

Thus, wellbeing has been related to professional, personal, and interpersonal success, with people who are well-adjusted demonstrating higher workplace productivity, more effective learning, enhanced creativity, more prosocial actions, and positive interpersonal relationships [3]. Wellbeing is a critical aspect of the present development agenda to meet individual and community ambitions and requirements for a better and more content existence [4]. Despite number of definitions, this research follows three dimensions of wellbeing, material, subjective and relational to explore the wellbeing factors for small-pelagic dried fish producers in Sri Lanka. Three dimensions, material, relational, and subjective wellbeing have been first introduced by Alister McGregor in 2007 [5]. Material wellbeing refers to the “welfare and standard of living” [6] for example requirements, resources, quality of life, financial reward, environment and governance [7-9]. The pursuit of human wellbeing in relation to others is referred as relational wellbeing [10] for example social network, love, care and peace. Subjective wellbeing refers to how individuals evaluate their life on an emotional and cognitive level [10]. Happiness, satisfaction, goals, and beliefs are determinants of subjective wellbeing.

Dried fish or ‘karawala’ in Sinhalese and ‘karavadu’ in Tamil is known as the poor man's protein, because it is the primary

source of animal protein of low-income quintiles [11].

The dried fish industry is mostly a cottage industry; especially women produce dried fish as a secondary source of income using conventional home-scale techniques [12-13]. The dried fish industry is one of the value adding industries that provides benefits to both men and women, particularly in coastal areas [14]. Dried fish industry enlarges opportunities in coastal communities, such as potentially increasing household income for both men and women [15-16], improving the living conditions of fishermen [17-18], increasing employment opportunities [19] and ensuring food security [20]. Globally, women play important roles in the pre and post-harvest sectors due to men's dominance in fishing operations [21].

Increased resilience, improved employee engagement, and higher performance and productivity can result from investments made in the well-being of persons working in the sector. There are no significantly documented studies, which analyse the wellbeing of small pelagic dried fish processors in Sri Lanka. Therefore, to determine the existing industrial background of small pelagic processors, wellbeing studies are crucial. In this background, this study focuses on material, subjective and relational wellbeing among small pelagic dried fish processors zooming into gendered preferences.

METHODOLOGY

Study Location

This study was conducted in Negombo, which is a fishing town and one of the country's major commercial hubs. Negombo provides an insight into coastal Sri Lankan life and is the finest spot to witness the centuries-old fishing industry. Negombo has a fishing population of 42, 280 people. A total of 51, 800 and 51,470 population [22] lives in Puttalam and Matara, respectively with fishing being the principal source of income for the majority of coastal, local households. Some of the techniques, used for

fishing, drying, and storing, have remained unchanged to this day.

The fishing sector is crucial to the economy, and Sri Lanka's second largest fish market is placed in Negombo accompanied by a dried fish processing yard. Roman Catholics make up the majority of the local population, particularly in fishing communities. In the Puttalam region of Sri Lanka's Northeast, along a stretch of lagoon, is the natural harbor known as the Kalpitiya Fishery Harbor. The city of Kalpitiya is composed of multi-ethnicities. Muslim is the primary ethnicity of Kalpitiya, followed by Christian. Sinhalese and Tamils are among the other ethnicities reside in Kalpitiya. One of Sri Lanka's hidden treasures is Kalpitiya Beach, which is surrounded by a closely-knitted fishing community and is largely untouched by the tourism industry. Kalpitiya dried fish is different from those of others and uniquely branded since, they use first quality fresh fish for processing, while favourable climate conditions (wind and sunlight) lead to the nourishment of lagoon fish.

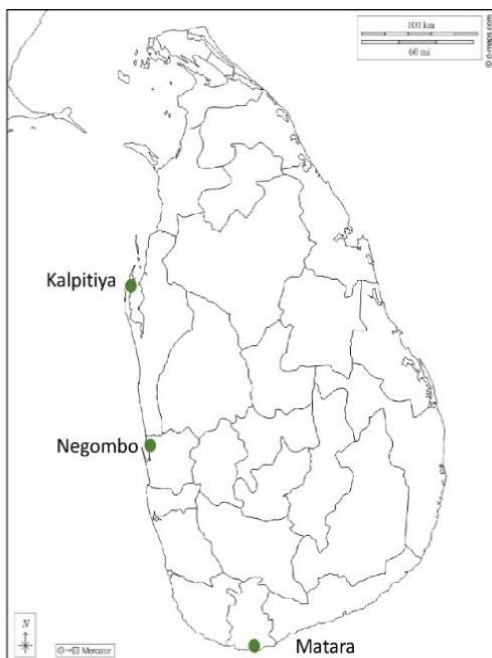


Figure 1: Study Locations

Matara is located in the Southern part, in Sri Lanka. The second-largest city in

the Southern Province. One of the districts that produce a significant amount of fish in the country. The main ethnic group in Matara is Sinhalese, but in the 16th and 17th centuries, Arab traders brought the Moors with them. Today, their ancestors live as a peaceful ethnic minority alongside Sinhalese.

Data Collection and Data Analysis

Qualitative data collection methods were adopted to glean data from twenty small pelagic dried fish processors using the snowball sampling technique. Among the respondents, seven were from Negombo, seven from Puttalam and six from Matara. The study ensured a gender equalled sample. A qualitative data collection approach was adopted. Hence, several qualitative data collection methods were employed with in-depth interviews (n=20), key informant discussions (n=6), and participant observations for better triangulation. Satisfaction, aspirations, labours and family support, wages, gender relationships such as, constraints and opportunities were considered as the variables.

The privacy, safety, and dignity of the respondents were respected throughout the research. In-depth interviews were reported and transcribed using pseudo names to ensure the privacy of the respondents. Secondary data were obtained from reports published by the Department of Census and Statistics, Ministry of Fisheries and Aquatic Resource Development, and National Aquatic Resources Research Development Agency. Those were used to collect general information on dried fish industry in Negombo, Kalpitiya and Matara. Contextual data analysis was adopted using Atlas.ti software. Data was transcribed, coded and analysed.

RESULTS AND DISCUSSION

Socio-Economic and Livelihood Profile

In Negombo, Kalpitiya and Matara, people are involved in dried fish processing, wholesaling, retailing, *Jaadi* preparation (A kind of fish preservation technique, which is

practiced from ancient time), and maldivian fish processing. In addition, a smaller portion of the population is engaged in other post-harvest fisheries-based livelihoods, which remain less widespread in these areas than dried fish processing and trading. The majority of processors are engaged in both trading and processing.

Dried fish preparation had started in these locations over 40-60 years back. Many of them have been processing and trading dried fish for over 20 years, learning from their previous generations or through personal experience. Processors were between the ages of 25 years to 70 years. Younger people make up the least number of processors in the dried fish processing industry, which is dominated by middle adulthood ranging from about 45 years to 64 years of age. Most of them just have an elementary or lower level of education. Few of others have obtained education up to Advanced Level (A/L) or up to secondary education. Most of the processors and workers were Sinhalese Catholic and Tamil Catholic in Negombo. However, almost all are Sinhalese in Matara. Muslim and Catholic workers were dominant in Kalpitiya.

Both men and women own processing centres. Nevertheless, it was observed that many women run small-scale processing centres in all the three locations. In Negombo, men account for 40% of drying plant owners, while women account for 60%. In Matara, men own 24% and women own 76% of drying plant ownership. In contrast, 80% of processors in Kalpitiya are men and only 20% are women. Fishermen's wives, widowed women, single or divorced women engage actively in post-harvest activities, such as dried fish processing and trading, while others support their husbands. In Kalpitiya, women participation is limited due to Muslim dominating socio-cultural background.

Sun drying is the most common way of fish drying in most of the areas. However,

it needs patience, while requiring a relatively lower amount of capital, and limited transportation. Hence, dried fish processing and trading widen the opportunities for women to engage with income generation that supplements the household economy. Besides, dried fish industry contributes to the national economy. Dried fish producers purchase second and third quality fish for processing. The average volume of production during the peak months (season) are 7000-8000 kg, especially in Negombo.

In Kalpitiya, the production ranges from 5000 to 6000 kg during the peak months. Sometimes, it goes beyond 1000 to 3000 kg per week/processor depending on the capacities of the processors. Similarly, the average production in Matara is around 5000-6000 kg of raw fish per month, and 1000-2000 kg in off-season months. The fish was processed two or three times per week, depending on the availability of raw materials, drying areas, demand, and sufficient sun light or favourable weather conditions. However, depending on the volume processed, dried fish processing was conducted cooperatively with the involvement of both men and women as supporters (hired employee workforce). Few of them were privileged with the co-operation of the family members in the household.

Dried Fish Varieties

Small pelagic fish, known as Smoothbelly sardinella (*Amblygaster leiogaster*: Keeramin), Spotted sardinella (*Amblygaster sirm:* Hurulla), Glodstripe sardinella (*Sardinella gibbose*: Salaya) and Indian Scad (*Decapterus russelli*: Linna) were largely processed by dried fish processors in the selected study areas.

Material Wellbeing on Dried Fish Processors

Both men and women processors in each area value income level and profit as the most important factors that contributes to the material wellbeing. However, men received higher wages than women, resulting women

to suffer a considerable level of a pay gap.

"I pay labourers in daily work basis and fish quantity basis. If there are huge fish quantities to process, I adopt quantity basis to pay labourers amounting approximately Rs.1000-1500 per day for men employees and Rs. 1000-1200 per day for female employees".

(Male processor, 71 years)

Their income level is fluctuating from time to time due to several factors. The inadequate quantity of raw material for processing, increased number of processors, increased number of traders, bad weather (rain, flood) and the impact of Covid-19 pandemic had resulted to decrease the dried fish processing business. Dried fish processors have perceived a changed climatic pattern following the Tsunami incident in 2004. The fish abundance, wind patterns, rain patterns have changed notably. Rain has negatively influenced the industry by hindering the dried fish processing and making huge losses for the processors. Fish get contaminated and susceptible for spoiling; hence processors have to throw away bad quality, spoiled dried fish.

During the first and second waves of Covid-19 pandemic, half of the processors participating in processing didn't continue regularly or just operated as per the demand. Further, processors and traders could not engage with their activities entirely during the first Covid-19 wave due to island wide lockdown. Subsequently, the lockdown was lifted and permitted the authorised actors to engage in the trade. However, the majority of processors and traders obtained the permission from the government to carry out their livelihoods. Subsequently, the government introduced Covid-19 management strategies, imposing travel restrictions or lockdowns in cluster basis. As a result, mobile vendors emerged. In that period government lifted some travel restrictions in complying with health safety regulations. Therefore, men and women processors enjoyed slight success.

The Covid-19 pandemic caused most processors to discard their dried fish because it had spoiled, with the exception of 10% of processors who did not process dry fish in their processing centers. Raw fish were scarce during the first wave of Covid-19 because fishermen did not engage in the fishing activities for the fear of encountering problems in selling them. However, because of the Peliyagoda fish market Covid-19 cluster, there was a high demand for the dried fish, one to two months after Covid-19 pandemic.

However, there were no sales like in the past and dried fish prices were fluctuating during that time. The low-income increased their level of precariousness in relations to their occupation, thus income level and profit are a significant factor for material wellbeing. About 20% of the female processors in Kalpitiya used to save money for their future, notably for the future of their children. They opened separate bank accounts for each of their kids to deposit money.

"I dry processed fish on the beachside. It is sometimes risky, especially because of the water flow. Recently also I experienced it and the entire dried fish and drying process was hampered. During the rainy season, I don't get necessary amount of raw fish needed to prepare dried fish and most of the customers do not come to buy dried fish during the rainy season. There were huge losses of dried fish during covid-19 pandemic. Dried fish worthy of approximately Rs.45,000 - 60,000 amount was spoiled during the first wave of the corona and most of the customers didn't pay money for dried fish which they bought on credit."

(Female processor, 65 years)

Possession is the factor that affects positively to achieve their material wellbeing. Respondents need a house and a vehicle of their own as their other assets. It was recognized that 40% of male processors have enough land area for processing, which some other men and women does not. While processors, who possess enough land area

partake material wellbeing, those who lack of enough land area are suffering from constraints due to the difficulties in processing a large volume of fish and drying them properly. Ample drying facilities, in addition to processing areas, contribute to higher-quality of finished small pelagic dried fish.

In Negombo, women processors trading in the marketplace were also had the same opinion. They were of the view that if they are provided with a suitable place to sell dried fish, it will take them on the path towards material wellbeing. For instance, in Kamachchodaya market traders were trading indoors and outdoors. People who sold outdoors had to undergo the impact of heavy rains and scorching sun. Sunrays caused to reduce the weight of dried fish. Therefore, people who are trading outdoors in the marketplace did not experience in good material wellbeing, when compared with indoor traders.

Processors, both males and females in study areas, highlighted education and skills as the fundamental requirement that helps to achieve social recognition and to secure better occupations in the society. The lack of proper education (children's education) and skills caused to increase the unemployment rate in the country on one hand and to decrease the family status on the other hand. Therefore, respondents are of the view that education and skills are inextricably linked with each other and it has a valuable role to improve material wellbeing in their life.

The majority of married processors, both men and women with children (40%), did not want their children to involve in the dried fish sector because of hardships and prevailing uncertainty. They prefer to see their children live with higher standards than they do, whereas 15% wanted to continue with their children, because they were of the notion that they were given extra potential when it is done as a family business. Others, (45%) the processing work is done alone, since their children are already

employed.

Male and female processors in Matara and male processors in Kalpitiya, emphasized the family status and structure as one of the most important factors to achieve material wellbeing. Both male and female processors without good family background find it difficult to win social recognition. Family structure is a very important component when they work as a team. During processing and trading, family members support each other to increase the living standards of their entire family.

Food security and healthy life are the other material wellbeing factors mentioned by male processors in Negombo and women in Kalpitiya and Matara. Food security and healthy life are the two aspects that are going in parallel. Respondents indicated that enough and healthy food fulfilled their consumption needs and guide them towards a healthy life. A healthy life is essentially needed to involve in dried fish processing and trading, as well as to brighten their children's life. Availability of resources for small pelagic dried fish processing is another factor to achieve material wellbeing as mentioned by male and female processors in all areas, except female in Kalpitiya. Availability of labour resources with well-experienced persons, adequate raw fish amounts and loan facilitating companies are the most important resources mentioned by the processors.

Subjective Wellbeing on Dried Fish Processors

Subjective well-being describes how people feel about and evaluate their life, as well as specific categories and activities [23]. Male and female processors regarded happiness and life satisfaction as the most essential item that can be attained, in terms of subjective wellbeing.

Increases in sales and processing quantities increase their job satisfaction. Therefore, 75% of male and female processors are happy with their occupations.

They believe that this is the only thing they know and familiar with, and they have enough free time, and are content with what they have.

The rest of the processors are dissatisfied with the beliefs that dried fish processing and trading need really hard work to make a big profit, it has curtailed their independence, and they have to deal with some crucial financial issues. So, around 27% of female and 23% of male processors are unhappy about their occupation. This livelihood is not recommended for anyone by them. Dried fish processing is very difficult to learn and teach. They are satisfied with this job, as it needs tiresome, strenuous work to fulfill and in contrast earning a satisfactory margin and maintaining life is hard. However, 77% of male and 73% of female processors are happy and contented with this business. They said that they are used to continue this occupation for years.

Female processors in Negombo, indicated that the fair days, for no reason, they feel like staying at home. They want to do this business, especially because they can stand on their feet without depending on the money lenders. Few of the widows take care of their children, even after the demise of their spouse, merely by engaging in dried fish processing and trading sector. So, they have become independent individuals.

"I have enough profit to spend my life. I'm happy with my business, my life and about my children's life. This business is fairly good. This is what I have practiced as my occupation. In the fair days, I never stay at home. I want to do this business and live without going after the money lenders like some other people have got used to do. I take care of my children without my husband, by just engaging in the dried fish trade. I did not depend on others. Therefore, I'm really happy."

(Female processor, 58 years)

They have ambitions to improve their present living conditions. They have their life

objectives and strive hard to accomplish them. When they achieve their objectives one by one consciously or unconsciously their ambitions are gradually directing them toward subjective wellbeing. Some of their goals include providing a good education for their children, expanding the extent of processing land, increasing the production volume, and business, as well as building or repairing their home and purchasing their vehicle. Some dried fish processors and traders spend luxury life styles. The dried fish processing and trading have elevated them to a sophisticated position. According to their response, around 50-60% of people in the village are enjoying exceptionally a better life.

"In this area lot of people spend luxurious lives. They have comfortable houses and their own vehicles. I also want to improve myself on to that level. In the future I will try hard to accomplish my goal, failing which at least to maintain the present level".

(Male processor, 35 years)

Mental calmness is essential to perform their assigned tasks, whether it is belonging to present or future and to maintain cordial relationships with others. When the mind is interrupted, the stress level rises, and it becomes difficult to work correctly. According to both male and female respondents, mental health is also one of the most important characteristics that can be classified under subjective wellness. Another thing they expect to keep them happy in their lives is leisure time and entertainment. They need to spend their free time with their families, children, friends, and neighbours and walk out to a better place to spend their time. They get together after concluding their work to exchange their experiences and information with one another. Other than the female processors in Negombo and the male processors in Matara, most small pelagic dried fish processors believe that entertainment and leisure time increase their subjective well-being.

They spend pleasant times with

people of their choice so that their subjective well-being would be boosted. The majority of responders are Buddhists, with only others being Catholic and Muslim. They have religious convictions, rituals, lessons, and events. Time spent in places of worship, the peaceful association with pastors gives people better feel as to how they should spend their lives properly and helps to create a clear awareness of their concerns and stress free mentality. Every Sunday, Catholics go to church and every Friday Muslims go to mosques as a habit that is endorsed in their minds for generations. Therefore, they spend time as if it is a holiday. Buddhists also visit temples and get involved in different religious activities such as alms giving and Katina festivals.

Relational Wellbeing on Dried Fish Processors

Relational wellbeing is a technique of looking at individuals as subjects and trying to understand how people see the world in terms that are as close as to their own as possible [24]. Developing positive, helpful, and continuing interpersonal connections, associations and communities are required to achieve relational well-being.

The key relational wellbeing aspects reported by the participants were that they need to be happy through social interactions within their family. They work together to attain their goals and complete their unique roles within the family, allowing them to shine in the future and gain social recognition. Relatives and community relationships also making them happy, and they share information and knowledge.

These relationships need to build good social networks, interact with one another, and be aware of the social environment in which they live. Employers' relationships with employees are critical for creating a positive working environment for both.

“Labourers come from Kalpitiya town and Anawasala area. They work around 5-10

years with me. There is a strong relationship among me and my employees. They work together and I supply medical facilities and accommodation. My wife helps to conduct all the processing activities such as drying, salting and packing of dried fish. Her contribution is important to run the business genuinely.”

(Male processor, 71 years)

Delivering high-quality final products to customers, and working with the same individual for an extended period without dispute are immensely contributing to maintaining relational wellbeing. In addition, a comfortable and sufficient customer base is also required and the customer loyalty should be appreciated.

“I have more than 50 regular customers. I do not provide credit facilities to my customers. However, I tend to do transactions and sell dried fish on trust without taking money at the time of transaction. Instead, allocate the buyer to pay the total amount by cheques after maximum one month period.”

(Male processor, 35 years)

Good relationships among employees in the same occupational category make it easier to accomplish the same job in the same area, without the fear of being judged. According to male respondents in Kalpitiya, happiness is enhanced by their support among one another, and they must work together to build a better society for their children and future generations. In Matara, male processors mentioned that responsibilities motivate people to feel the necessity of working strenuously, working correctly, and producing money in the most efficient way possible. Finally, all of these factors assist people in achieving relational wellbeing in their community.

Due to the socio-cultural influence of Islamism, women in Kalpitiya do not explore deeper social relations outside of their families, friends, and immediate kin. Women also have fewer opportunities to socialize in Matara and Negombo, although males who work as processors have relatively more

opportunities in these three study areas.

CONCLUSIONS

This study was designed to explore the gendered wellbeing factors of dried fish processors in Negombo, Kalpitiya and Matara in relation to the three dimensions, namely material, relational, and subjective. The respondents were able to obtain all three dimensions of well-being aspects; differently or similarly. Men and women processors highlighted income level and profit as the most important variables in maintaining their material well-being. Other determinants include possessions, education and skills mentioned by males and females in all areas. In addition, resource availability, family status and structure, savings, food security, and healthy lifestyle factors are experienced differently by men and women in certain areas.

In terms of subjective well-being, male and female processors viewed life satisfaction with happiness as the most important component, next to aspirations. Mental health, leisure time, entertainment and religious beliefs and practices were among the subjective wellbeing qualities undergone variously.

Social contacts within the family, relatives and community, customer interactions, relationships with co-workers and traders and other processors were the most vital aspects of relational wellbeing for both male and female respondents. Support for others and fulfilling responsibilities were identified to be the significant drivers of relational wellbeing for male processors. However, based on gender and religion, the level of experience in women is differently affected by their wellbeing.

SUPPLEMENTARY INFORMATION

Table 1: Material Wellbeing Factors of Small Pelagic Dried Fish Processors in Study Areas

Table 2: Subjective Wellbeing Factors of Small Pelagic Dried Fish Processors in Study Areas

Table 3: Rational Wellbeing Factors of Small Pelagic Dried Fish Processors in Study Areas

CONFLICT OF INTEREST

The authors declare that there are no conflicts of interest.

AUTHORS' CONTRIBUTIONS

SAA and DNK: Carried out the investigations, data collection, qualitative analysis, and prepared the first draft of manuscript; DNK: supervised the study and revised the manuscript. All authors read and approved the manuscript.

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SUPPLEMENTARY INFORMATION

Table 1: Material Wellbeing Factors of Small Pelagic Dried Fish Processors in Study Areas

Area	Men	Women
Negombo	Income level and profit Possessions Education and skills Resource availability Healthy life Food security	Income level and profit Possessions Education and skills Resource availability
Kalpitiya	Income level and profit Possessions Education and skills Resource availability Family status and structure	Income level and profit Possessions Education and skills Savings Healthy life Food security
Matara	Income level and profit Education and skills Possessions Family status and family structure Resource availability	Income level and profit Education and skills Possessions Family status and structure Healthy life Resource availability

Source: Field Data

Table 2: Subjective Wellbeing Factors of Small Pelagic Dried Fish Processors in Study Areas

Area	Men	Women
Negombo	Happiness Satisfaction Aspirations Leisure time and entertainment	Happiness Satisfaction Aspirations Mental freedom Religiosity
Kalpitiya	Happiness Satisfaction Aspirations Mental freedom Leisure time and entertainment Religiosity	Happiness Satisfaction Aspirations Leisure time and entertainment
Matara	Happiness Satisfaction Aspirations	Happiness Satisfaction Aspirations Mental freedom Leisure time and entertainment Religiosity

Source: Field Data

Table 3: Rational Wellbeing Factors of Small Pelagic Dried Fish Processors in Study Areas

Area	Men	Women
Negombo	Family relationships Relatives and community Relationships with traders and other processors Customer interactions Relationships with employees	Family relationships Relatives and community Relationships with traders and other processors Customer interactions Relationships with employees
Kalpitiya	Family relationships Relatives and community Relationships with traders and other processors Relationships with employees Customer interactions Support to others	Family relationships Relatives and community Relationships with traders and other processors Customer interactions Relationships with employees
Matara	Family relationships Relatives and community Relationships with traders and other processors Customer interactions Relationships with employees Responsibilities	Family relationships Relatives and community Relationships with traders and other processors Customer interactions Relationships with employees

Source: Field Data