

# **Entrepreneurial Behaviour of Grape Growers in District Ganderbal**

**Farah Farooq**  
(2017-A-1141-M)



**Division of Agriculture Extension and Communication  
Faculty of Agriculture  
Sher-e-Kashmir University of Agricultural Sciences and  
Technology of Kashmir**

**2019**

**Entrepreneurial Behaviour of Grape Growers in  
District Ganderbal**

**Farah Farooq  
(2017-A-1141-M)**



**Thesis**

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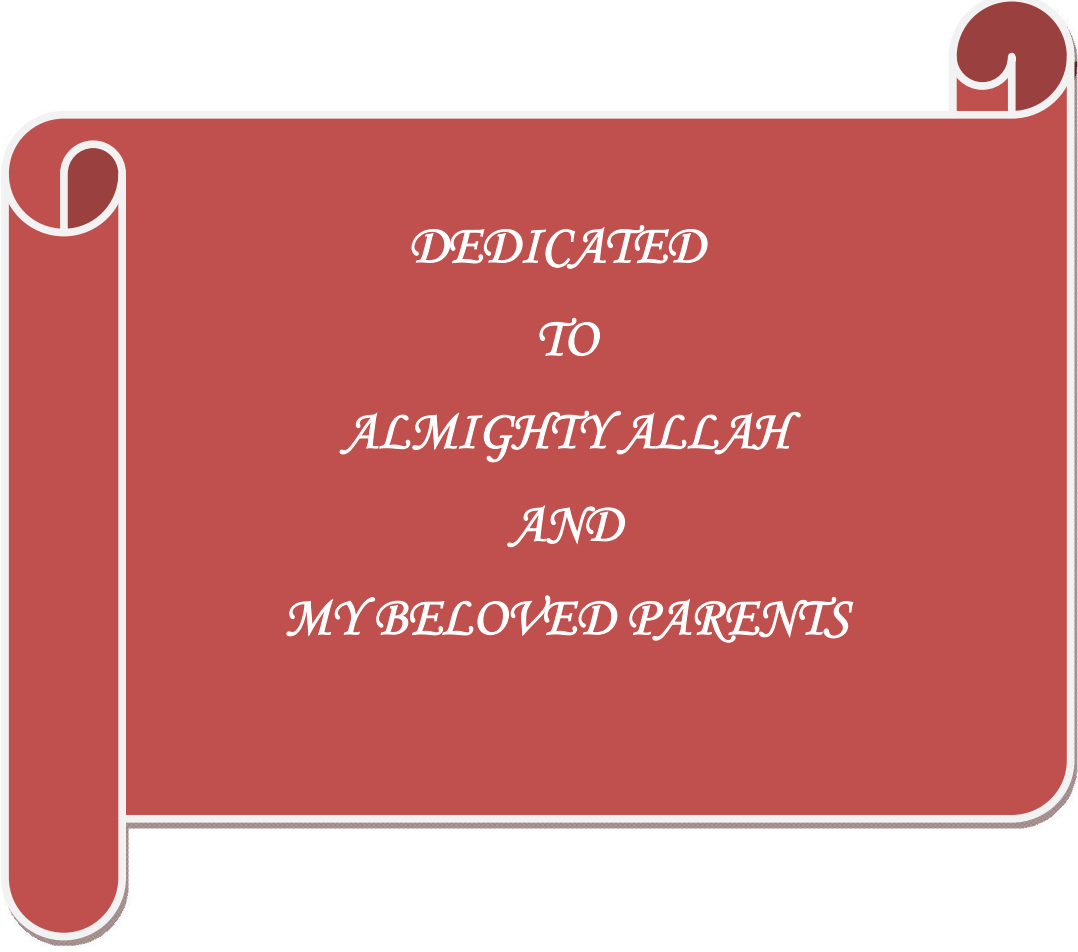
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**Sher-e-Kashmir**

**University of Agricultural Sciences & Technology of Kashmir  
In partial fulfilment of requirement for the award of the degree of**

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**2019**



*DEDICATED  
TO  
ALMIGHTY ALLAH  
AND  
MY BELOVED PARENTS*

**Sher-e-Kashmir**  
**University of Agricultural Sciences & Technology of Kashmir,**  
**Division of Agriculture Extension and Communication,**  
**Faculty of Agriculture, Wadura - 193 201**

**Certificate- I**

This is to certify that the thesis entitled, “**Entrepreneurial Behaviour of Grape Growers in District Ganderbal**” submitted in partial fulfilment of the requirements for the award of the degree of **Master of Science in Agriculture (Agriculture Extension and Communication)**, to the **Faculty of Agriculture, Sher-e-Kashmir University of Agricultural Sciences and Technology of Kashmir** is a record of bonafide research work carried out by **Ms. Farah Farooq (Regd. No. 2017-A-1141-M)** under my supervision and guidance. No part of the thesis has been submitted for any other degree or diploma.

It is further certified that information received during the course of investigation has duly been acknowledged.

**(Dr. Quadri Javeed Ahmad Peer)**  
Chairman  
Advisory Committee

**Endorsed**

**Head,**  
Division of Agriculture Extension and Communication

**Sher-e-Kashmir**  
**University of Agricultural Sciences & Technology of Kashmir,**  
**Division of Agriculture Extension and Communication,**  
**Faculty of Agriculture, Wadura - 193 201**

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We, the members of the Advisory Committee of **Ms. Farah Farooq (Regd. No. 2017-A-1141-M)**, a candidate for the degree of **Master of Science in Agriculture (Agriculture Extension and Communication)** have gone through the manuscript of the thesis entitled, “**Entrepreneurial Behaviour of Grape Growers in District Ganderbal**” and recommend that it may be submitted by the student in partial fulfilment of the requirements for the award of the degree.

**Advisory Committee**

**Chairman**

**Dr. Quadri Javeed Ahmad Peer**  
Assistant Professor, Division of Agri. Extension &  
Communication, FoA, Wadura,  
SKUAST-Kashmir

**Members**

**Dr. A.H. Hakeem**  
Dean,  
FoA, Wadura SKUAST-Kashmir

**Dr. Nazir Ahmad Ganai**  
Assistant Professor, Division of Fruit Science,  
FoA, Wadura, SKUAST-Kashmir

**Dr. Showkat Maqbool**  
Associate Professor, Division of Animal Genetics  
& Breeding, F.V.Sc, Suhama, SKUAST- Kashmir

**Dr. S.A. Saraf**  
Assistant Professor, Division of Agri-Economics  
& Statistics, FoA, Wadura, SKUAST-Kashmir

**Dean’s Nominee**

**Dr. Abdul Rouf Wani**  
Professor and Head, Division of Entomology,  
FoA, Wadura, SKUAST-Kashmir

**Sher-e-Kashmir**  
**University of Agricultural Sciences & Technology of Kashmir,**  
**Division of Agriculture Extension and Communication,**  
**Faculty of Agriculture, Wadura - 193 201**

**Certificate – III**

This is to certify that the thesis entitled, “**Entrepreneurial Behaviour of Grape Growers in District Ganderbal**” submitted by **Ms. Farah Farooq (Regd. No. 2017-A-1141-M)** to the **Faculty of Agriculture, Sher-e-Kashmir University of Agricultural Sciences & Technology of Kashmir** in partial fulfilment of the requirements for the award of the degree of **Master of Science in Agriculture (Agriculture Extension and Communication)** was examined and approved by the Advisory Committee and External Examiner on .....

**Chairman**  
Advisory Committee

**External Examiner**

**Head,**  
Division of Agriculture Extension and Communication

**Dean,**  
Faculty of Agriculture,  
SKUAST-Kashmir, Wadura

**Sher-e-Kashmir**  
**University of Agricultural Sciences & Technology of Kashmir,**  
**Division of Agriculture Extension and Communication,**  
**Faculty of Agriculture, Wadura - 193 201**

Name of the student : **Farah Farooq**

Registration No. : 2017-A-1141-M

Major Subject : Agriculture Extension and Communication

Minor Subject : Horticulture and Plant Pathology

Major Advisor : **Dr. Quadri Javeed Ahmad Peer**  
Assistant Professor, Division of Agri. Extension  
& Communication, FoA, Wadura,  
SKUAST-Kashmir

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Growers in District Ganderbal”**

**ABSTRACT**

The present study entitled **“Entrepreneurial Behaviour of Grape Growers in District Ganderbal”** with the objectives to study the socio economic profile, entrepreneurial behaviour, marketing structure and constraints faced by the grape growers was carried out in six purposively selected villages of horticulture block Lar of district Ganderbal of J&K state. By using proportionate allocation method, a sample of 120 grape growers was taken for collecting the primary data with the help of a well-structured interview schedule. Data derived from the interviewees of the sampled growers was analyzed using suitable statistical methods. Six independent variables were categorized and studied in relation to nine dependent variables i.e. knowledge, innovativeness, decision making ability, information seeking ability, leadership ability, achievement motivation, risk orientation, management orientation and economic motivation of grape growers. The study revealed that majority of the growers were illiterate with middle age (36-60 years) having small land holding up to 10 kanals, annual income up to Rs. 2 lakh, low level of extension contact and medium mass media exposure. Majority of grape growers 62.00 per cent possessed medium level of entrepreneurial behaviour and 82.00 per cent had medium level of knowledge of recommended package of practices for grape cultivation given by SKUAST-Kashmir. Correlation analysis revealed that age had significant relationship with decision making and risk orientation, education had significant relationship with innovativeness, decision making ability,

information seeking ability, economic motivation and knowledge, annual income had significant relationship with leadership ability and risk orientation, land holding had significant relationship with only innovativeness, extension contact had significant relationship with information seeking ability, leadership ability, achievement motivation, risk orientation, economic motivation and knowledge whereas mass media exposure had significant relationship with all the variables. Regression analysis revealed that all the independent variables had significant variation of 78% on entrepreneurial behaviour. Three marketing channels were identified namely producer-consumer, producer-commission agent-wholesaler-retailer-consumer and producer-wholesaler-retailer-consumer. Out of these, the third channel was frequently used. Major constraints faced by the grape growers were lack of bowers, small fruit size, irregular rains, diseases, frequent fluctuation of prices, distant markets and unavailability of fencing.

**Key words:** Grape growers, Entrepreneurial Behaviour, Marketing, Constraints.

Signature of Student

Signature of Major Advisor

Dated: \_\_\_\_\_

Dated: \_\_\_\_\_

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*Mahatma Gandhi.*

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***Farah Farooq***

Place: Wadura, Sopore

Dated:

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## Chapter-1

### INTRODUCTION

India has achieved self-sufficiency in food grain production and now the major concern is to achieve higher growth rate. The focus has now shifted to horticulture which besides imparting nutritional security offers a great potential for efficient input use, higher returns per unit area, crop diversification, foreign exchange earnings and greater employment generation in agro-industries. Continuous focused attention and higher investment in horticulture during the last decade has paid rich dividends in terms of increased production, quality and productivity of horticultural crops with manifold export potential. The total horticulture production of the country is estimated to be 306.8 million tonnes during 2017-18 with the production of fruits and vegetables to be 97 million tonnes and 180 million tonnes respectively (Anonymous, 2018). Horticulture contributes about 30 per cent of India's agricultural GDP from 13.08 per cent of cropped area. The horticulture sector provides about 37 per cent of the total export of agricultural commodities (Anonymous, 2019). There has been a significant increase in area and production of fruits particularly in Andhra Pradesh, Karnataka, Tamil Nadu, Maharashtra, Gujarat, Himachal Pradesh, Jammu and Kashmir and Uttaranchal (Shreeshail, 2007).

Grape (*Vitis vinifera* L.), the queen of fruits is botanically a berry and belongs to genus *Vitis*. Grape can be eaten fresh as table grapes or can be used for making jams, juices etc. Grape cultivation is one of the remunerative farming enterprises in India (Sumana *et al.*, 2018). It is considered as one of the most important commercial fruit crops of temperate regions. However, it is also grown successfully in tropical and sub-tropical regions of the world (Kumar *et al.*, 2017).

Globally grape production contributes about 16.00 per cent of total fruit production. Grape is the third most widely cultivated fruit after citrus and banana (Bhat *et al.*, 2017a). Italy ranks first in production of grapes with an annual

production of 8,307,514 metric tons followed by France and United States with annual productions of 67 lakh and 62 lakh metric tons (approx.) respectively (Anonymous, 2018).

In India, remarkable success has been achieved in table grape production and yield of fresh grape is the highest in the world (Bhat *et al.*, 2017b). Cultivation of grapes in India has been commercially taken up under a wide range of soil and climatic conditions in the states of Maharashtra, Karnataka, Telangana, Andhra Pradesh and Tamil Nadu. It is one of the most remunerative farming enterprises that had created interest among Indian growers. India is the 13<sup>th</sup> largest producer of grapes accounting 2.24 per cent of the global production (Anonymous, 2015-16). In India, the area under grape is 1.36 lakh ha with an annual production of 26 lakh Mt approximately (Anonymous, 2016-17).

In Jammu and Kashmir, the area under grape is 321 ha with a production of 648 Mt (Anonymous, 2016-17). Kashmir grapes lived up its reputation for being one of the choicest fruits. Kashmir valley is endowed with congenial agro-climatic conditions for a wide range of temperate fruits. In Kashmir valley the productivity is highest in district Ganderbal which ranks first in area (187.85 ha) and production (358.43Mt) under grapes (Anonymous 2015-16).

Entrepreneurship can be defined as a creative and innovative response to the environment. These responses can take place in variety of fields of social endeavour business, industry, agriculture, education, social work and the like. The development of any nation depends primarily on the important role played by entrepreneurs. Hence, the part played by entrepreneurs is of vital importance in a developing country like India where there are ample opportunities for using innovations to exploit the available resources, particularly in the field of agriculture and horticulture. An entrepreneur is primarily concerned with changes in the formula of production over which he has full control. By simple definition, doing new things or doing things that had already being done in a new way is a part of entrepreneurial behaviour.

## **1.2 Need and importance of study**

Kashmir grapes are known for its delectable taste, large berry size and are available in off seasons of the year when no other grape variety is ready to harvest from rest of the country. The productivity of grapes is maximum among most of the fruit crops and thus this crop has a great potential in economic upliftment of farmers. It is one of the most remunerative farming enterprise that has inculcated enthusiasm among grape growers of the valley. Since fruit production is capital intensive and risky, a fruit grower needs to possess the ability to take risk, innovativeness, decision making, imitative and capacity to marshal resources in order to run the enterprise successfully. In addition to these, a grower must also have leadership qualities, management orientation, achievement motivation, economic motivation and information seeking ability. These characteristics enable him to decide and accept to adopt appropriate scientific farming methods. Entrepreneurial behaviour has been now recognized as a concept, not only vital for starting industries but also in the development of agriculture. Thus, in all economic development activities more and more focus is being centred on entrepreneurial behaviour of the people. Understanding of entrepreneurial behaviour is essential to improve the quality of extension services offered by the institutional and non-institutional agencies. All round development of agriculture is possible with the effective exploitation of human as well as material resources. In our valley, where human resources are found to be plenty, we can identify individuals in all segments of population who have the requisite entrepreneurial skills. An attempt has also been made to study the constraints faced by grape growers, thereby the efforts can be made to eliminate those constraints in order to increase their entrepreneurial behaviour. The study also focuses on the marketing structure of grapes so as to obviate the problems occurring in the marketing channels. The results of the study are expected to be useful to the extension personnel and the administrators to know the extent of entrepreneurial behaviour which the grape growers possess and will also help the extension workers to

concentrate on a particular category of orchard holders who need the information on specific aspects of grape production for increasing productivity and quality.

At this juncture, it is also logical to analyze to what extent our grape growers are progressive, forward looking and willing to diversify their occupations as development of economy of any nation depends primarily on the important role played by entrepreneurs. Keeping the above facts in view, the study was designed to analyze “Entrepreneurial Behaviour of Grape Growers in District Ganderbal”, which was planned with the following objective:

### **1.3 Objectives:**

- To study the socio-economic profile of grape growers
- To study the entrepreneurial behaviour of grape growers
- To study the marketing structure of grapes
- To study the constraints faced by grape growers

### **1.4 Scope of study**

The findings of this study would be helpful to the extension worker and researcher working in the area for monitoring their programmes to meet the present day need and enhance the entrepreneurial behaviour of the farmers and the relationship between socio-economic characteristics with entrepreneurial behaviour thereby improving the status of growers and enhancing the production of grapes. It would be beneficial in formulating strategies to overcome the various constraints. The results of the study would provide guidelines for researchers, planners and concerned agencies to prepare future programmes of grape marketing efficiency, price spread and producers share in consumers' rupee.

### **1.5 Limitations of the study**

Due to the limitation of the time and other resources at the disposal of the researcher, the study was confined to only one horticultural block of the

Ganderbal District. However, considerable care and thought was made in making the study scientific, systematic and objective.

The study was qualitative in nature based on the views as expressed and provided by the grape growers regarding the study. Hence, the findings had to be viewed in specific context of the conditions prevailing in the study area.

Further, due to the limitation of the area, the study may not be generalized and opinion expressed by the respondents with regard to the various issues of the study may not be totally free from personal bias and prejudice.

## Chapter 2

### REVIEW OF LITERATURE

A comprehensive review of literature is an essential part of any scientific investigation. Apart from determining the work done in the past, assisting in delineation of insight and procedures, it forms the basis for interpretation of findings and provides a basic theoretical framework. The literature related to the entrepreneurial behaviour of grape growers is very limited yet an effort has been made to review the available literature having a direct or an indirect bearing on the study. The same has been presented in this chapter under the following heads:

#### **2.1 Socio-economic profile of grape growers**

##### **2.1.1 Age**

Giridhara *et al.* (2015) conducted a study on entrepreneurial behaviour of association of women entrepreneurs and reported that majority (78.8%) of the women entrepreneurs were middle aged followed by young (15%) and old (6.3%). It revealed that the women were middle aged while selecting the trainees required for the EDP and more number of these women expressed their interest and were married.

Jha and Pongener (2015) conducted a study on innovativeness of cucumber growing farmers and concluded that majority of the cucumber growing farmers were middle aged (64%) followed by old (21%) and young (15%).

Kashyap and Guleria (2015) in the study on socio-economic and marketing analysis of apple growers observed that majority of the apple growers (80.00%) falls within the age range of 35-60 years. This means that the enterprise is dominated by the older ones who are more active and stronger considering the bulky and heavy nature of apple.

##### **2.1.2 Education**

Kumar *et al.* (2013) in the study on factors influencing entrepreneurial

behaviour of vegetable growers reported that most of the vegetable growers (80.00%) had medium education level i.e. education up to high school.

Kalimangasi *et al.* (2014) conducted a study on the economic analysis of the smallholders grape production and marketing and showed that grape production was mostly practiced by people with low education level and people with higher education level were not effectively engaged in grape production.

Shirur *et al.* (2017) in the study on entrepreneurial behaviour and socio-economic analysis of mushroom growers revealed that more than half of the mushroom growers were having either graduate or a post-graduate degree.

### **2.1.3 Land holding**

Kumari (2010) conducted a study on adoption of IPM practices by rice growers and reported that majority (56 per cent) of rice growers had marginal land holding below 1 hectare.

Boruah *et al.* (2015) in the study on entrepreneurial behaviour of tribal winter vegetable growers reported that majority (37.5%) of the winter vegetable growers belonged to small farmer category followed by semi medium farmer (36.67%), marginal and medium farmers recorded 8.33 and 17.5 per cent respectively. None of the farmers were found having large size of operational land holding which indicates that most of the small land holder and landless farmers are interested in entrepreneurial activities.

Padwal *et al.* (2018) conducted a study on knowledge of BT cotton cultivation practices and revealed that majority of the cotton growing farmers belonged to big farmer category (48.66%) followed by medium, small and marginal farmers with 28, 16 and 8.66% respectively.

### **2.1.4 Annual income**

Lokhande (2010) conducted a study on adoption behaviour of tomato growers in relation to improved production technology and reported that more

than half (55.83%) of tomato growers were having medium annual income.

Pathade *et al.* (2017) revealed that majority (60.00%) of the self-help group members had medium income followed by low (23.33%) and high (16.67%) income.

Gupta *et al.* (2018) in the study on Socio economic profile of the farmers observed that 41.67 per cent respondents were having their annual income between Rs. 1,00,000-1,50,000, followed by 32.50 per cent of respondents had their annual income between Rs. 50,000-1,00,000, and only 25.83 per cent respondents had annual income more than 5,00,000.

#### **2.1.5 Extension contact**

Jagannath *et al.* (2009) in the study on attitude of vegetable growers towards organic farming practices reported that the majority (61.67%) of vegetable growers had medium extension contact.

Peer (2012) in the study on adoption of recommended crop production technologies by the potato growers in the sub-tropical zone observed that majority of potato growers had medium level of extension contact and most of them had contact with Junior Agriculture Extension Officers and the role of other extension functionaries/agencies was negligible.

Galadima (2014) concluded that the sources of information to rural farmers were from; television, radio, extension workers, and ward leaders. It was also discovered that the factors militating against the information delivery are; Irrelevant information, information delayed, extension workers' personalities, language barriers and lack of feedback in the study area.

#### **2.1.6 Mass media exposure**

Jadav (2005) in the study on managerial ability of mango growers about scientific cultivation of mango orchard stated that 60.50 per cent of the mango orchard growers had medium level of mass media exposure, whereas 24.00 and

15.50 per cent of them had low and high level of mass media exposure, respectively.

Sowmya (2009) conducted a study on entrepreneurial behaviour of rural women and observed that majority (75.00%) of rural women had medium level of mass media participation followed by high (15.83%) mass media participation and 9.17 per cent had low mass media participation.

Jamanal and Sadaqath (2017) conducted a study on socio-economic characteristics of soybean growers and revealed that majority of the soybean farmers 67.33 per cent had medium level of mass media participation followed by high level for 17.33 per cent and low level 15.33 per cent.

## **2.2 Entrepreneurial behaviour**

Anitha (2004) in the study on entrepreneurial behaviour and market participation of farm women reported that 47.50 per cent of farmwomen belonged to the medium category of entrepreneurial behaviour whereas 28.30 per cent were in high entrepreneurial behaviour category and around one-fourth (24.20%) had low entrepreneurial behaviour.

Narinder Paul and Sharma (2007) conducted a study on entrepreneurial behaviour of poultry farmers and revealed that 54.58 per cent of poultry farmers possessed low level of entrepreneurial behaviour and 28.75 per cent had medium level of entrepreneurial behaviour. However 16.67 per cent had high level of entrepreneurial behaviour.

Dawar (2008) conducted a study on entrepreneurial behaviour of tomato production and reported that majority of the tomato growers (61.40%) possessed medium level of entrepreneurial behaviour.

Jain (2008) in the study on entrepreneurship of the vegetable growers revealed that majority of the vegetable growers possessed medium level of entrepreneurship.

Ghadge *et al.* (2010) conducted a study on entrepreneurial behaviour of cut flower producers and revealed that 48 per cent of the cut flower producers had high level of entrepreneurial behaviour and 44 per cent of the cut flower producers had exhibited medium level of entrepreneurial behaviour.

## **2.2.1 Components of entrepreneurial behaviour**

### **2.2.1.1 Innovativeness**

Pandeti (2005) conducted a study on entrepreneurial behaviour of farmers and reported that majority of small farmers (47.50%) had low innovativeness where as 42.50 per cent of medium farmers had medium innovativeness and 37.50 per cent of big farmers had high innovativeness.

Thorat *et al.* (2007) in the study on entrepreneurial behaviour of mango growers concluded that majority of the mango growers had medium level of innovativeness followed by high (20%) and low (9%) level of innovativeness respectively.

Patil (2008) in the study on production and marketing management behaviour of organic vegetable growers indicated that more than half of the organic vegetable growers had high innovative proneness (53.57%), followed by medium (32.14%) innovative proneness and only 10.29 per cent of them belonged to low innovative proneness category

### **2.2.1.2 Decision making ability**

Chaudhari (2006) conducted a study on entrepreneurial behaviour of dairy farmers and reported that around half of the both trained (52.00%) and untrained (49.00%) dairy farmers had moderate decision making ability whereas, 31.00 per cent of trained and only 12.00 per cent of untrained dairy farmers had good decision making ability whereas 17.00 per cent of trained and 39.00 per cent of untrained dairy farmers had poor decision making ability.

Ravi (2007) in the study on entrepreneurial behavioural characteristics of

SC and ST farmers showed that 38.75 per cent of SC and ST farmers had low farm decision making followed by high farm decision making (33.12%) and 28.13 per cent had medium farm decision making ability.

Sidram (2008) in the study on analysis of organic farming practices in Pigeon pea in Gulbarga district of Karnataka state found that 46.67 per cent of the pigeon pea growers had low decision making ability followed by 34.17 and 19.17 per cent of pigeon pea growers who had medium and high decision making categories respectively.

Vijaykumar (2012) in the study on knowledge and adoption of recommended cultivation practices of onion by farmers observed that 48.33 per cent of the farmers belonged to high decision making ability, while 37.08 and 14.58 per cent of them had medium and low decision making ability, respectively

#### **2.2.1.3 Information seeking ability**

Suresh (2004) in the study on entrepreneurial behaviour of milk producers reported that majority of the milk producers had medium level of information seeking behaviour followed by high and low level with 68.75, 17.08 and 14.17 per cent, respectively.

Chaudhari *et al.* (2006) conducted a study on a scale for measurement of entrepreneurial behaviour of dairy farmers and observed that the scale values of component of entrepreneurial behaviour of dairy farmers i.e. information seeking behaviour, was found to be 5.22.

Vijayakumar (2011a) in the study on entrepreneurial behaviour of silk worm seed producers revealed that majority (37.50%) of silkworm seed producers had low information seeking behaviour, followed by medium (31.67%) and high (30.83%) information seeking behaviour.

#### **2.2.1.4 Leadership ability**

Nagesha (2005) in the study on entrepreneurial behaviour of vegetable

seed producing farmers concluded that the majority (49.20%) of the vegetable seed producing farmers belonged to low level of leadership ability followed by 25.80 and 25.00 per cent of the vegetable seed producing farmers having high and medium level of leadership ability respectively.

Shreekant and jahagirdar (2017) conducted a study on analysis of entrepreneurial behaviour of dry grape producers and reported that about 60.00 per cent of the dry grape producers belonged to medium leadership ability followed by 21.67 and 18.33 per cent of the dry grape producers with high and low level of leadership ability respectively. The majority of the dry grape producers belonged to medium leadership ability the possible reason might be due to their socio-economic status.

#### **2.2.1.5 Achievement motivation**

Hage Manty (2011) in the study on access and use of ICT tools by extension personnel for transfer of technology in North Karnataka reported that 40.00 per cent of UASD extension personnel exhibited high achievement motivation followed by medium (35%) and low (20%) respectively.

Deswal & Rani (2012) conducted a study on achievement motivation of parented and orphan adolescents and found that male adolescents were possessing higher level of achievement motivation than female adolescents.

Rashmi and Prasad (2013) conducted a study on effect of achievement motivation on high and low achievers of secondary school students and observed that achievement motivation has significant effect on student's academic achievement. Girls having better achievement motivation than that of boys. Gender difference for achievement motivation is more pronounced in the low achievement group than in the high achievement group.

Gupta *et al.* (2013) in the study on entrepreneurial behaviour and constraints encountered by dairy and poultry entrepreneurs reported that majority of the dairy and poultry entrepreneurs had medium level of achievement

motivation, risk taking capacity, decision making ability, communication skills, adoption propensity and self-confidence.

#### **2.2.1.6 Risk orientation**

Jyoti (2012) in the study on farm mechanization expectations of cotton growers reported 42.50 per cent of the cotton growers belonged to high risk orientation followed by 38.75 and 18.75 per cent belonged to medium and low risk orientation categories, respectively.

Sabi (2012) conducted a study on knowledge and technological gap in wheat production and reported that 38.34 per cent of the wheat producers had low risk orientation followed by high (34.16%) and medium (27.50%) risk orientation categories, respectively.

Anthony *et al.* (2014) conducted a study on analysis of entrepreneurial behaviour among cassava farmers and stated that majority (90%) of the Cassava farmers possesses very high risk taking ability while 6% had medium risk taking ability and only 4% had low risk taking ability.

Dhakad *et al.* (2018) in the study on entrepreneurial behaviour of sugarcane growers stated that the more than half (53.34%) of the sugarcane growers were medium risk takers. The high-risk takers were 37.5% sugarcane growers while low-risk takers were only 9.16% of the sugarcane growers.

#### **2.2.1.7 Management orientation**

Nagesh (2006) in the study on entrepreneurial behaviour of pomegranate growers reported that majority (62.50%) of the pomegranate growers had low category of management orientation followed by 21.66 per cent of pomegranate growers had high level management orientation and 15.84 per cent of respondents had medium level management orientation.

Patil (2008) in the study on constraints analysis of grape exporting farmers revealed that majority 53.00 per cent of the grape exporting farmers belong to low

management orientation followed by high (34.00%) and medium (13.00%) management orientation categories respectively.

Vijayakumar (2011b) conducted a study on entrepreneurial behaviour of silkworm seed producers and reported that majority (38.33%) of the silkworm seed producers had medium level of management orientation followed by 32.50 per cent of silkworm seed producers had high level of management orientation and 29.17 per cent of silkworm seed producers had low level of management orientation.

#### **2.2.1.8 Economic motivation**

Shilpashree (2011) in the study on a profilistic study on awardee farmers reported that 42.50 per cent of the non-awardee farmers belonged to low economic motivation followed by medium (37.50%) and high (20.00%) economic motivation respectively.

Sharma and Gupta (2013) conducted a study on knowledge and constraints in scientific cultivation of tomato among the farmers and reported that half (50.00%) of tomato growers had medium economic motivation.

Suman (2019) conducted a study on socio-economic and psychological characteristics of vegetable growers and revealed that the majority of the vegetable growers (38.56%) had medium level of economic motivation followed by high level of economic motivation (31.11%) and low level of economic motivation (30.56%) respectively.

### **2.3 Knowledge**

Ghaswa *et al.* (2013) in the study on knowledge level of cauliflower growers about recommended cauliflower production technology found that 42.86 per cent of cauliflower growers were categorized in medium knowledge level while 32.14 and 25 per cent cauliflower growers in high and low knowledge level about recommended cultivation practices of cauliflower respectively.

Wankhade *et al.* (2013) conducted a study on entrepreneurial behaviour of vegetable growers and observed that above two third of the vegetable growers (69.00%) had medium level of knowledge about technical and management aspects of their venture. High level of knowledge was found in 17.00 per cent followed by 14.00 per cent vegetable growers who had low level of knowledge.

Rashid (2018) in the study on adoption of recommended package of practices by cabbage growers reported that majority 65.84 per cent of the cabbage growers had medium level of knowledge, whereas 24.16 per cent and 10.00 per cent of the cabbage growers had low and high level of knowledge of recommended package of practice respectively.

## **2.4 Constraints**

Samantaray *et al.* (2009) conducted a study on constraints in vegetable production-experiences of tribal vegetable growers and stated that the major constraints like lack of post-harvest technologies, absence of storage facilities, inadequate training programme and inadequate demonstration of new technology are faced by the vegetable growers.

Kale *et al.* (2013) conducted a study on constraints faced by farm women in dairy farming and reported that the constraints faced by farm women while dairy farming were; high cost of quality concentrate feeds (98.00%), high cost needed for purchasing crossbred animals and veterinary medicine (95.00%), decline in performance of exotic animals due to the high temperature (94.00%), low water profile and lack of irrigation facilities (85.00%), inadequacy of green fodder round the year (82.00%), non-remunerative price for milk (80.00%) and higher initial investment for proper housing and dairy animals (70.00%).

Pandit and Basak (2013) in the study on constraints faced by the farmers in commercial cultivation of vegetables concluded that majority of the vegetable growers faced constraints regarding all the aspects under study except extension media contact. In respect of individual constraint low price of vegetables during

harvesting, non-availability of quality seed, high wages of labourer and lack of storage facility were the major ones. So, concerned authorities should take proper steps to minimize the constraints so that the commercial vegetable growers can get expected return from their investment.

## **2.5 Marketing**

Rampal (2012) in the study on risk orientation of the farmers and their reactions towards contract farming revealed that the farmers complained about grading based pricing used by the agencies. Majority of the farmers agreed with inputs provided and their quantity. Majority of them disagreed with payment for purchase at right time. There was mixed reactions about technical know-how and extension services. Majority of them were having average and above average risk orientation score. The farmers' reactions towards inputs provided, marketing support, extension services and payment of the produce were associated with their risk orientation scores.

Rai *et al.* (2014) conducted a study on entrepreneurial behaviour of vegetable growers and observed that the problem of fluctuation in market price ranked first followed by exploitation by the middle man, high cost of transportation, markets are far away, high commission charges and lack of market information ranked second, third, fourth, fifth and sixth, respectively.

Raghav and Sen (2014) in the study on constraints faced by the farmers in cultivation of major crops reported that among the marketing problems, lack of storage facility seems to be the most important constraint faced by the farmers in cultivation of major crops of the study area. However, it is noted that lack of storage facility is not a problem for large farmers. But, poor storage facility faced by marginal to medium farmers often compel them to sell their produce just after harvesting when supply is higher and consequently prices are lower.

Ashokkumar and Aski (2016) conducted a study on constraints faced by cabbage growers and nature of marketing in north Karnataka and stated that more

than fifty per cent of the total cabbage growers sold their produce to village merchants in farm gate itself. Majority of cabbage growers sold their produce after harvesting, because of non-availability of cold storage facilities. The cabbage growers are gathering and getting price information through the person who visited to the market and mobile phones. It is evident from the study that farmers were not following effective marketing strategies for getting remunerative price for their cabbage. So, it is imperative to conduct awareness programme about different marketing aspects of cabbage.

## **2.6 Relationship between selected profile characteristics of respondents and dependent variables**

Borate *et al.* (2012) in the study on entrepreneurial behaviour of sapota growers found that the social participation, were significantly related with entrepreneurial behaviour.

Jaswal and Patil (2012a) in the study on entrepreneurial behaviour of rural women revealed that the regression relationship were not significant for age, caste, land, material possession, family occupation, family income, economic status and owing responsibility for failure.

Mehta and Sonawane (2012) conducted a study on entrepreneurial behaviour of mango growers and reported that area under mango cultivation, annual income, social participation, awareness regarding value, mango yield index, employment generation, extension participation, mass-media exposure, extent of adoption, management orientation, innovativeness, progressiveness and knowledge of mango growers had positive and significant relationship whereas the variables age, land holding, irrigation facility, family size and cropping intensity had non-significant relationship with entrepreneurial behaviour of mango growers. The three indicators decision-making, market orientation and economic motivation played significant role in shaping the entrepreneurial behaviour of mango growers.

Jaisawal and Patel (2012b) in the study on entrepreneurial behaviour of

rural women revealed that the relationship between age and entrepreneurial behaviour was found to be negative and significant. It shows that if the rural woman entrepreneur is young in age, her entrepreneurial behaviour would be high.

Dwivedi (2013) in the study on Entrepreneurial Behaviour of Potato Growers observed that among four independent variables, three variables viz., education, farming experience and socio- political participation showed positive and significant relationship at 0.01 level of probability with entrepreneurial behaviour, whereas, one variable viz. family size did not establish any significant relationship with entrepreneurial behaviour.

Chouhan (2015) in the study on entrepreneurial behaviour of tomato growers revealed that the variables age had significant but negative relationship while education, size of land holding, area under tomato crop, material possession, social participation, annual income, economic motivation, scientific orientation, information source utilization and extension contact had positive and significant relationship with entrepreneurial behaviour of the tomato growers.

Shivacharan *et al.* (2015) conducted a study on Entrepreneurial Behaviour of Rural Young Agri-entrepreneurs and Relationship between Entrepreneurial Behaviour and Profile Characters and revealed that the variable extension contact was positively and significantly related with innovativeness and self-confidence.

Wanole *et al.* (2018) conducted a study on relational analysis of entrepreneurial behaviour of banana growers and reported that annual income of the banana growers had shown positive and highly significant relationship with entrepreneurial behaviour of farmers.

Kulkarni and Jahagirdar (2019) conducted a study on Entrepreneurial Behaviour and Constraints Faced by the Rose Growers and revealed that the variables such as age and land holding were not significantly related with entrepreneurial behaviour of rose growers.

## **Chapter 3**

### **MATERIALS AND METHODS**

This chapter deals with the detailed description of the research methodology adopted for conducting the study on entrepreneurial behaviour of grape growers. The methods employed for conducting the study are elaborated under the following heads:

- 3.1 Sampling procedure
- 3.2 Agro-climatic conditions of the district
- 3.3 Variables and their measurement
- 3.4 Marketing system
- 3.5 Constraints
- 3.6 Tools for data collection
- 3.7 Statistical procedures

#### **3.1 Sampling procedure**

Multistage cum purposive and random sampling techniques were used keeping in view the following objectives of the study.

##### **3.1.1 Locale of study**

On the basis of research problem and its objectives, the present study was conducted in the purposively selected district Ganderbal of Jammu and Kashmir having an area of 187.85 hectare under grape with production of 358.43 Mt (Anonymous 2015-16).

##### **3.1.2 Selection of the horticultural block**

District Ganderbal has seven horticultural blocks out of which one block namely Lar was selected purposively on the basis of maximum area and production under grapes.

### **3.1.3 Selection of villages**

Horticultural Block Lar consists of 15 villages, out of which only 6 villages were selected on the basis of maximum number of grape growers. The villages selected were namely Raipora; Chanthan Gulab Bagh; Chount Valiwar; Qasba Lar; Thuru and Watlar for the present study.

### **3.1.4 Selection of grape growers**

A comprehensive list of grape growers from the selected villages was obtained from the concerned Chief Horticultural Officer and a sample of grape growers was taken by proportionate allocation method of sampling (taking area as auxiliary information) from the selected villages. Out of the six selected villages, a total of 120 grape growers were selected randomly with minimum number of 8 grape trees/vines.

Formula for proportionate allocation method:

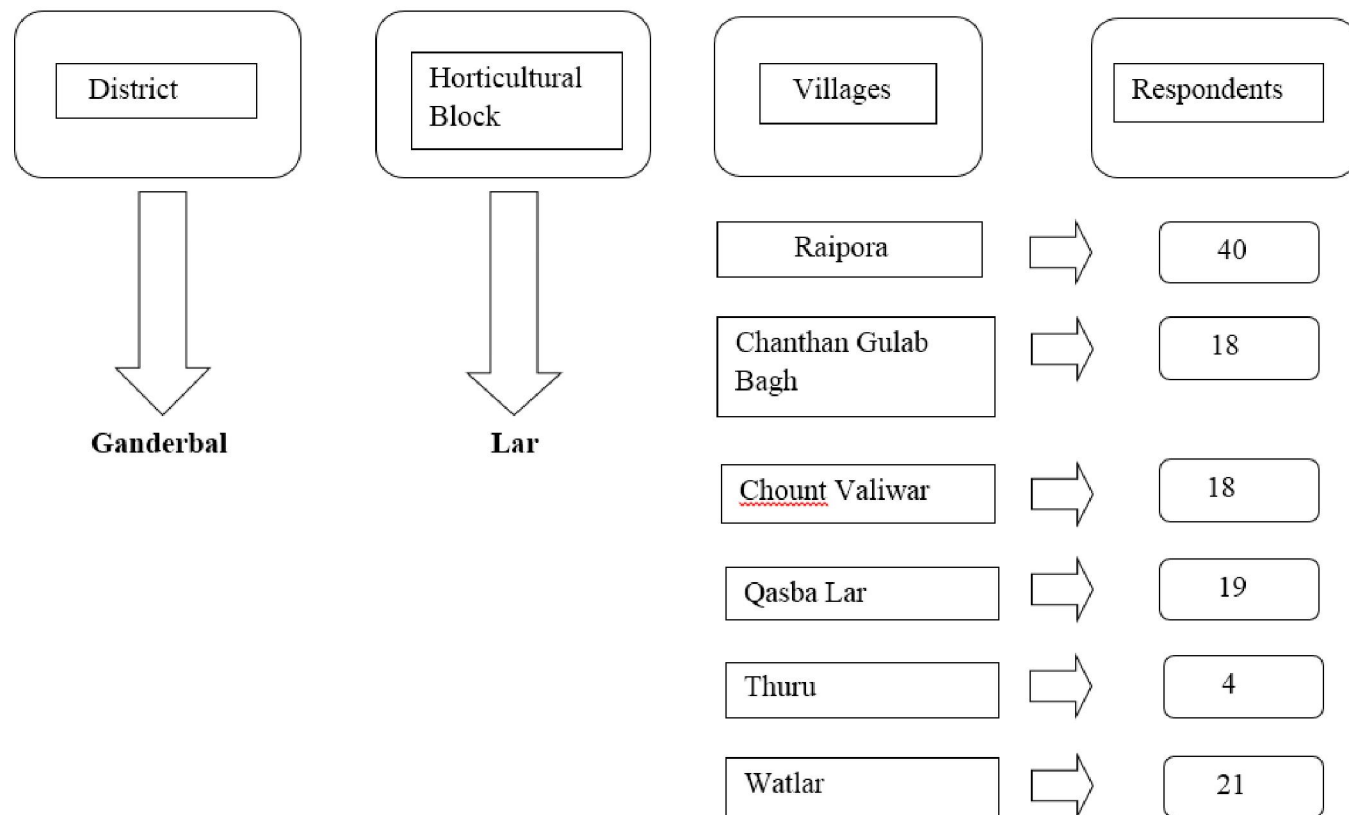
$$n_1 = N_1/N \times n$$

$n_1$  = Total sample from the village

$N_1$  = total No. of respondents from the concerned village

$N$  = total no. of respondents from the 6 villages

$n$  = sample size (120)



**Fig. 3.1: Sampling Plan**



**Plate 3.1: Collecting data from grape growers**

**Table 3.1: Selection of the respondents in district Ganderbal**

<b>District</b>	<b>Horticultural Block</b>	<b>Area under grape crop</b>	<b>No. of grape villages in Lar block</b>	<b>No. of villages selected by random sampling method</b>	<b>No. of grape growers from selected villages</b>	<b>No. of grape growers selected by proportionate allocation method</b>
Ganderbal	Lar	94 ha	15	Raipora	261	40
				Chanthan Gulab Bagh	117	18
				Chount Valiwar	114	18
				Qasba lar	124	19
				Thuru	23	4
				Watlar	137	21
Total				06	776	120

[Source: Chief Horticulture Office Ganderbal (2015-16)]

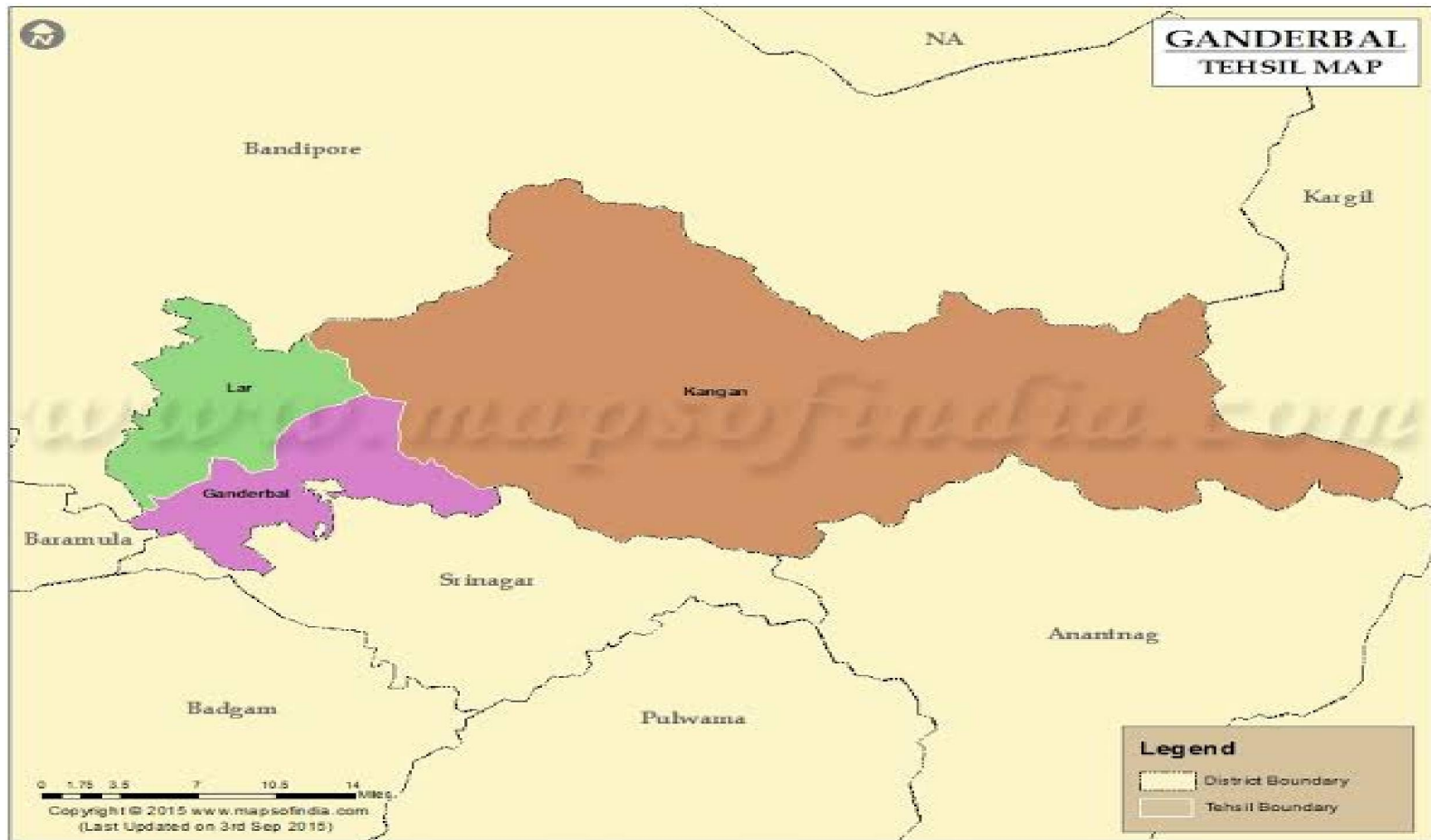


Fig. 3.2: Map of the study area

### **3.2 Agro-climatic conditions**

Ganderbal district with its headquarters located at 34 degree -12'N, longitude of 74 degree -46'E and at an altitude of 5213 ft above sea level at a distance of 21 kilometres from Srinagar city. Ganderbal district possesses all the typical characteristics of the climate of Kashmir valley as a whole. The annual rainfall and precipitation of the area is 676 mm having 67 normal rainy days. The majority of the area has clay loam soils followed by sandy loam and forest and hill soils. The net sown area is 14.109 thousand hectares with cropping intensity of 128 per cent. The net irrigated area is 10.672 thousand hectare, gross irrigated area of 13.877 thousand hectare and rainfed area covers 4.012 thousand hectares. Mostly the source of irrigation is canal or small canals.

### **3.3 Variables and their measurement**

Based on the objectives, available literature and opinion of the experts, 9 dependent variables and 6 independent variables were selected. The variables, which were found to have relevance to the present investigation, were included in the study. The instruments used to measure the variables together with the procedure followed, have been described in detail. Considering the dependent and independent variables, the respondents were classified into different categories based on mean and standard deviation.

**Table 3.2: Variables and their empirical measurement**

<b>S. No.</b>	<b>Variables</b>	<b>Empirical Measurement</b>
1.	Innovativeness	Measured by Moulik's self-rating innovativeness scale (1965)
2.	Decision making ability	Measured by Supe (1969) scale, adopted by Rao (1995)
3.	Information seeking ability	Measured by scale developed by Rao (1985)
4.	Leadership ability	Measured by scale developed by Nandapurkar (1980)
5.	Achievement motivation	Measured by scale developed by Chandrapaul (1998)
6.	Risk orientation	Measured by scale developed by Supe (1969)
7.	Management orientation	Measured by scale developed by Samanta (1977)
8.	Economic motivation	Measured by scale developed by Supe (1969)
9.	Age	Measured by scale given by Psych info. (2017)
10.	Education	Measured by Socio-economic status rural scale, adopted by Vijay Kumar (1997)

### 3.3.1 Independent variables

#### 3.3.1.1 Age

It refers to the chronological age of the respondents at the time of interview. It was measured by scale given by psych info. (2017).

S. No.	Category	Criterion
1	Young Age	18-35 years
2	Middle Age	36-60 years
3	Old Age	Above 60 years

#### 3.3.1.2 Education

It refers to the formal schooling years completed by the respondents. It was measured using socio-economic status (SES) rural scale, the procedure followed by Vijay Kumar (1997) with slight modification.

S. No.	Category	Score
1.	Illiterate	0
2.	Primary school	1
3.	Middle school	2
4.	High school	3
5.	Graduate	4
6.	Post Graduate	5

### 3.3.1.3 Land holding

It refers to the total number of kanals (1 kanal =1/20<sup>th</sup> of hectare) of land owned by the grape growers at the time of interview. Depending on the land holding, the respondents were categorized into following categories.

S. No.	Land holding
1.	Up to 10 kanals
2.	11-20 kanals
3.	21-30 kanals
4.	Above 30 kanals

### 3.3.1.4 Extension contact

It was operationalized as the degree to which a farmer had maintained contact and the frequency of contacts with extension personnel. The degree of extension contact of the respondents was measured with the help of a schedule developed for the study. The individuals were scored based on the number of extension personnel contacted and also the extent of contact. The extent of contact was measured with a score of '2' for 'frequently', '1' for 'occasionally' and '0' for 'never'. The total score of each farmer was arrived by adding all the scores. The maximum and minimum scores were in the range of 0-12. The respondents were grouped into three categories based on mean and standard deviation. The mean and standard deviation is 2.06 and 2.14 respectively.

Category	Score range
Low extension contact	Below Mean - $\frac{1}{2}$ S.D (2.06 - 2.14)
Medium extension contact	Between Mean + $\frac{1}{2}$ S.D (2.06 +2.14)
High extension contact	Above Mean + $\frac{1}{2}$ S.D (2.06 + 2.14)

### 3.3.1.5 Annual income

It refers to the annual income (rupees) of grape growers from all the resources. The mean and standard deviation is ₹ 2.17 lakh and ₹ 1.6 lakh respectively. The following categories were made:

Category	Criterion
Low income group	Up to ₹ 2 lakh
Medium income group	₹ 2 lakh – ₹ 4 lakh
High income group	Above ₹ 4 lakh

### 3.3.1.6 Mass media exposure

It refers to the various mass media channels viz., newspaper, radio, television or any other means of media, grape growers are utilizing for getting information and the degree of contact with them. The statements were measured with four response categories viz., ‘never’, ‘rarely’, ‘occasionally’ and ‘regularly’. The mean and standard deviation is 4.15 and 2.78 respectively.

Category	Score
Low	< Mean – S.D (4.15 - 2.78)
Medium	Between Mean ± S.D (4.15 ± 2.78)
High	> Mean + S.D (4.15 + 2.78)

## 3.3. 2 Dependent variables

### 3.3.2.1 Innovativeness

It refers to the behaviour pattern of an individual who has interest and desire to seek changes in farming techniques and is prepared to introduce such

changes into his farm operations wherever practical and feasible. The innovativeness was measured by using self-rating scale developed by Moulik (1965).

<b>Category</b>	
<b>Most likely</b>	<b>Least likely</b>
2	1

The scores attained by an individual for all the statements were added to arrive at the total score bagged by the individual. They were then classified in three categories based on the total scores using mean (9.43) and standard deviation (1.18) as shown below:

<b>Category</b>	<b>Score</b>
Low	< Mean – S.D (9.43 – 1.18)
Medium	Between Mean ± S.D (9.43 ± 1.18)
High	> Mean + S.D (9.43 + 1.18)

### **3.3.2.2 Decision making ability**

The decision making ability of a farmer is operationally defined as the degree of weighing the available alternatives in terms of their desirability and their likelihoods and choosing the most appropriate one for achieving maximum profit on his farming. The scale developed by Supe (1969) with suitable modifications was found to be more appropriate to measure decision making ability of the grape growers.

<b>Category</b>			
<b>Self</b>	<b>Elders</b>	<b>Husband/Wife</b>	<b>Children</b>
4	3	2	1

The scores attained by an individual for all the statements were added to arrive at the total score bagged by the individual. They were then classified in three categories based on the total scores using mean (19.94) and standard deviation (4.09) as shown below:

<b>Category</b>	<b>Score</b>
Low	< Mean – S.D (19.92 – 4.09)
Medium	Between Mean ± S.D (19.92 ± 4.09)
High	> Mean + S.D (19.92 + 4.09)

### **3.3.2.3 Information seeking ability**

Information seeking ability was operationally defined as the frequency of contact or exposure of a farmer to different sources for obtaining farm information. The information seeking ability was measured by using scale developed by Rao (1985).

<b>Category</b>			
<b>Frequently</b>	<b>Occasionally</b>	<b>Rarely</b>	<b>Never</b>
3	2	1	0

The scores attained by an individual for all the statements were added to arrive at the total score bagged by the individual. They were then classified in three categories based on the total scores using mean (2.45) and standard deviation (2.51) as shown below:

Low	< Mean - ½ S.D (2.45 - 2.51)
Medium	Between Mean ± ½ S.D (2.45 ± 2.51)
High	> Mean + ½ S.D (2.45+ 2.51)

#### 3.3.2.4 Leadership ability

Leadership ability was operationalized as the degree to which an individual initiates or motivates the action of others. The scale developed by Nandapurkar (1980) was used with suitable modifications to measure leadership ability.

Category		
Always	Sometimes	Never
2	1	0

The scores attained by an individual for all the statements were added to arrive at the total score bagged by the individual. They were then classified in three categories based on the total scores using mean (4.4) and standard deviation (2.16) as shown below:

Low	< Mean – SD (4.40-2.16)
Medium	Between Mean ± SD (4.40 ± 2.16)
High	> Mean +SD (4.40 + 2.16)

### 3.3.2.5 Achievement motivation

It was operationalized as the desire for excellence to attain a sense of personal accomplishment. It was measured with the help of procedure developed by Chandrapaul (1998). The scoring was given in the three point continuum as shown below and it was reversed in case of negative statements.

Statements	Agree	Undecided	Disagree
Positive	3	2	1
Negative	1	2	3

The individuals were categorised into three categories based on the total scores using mean (3.24) and standard deviation (1.55) as shown below:

Category	Criterion
Low	< Mean – SD (3.24-1.55)
Medium	Between Mean ± SD (3.24 ± 1.55)
High	> Mean + SD (3.24 + 1.55)

### 3.3.2.6 Risk orientation

Risk orientation was operationalized as the degree to which the farmer is oriented towards risk and uncertainty in facing problems in farming. It was measured by scale developed by Supe (1969). The scoring was given in the five point continuum as shown below and it was reversed in case of negative statements.

Category	Strongly agree	Agree	Undecided	Disagree	Strongly disagree
Positive	1	2	3	4	5
Negative	5	4	3	2	1

The individuals were categorised into three categories based on the total scores using mean (0.02) and standard deviation (3.84) as shown below:

Low	< Mean - $\frac{1}{2}$ SD (0.02 – 3.84)
Medium	Between Mean $\pm$ $\frac{1}{2}$ SD (0.02 $\pm$ 3.84)
High	> Mean + $\frac{1}{2}$ SD (0.02 $\frac{1}{2}$ 3.84)

### 3.3.2.7 Management orientation

It refers to the degree to which a farmer is oriented towards scientific farm management comprising of planning, production and marketing functions on his farm. It was measured by scale developed by Samanta (1977). The scoring was given in the five point continuum as shown below and it was reversed in case of negative statements.

Category	Strongly agree	Agree	Undecided	Disagree	Strongly disagree
Positive	5	4	3	2	1
Negative	1	2	3	4	5

The scores attained by an individual for all the statements were added to arrive at the total score bagged by the individual. They were then classified in three categories based on the total scores using mean (23.58) and standard deviation (3.49) as shown below:

Low	< Mean –SD (23.58 - 3.49)
Medium	Between Mean ± SD (23.58 ± 3.49)
High	> Mean + SD (23.58 + 3.49)

### 3.3.2.8 Economic motivation

It refers to the values or attitudes which attach greater importance to profit maximization as the ends and means. It was measured with the help of self-rating scale developed by Supe (1969). The scoring was given in the five point continuum as shown below and it was reversed in case of negative statements.

Category	Strongly agree	Agree	Undecided	Disagree	Strongly disagree
Positive	5	4	3	2	1
Negative	1	2	3	4	5

The scores attained by an individual for all the statements were added to arrive at the total score bagged by the individual. They were then classified in three categories based on the total scores using mean (15.65) and standard deviation (2.11) as shown below:

Low	< Mean – SD (15.65 – 2.11)
Medium	Between Mean ± SD (15.65 ± 2.11)
High	>Mean +SD (15.65 + 2.11)

### 3.3.2.9 Entrepreneurial behaviour

Entrepreneurial behaviour was taken as a function of eight components viz., innovativeness, decision making ability, information seeking ability, leadership ability, achievement motivation, risk orientation, management orientation and economic motivation. The summation of scores of all these components constitute the entrepreneurial behaviour score of the respondents. The mean and standard deviation is 78.70 and 9.31 respectively.

Low	< Mean – SD (78.70 – 9.31)
Medium	Between Mean $\pm$ SD (78.70 $\pm$ 9.31)
High	> Mean +SD (78.70 + 9.31)

### 3.3.2.10 Knowledge

English and English (1958) defined knowledge as a body of understood information possessed by an individual. In the present study, it is operationalized as the extent to which a respondent had knowledge of recommended package of practices of grapes.

#### Construction of teacher made test

A teacher made test was employed to measure the knowledge level of the respondents about the grape cultivation practices. A list of knowledge items was prepared by discussing with experts from fruit science, agronomy, agricultural extension and by referring to the Package of Practices book published by the Sher-e-Kashmir University of Agricultural Sciences and Technology of Kashmir, Shalimar. Each practice was framed in a question form to obtain the response from the respondents. The answers to the question were quantified by giving 2 score to full knowledge answer, 1 score for partial knowledge and zero score for

no knowledge answer. The test constituted 12 knowledge questions. The questions covered full range of cultivation practices beginning from variety selected to the appropriate time of harvesting of particular variety obtained. Thus, the maximum possible score was 25 and the minimum was zero. The summation of scores of the correct answers for a particular respondent indicates his knowledge level about improved grape cultivation practices. The respondents were grouped into three categories using mean and standard deviation as measure of check.

<b>Category</b>	<b>Criterion</b>
Low knowledge	Below Mean – SD (16.20 – 1.86)
Medium knowledge	Between Mean $\pm$ SD (16.20 $\pm$ 1.86)
High knowledge	Above Mean + SD (16.20 + 1.86)

### **3.4 Marketing structure**

The market structure refers to the characteristics of the market either organizational or competitive that describes the nature of competition and the pricing policy followed in the market.

The details of the methodology followed in the present investigation to know the marketing structure of grape crop are presented under the following heads:

#### **3.4.1 Marketing channels**

Moore *et al.* (1973) defined marketing channels as the chain of intermediaries through whom the various food grains pass from producers to consumers constitutes their marketing channels.

Marketing channels are routes through which agricultural products move

from producers to consumers. The length of the channel varies from commodity to commodity, depending upon the quantity to be moved, the form of consumer demand and degree of regional specialization in production.

For present study the actual marketing channels followed by the respondents for only one variety 'Sahibi' for the year 2018 were noted down because of the fact that this variety is most prevalent and also for being the most superior variety among all other varieties of grapes in the study area.

### **3.4.2 Producer's share in consumer's rupee**

It is the price received by the farmer expressed as a percentage of the retail price (i.e, the price paid by the consumer). If Pr is the retail price, the producer's share in consumer's rupee (Ps) may be expressed as follows:

$$Ps = (Pf / Pr)100$$

Where, Pf = Price received by the farmer.

For present study, well-structured schedule was prepared by discussing with the experts from Agriculture Economics and Agriculture Extension and producer's share in consumer's rupee of each respondent was calculated from the data collected from the respondents to know the exact percentage of share, producers are getting while marketing their produce.

### **3.4.3 Market Efficiency**

Kohl and Uhl (1980) defined market efficiency as the ratio of market output (satisfaction) to marketing input (cost of resources). An increase in this ratio represents improved efficiency and a decrease denotes reduced efficiency. A reduction in the cost for the same level of satisfaction or an increase in the satisfaction at a given cost results in improvement in efficiency.

Market efficiency =  $\frac{\text{Consumer purchase price}}{\text{Total market cost} + \text{Marketing margins}}$

For the present study, well-structured schedule was prepared by discussing

with the experts from Agriculture Economics and Agri. Extension and data was collected to get the market efficiency of the produce.

#### **3.4.4 Price Spread**

In the marketing of agriculture/horticulture commodities, the difference between the price paid by the consumer and the price received by the producer for an equivalent quantity of farm produce is known as price spread.

$$\text{Price spread} = \text{consumer purchase price} - \text{farmer sale price}$$

For the present study, from the collected data price spread was calculated to know the difference between the price paid by the consumer and the price received by the producer.

#### **3.4.5 Marketing Costs**

The cost involved in moving the product from the point of production to the point of consumption, i.e the cost of performing the various marketing functions and of operating various agencies was also calculated from the data collected from the schedule.

#### **3.4.6 Marketing Margins**

Profits in the various market functionaries involved in moving the produce from initial point of production till it reaches the ultimate consumer was also calculated from the collected data. The absolute value of the marketing margin varies from channel to channel, market to market and time to time.

### **3.5 Constraints**

The dictionary meaning of constraint is the threat or use of force to prevent, restrict or dictate the action or thought of others. In the context of our study the impediments/constraints limiting the entrepreneurial behaviour of grape growers. Unstructured schedule was framed for constraints and the responses were collected and frequency for constraints was calculated. Percentage of frequencies

for each of the constraints was obtained and ranking was done on the basis of maximum percentage.

### **3.6 Tools for data collection**

#### **3.6.1 Designing of Interview Schedule**

In the present study the device used for data collection was well structured interview schedule. The schedule was developed for gathering information of independent variable, dependent variable, marketing and constraints faced by the grape growers. The interview schedule was strictly formulated in accordance with the set objectives and in consultation with experts from the division of Horticulture, Agriculture Economics and Statistics and Agriculture extension functionaries of the Agriculture Department. The Part-A of the interview schedule consisted of profile, socio-personal characteristics of the respondents. Part-B includes questions related to the entrepreneurial behaviour of grape growers. Part-C consisted of marketing structure of grape growers. Part-D consisted of open ended constraints faced by grape growers

#### **3.6.2 Pretesting of Interview Schedule**

The interview schedule was pretested over 15 respondents not included in the final sample. The necessary modifications were made in light of offered suggestions to make the interview schedule more appropriate, effective and useful.

#### **3.6.3 Data Collection**

The researcher personally collected the data as in plate-1 by interviewing the respondents through the well-structured interview schedule. The data was collected during the leisure time of the respondents. Each respondent was met personally so that investigator can get first-hand information. The response of each respondent was recorded in the interview schedule separately. The respondents were at ease and expressed their opinion freely, fairly and frankly as

friendly atmosphere was maintained during the interview. Every effort was kept to check and cross check the data collected from all the sampled respondents.

### **3.6.4 Compilation and Working of Data**

After collection of data from the growers, scores were given to responses collected from them and then accordingly tabulated, classified and quantified. Suitable statistical tools were used for the analysis of data and findings emerged out of the data were interpreted based on the objectives and accordingly discussed and necessary inferences, conclusions were drawn.

### **3.7 Statistical Procedures**

The following statistical tests and measures were used for the analysis of the data.

#### **3.7.1 Arithmetic Mean**

This was used to compare the respondents in respect of their dependent variables. The arithmetic mean is the sum of scores divided by the number of respondents.

$$\bar{X} = \frac{\sum x}{n}$$

Where,

$\bar{X}$  = Mean

$\sum x$  = sum of scores

n = Number of respondents

#### **3.7.2 Standard Deviation**

Standard deviation is the square root of the mean of the sum of squares of the deviation taken from the mean of the distribution.

$$\sigma = \sqrt{\frac{1}{n} \left( \sum X^2 - \frac{(\sum X)^2}{n} \right)}$$

Where,

- $\sigma$  = Standard deviation
- $x^2$  = Sum of squared deviations from the mean
- $n$  = Number of items

### 3.7.3 Frequencies (f) and Percentages (%)

Wherever necessary to know the distribution pattern of respondents according to variables and for standard deviation by calculating the number of individuals that would be in given category if the number of cases were 100. Some of the data were also subjected to and interpreted in terms of their frequencies and percentages.

### 3.7.4 Correlation Co-efficient (r)

This tool was used to find out the significant relationship, if any between scores of the independent variables and the scores of the dependent variable of the sample respondents. By using the following formula:

$$r = \frac{\sum xy - \frac{(\sum x)(\sum y)}{n}}{\sqrt{\sum x^2 - \frac{(\sum x)^2}{n}} \sqrt{\sum y^2 - \frac{(\sum y)^2}{n}}}$$

Where,

- $r$  = Co-efficient of correlation between x and y
- $\sum x$  = Sum of independent variable x
- $\sum y$  = Sum of dependent variable y
- $\sum x^2$  = Sum of squares of x variable

$\sum y^2$  = Sum of squares of y variable

n = Size of the sample

The significance of the correlation co-efficient was tested by using the following formula:

$$t = \frac{|r|\sqrt{n-2}}{\sqrt{1-r^2}}$$

The computed 'r' values were then compared with the table values and coefficient of correlation at 1 and 5 per cent level of significance was tested.

### 3.7.5 Multiple Regression Co-efficient

This tool was used to predict the value of a dependent variable based on the value of two or more independent variables. By using the formula:

$$b = (\sum xy - \sum x \sum y / n) / \sum x^2 - (\sum x)^2 / n$$

where,

b = regression coefficient

x = independent variable

y = dependent variable

$\sum x^2$  = Sum of squares of x variable

$(\sum x)^2$  = Square of summation of x variable

## Chapter 4

### RESULTS AND DISCUSSION

The prime objective of this investigation was to critically analyze the entrepreneurial behaviour of grape growers in Ganderbal district. The data collected during the study was coded, analyzed, interpreted and the results are presented under the following heads:

- 4.1 To study the socio-economic profile of grape growers
- 4.2 To study the entrepreneurial behaviour of grape growers
- 4.3 To study the marketing structure of grapes
- 4.4 To study the constraints faced by grape growers

#### **4.1 Socio economic profile of grape growers**

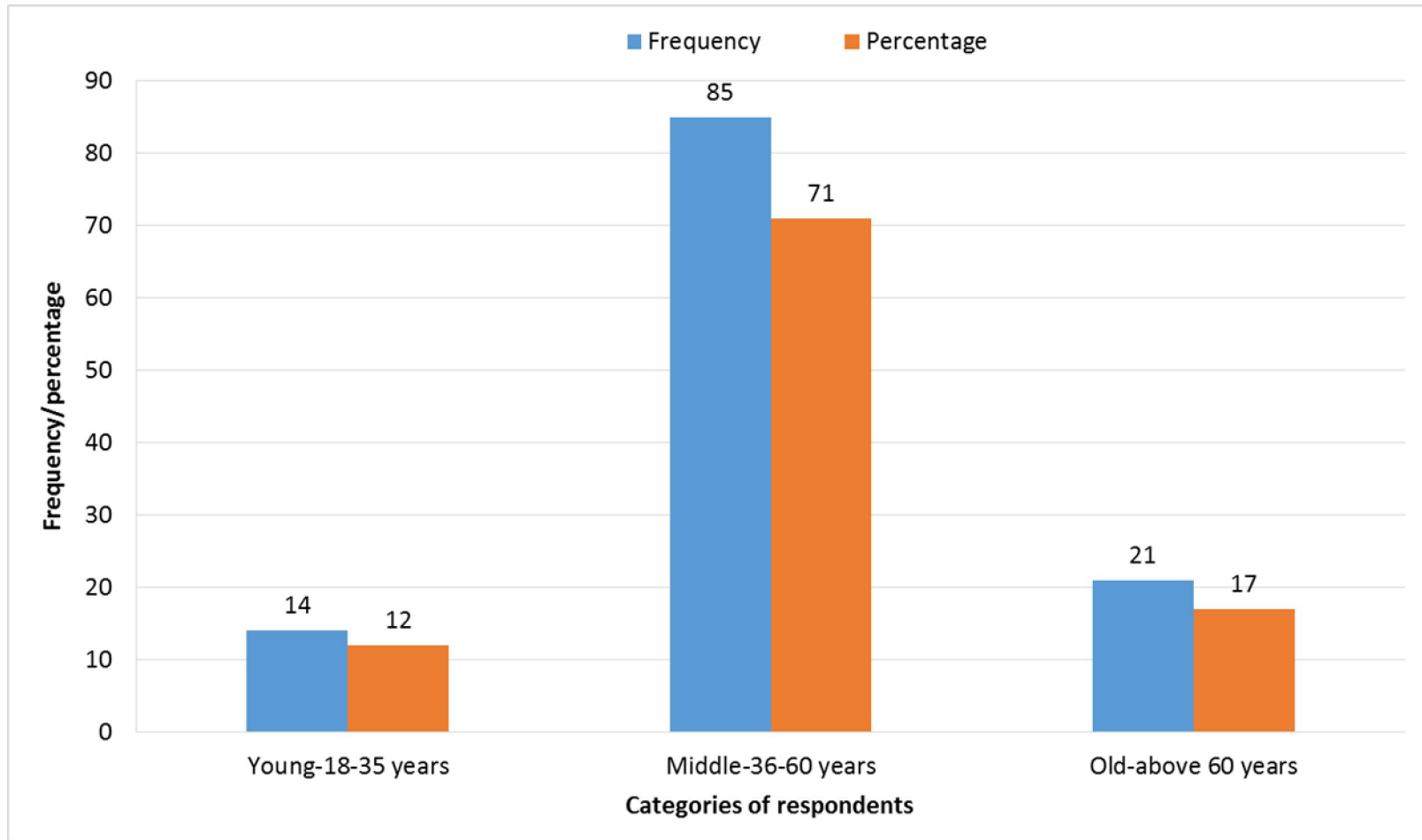
##### **4.1.1 Age**

The data in Table 4.1 and Fig. 4.1 reveals that majority 71.00 per cent of the growers belonged to middle age, followed by old age (17.00%) and 12.00 per cent belonged to young age group. This might be due to the fact that majority of the entrepreneurs might have started this enterprise at young age and attained the middle age till the time of the study as most of them had experience of 5-10 years. The findings are in line with the findings of Giridhara *et al.* (2015), Jha and Pongener (2015) and Kashyap (2015).

**Table 4.1: Socio economic profile of selected grape growers**

(N=120)

S. No.	Variable	Category	Respondents	
			Frequency	Percentage
1	Age	Young -18 to 35years	14	12.00
		Middle -36-60 years	85	71.00
		Old -above 60 years	21	17.00
2	Education	Illiterate	39	32.00
		Primary	4	3.00
		Middle	31	26.00
		High School	32	27.00
		Graduate	6	5.00
		Postgraduate	8	7.00
3	Annual income	Low income group (up to ₹2 lakh)	78	65.00
		Medium income group (₹ 2 lakh- ₹4 lakh)	23	19.00
		High income group (above ₹ 4 lakh)	19	16.00
4	Land holding	Up to 10 kanal	75	63.00
		11-20 kanal	34	28.00
		21-30 kanal	9	7.00
		Above 30 kanal	2	2.00
5	Extension contact	Low (below mean - ½S.D)	48	40.00
		Medium (between mean + ½S.D)	40	33.00
		High (above mean + ½S.D)	32	27.00
6	Mass media exposure	Low (below mean -S.D)	22	18.00
		Medium (between mean + S.D)	75	63.00
		High (above mean +S.D)	23	19.00



**Fig. 4.1:** Distribution of respondents according to their age

#### **4.1.2 Education**

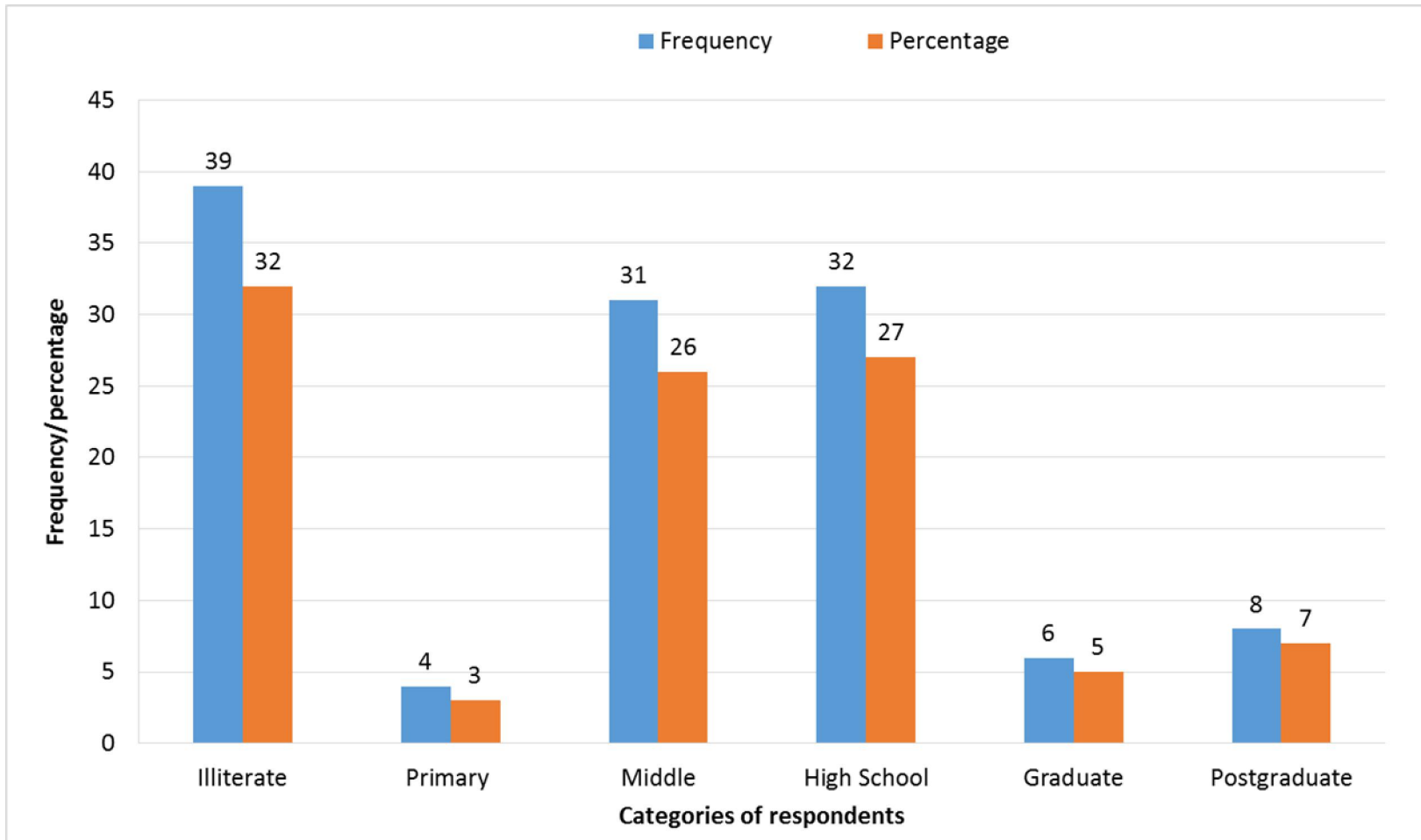
It is clear from the Table 4.1 and Figure 4.2 that majority of the growers (32.00%) were illiterate followed by 27.00 per cent of the growers educated up to high school, 26.00 per cent of growers were educated up to middle school and 7.00 per cent were post graduate. While 5.00 per cent of the growers were graduate and 3.00 per cent of the growers had primary level of education. It could be inferred that lack of good educational facilities in the rural areas combined with unavoidable compulsion in the family to help their parents may be the reason for poor formal schooling among the growers. The findings are not in line with the findings of Kumar *et al.* (2013), Kalimang'asi (2014) and Shirur *et al.* (2017).

#### **4.1.3 Annual income**

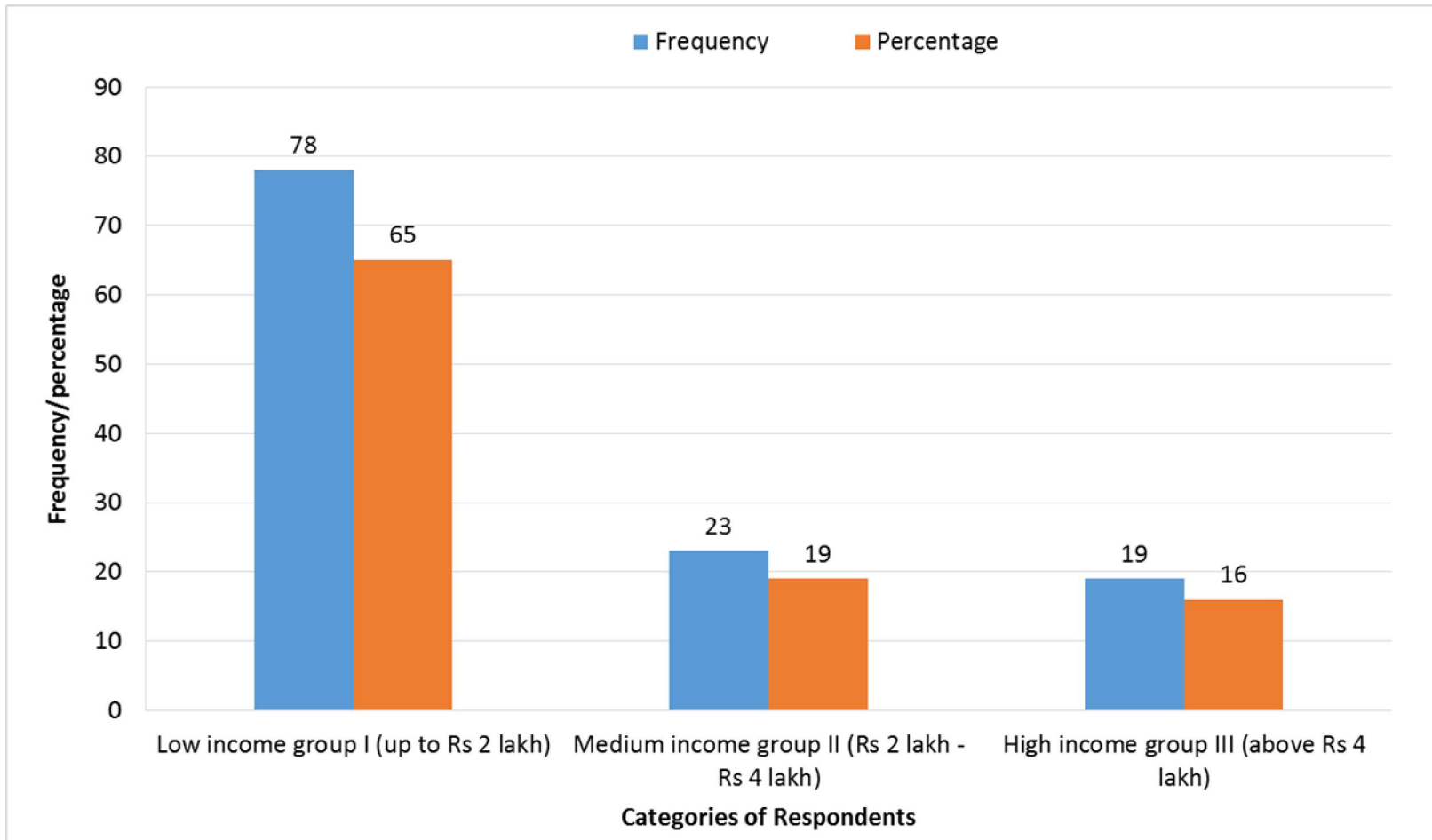
It is clear from the Table 4.1 and Figure 4.3 that majority 65.00 per cent of the growers were having low level of annual income (up to ₹ 2 lakh), 19.00 per cent of the growers were having middle level of annual income ( ₹2 lakh- ₹4 lakh) and only 16.00 per cent of the growers had high level of annual income (above ₹ 4 lakh). The probable reason, which could be attributed to varied income categories of respondents, might be due to the annual returns from the agriculture and horticulture and the jobs they are engaged with. The findings are not in line with the findings of Lokhande (2010) and Pathade (2017).

#### **4.1.4 Land Holding**

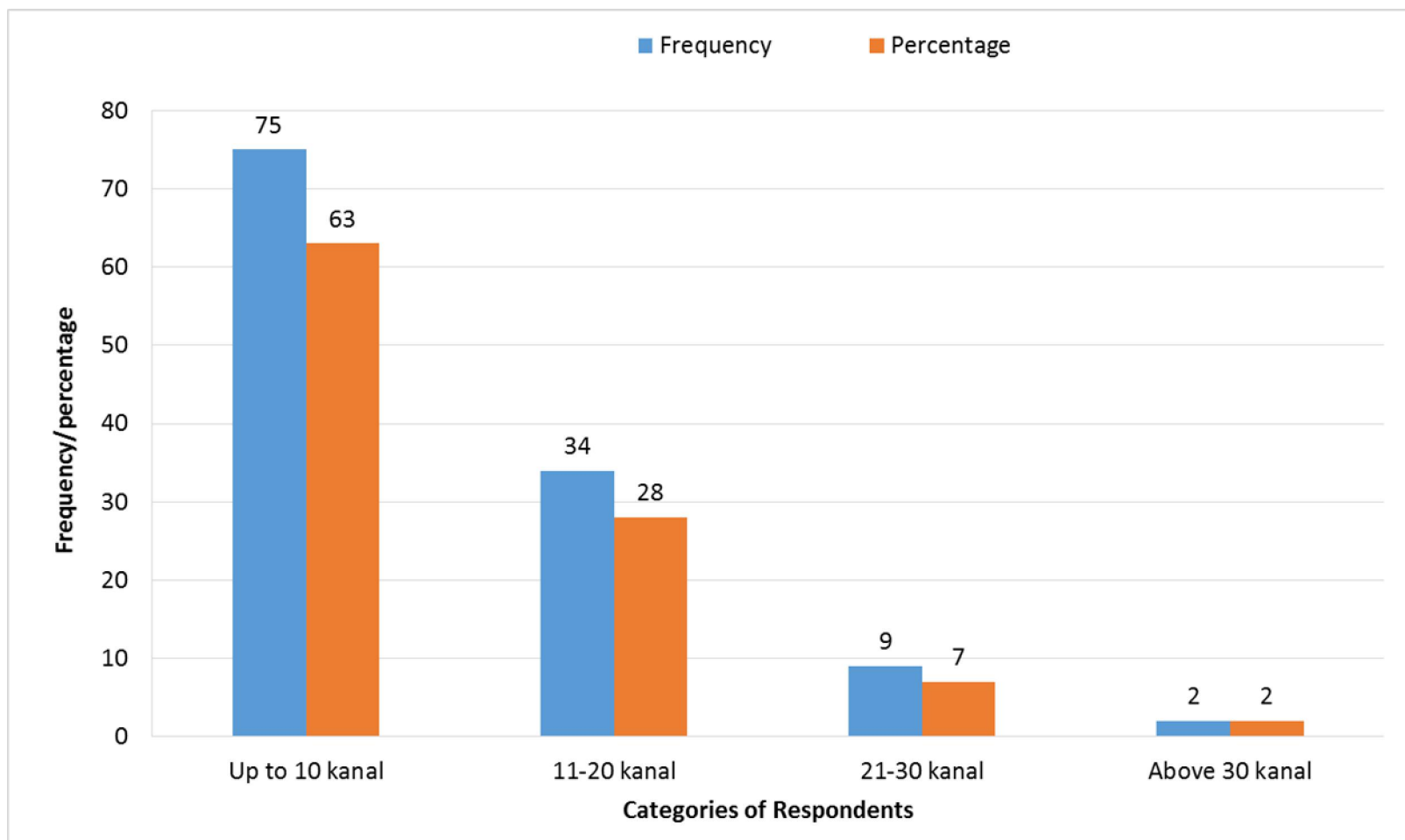
The data in Table 4.1 and Figure 4.4 shows that, majority 63.00 per cent of the growers were having land holding (up to 10 kanals), 28.00 per cent of the growers were having operational land holdings (11-20 kanals), 7.00 per cent of the growers had land holding (21-30 kanals), whereas, only 2.00 per cent of the growers had land holding above 30 kanals. This might be due to the splitting of family size resulting in fragmentation of the ancestral land. The findings are in line with the findings of Kumari (2010).



**Fig. 4.2: Distribution of respondents according to their education**



**Fig. 4.3: Distribution of respondents according to their annual income**



**Fig. 4.4: Distribution of respondents according to their land holding**

#### **4.1.5 Extension contact**

The data presented in Table 4.1 and Figure 4.5 revealed that majority 40.00 per cent of the growers had low level of extension contacts, 33.00 per cent of the growers were having medium level of extension contact and 27.00 per cent of the respondents had high level of extension contacts. This could be attributed to their low interest in extension activities to gather recent information, their low education level and less contact with the extension workers. The findings are not in line with the findings of Jagannath (2009) and Peer (2012).

#### **4.1.6 Mass Media Exposure**

The perusal of data presented in Table 4.1 and Fig. 4.6 exhibits that majority 63.00 per cent of the growers were having medium level of mass media exposure followed by high and low levels of mass media exposure with 19.00 per cent and 18.00 per cent respectively. This might be due to the fact that medium exposure to various sources of information facilitated them to get detailed information, experience and conviction about grape cultivation. Mass media provides information on experiences of successful entrepreneurs through various channels like television, radio, newspaper etc, which reinforce confidence in other growers to take up similar activities or try out new innovations. The findings are in line with the findings of Jadav (2005), Sowmya (2009) and Jamanal and Sadaqath (2017).

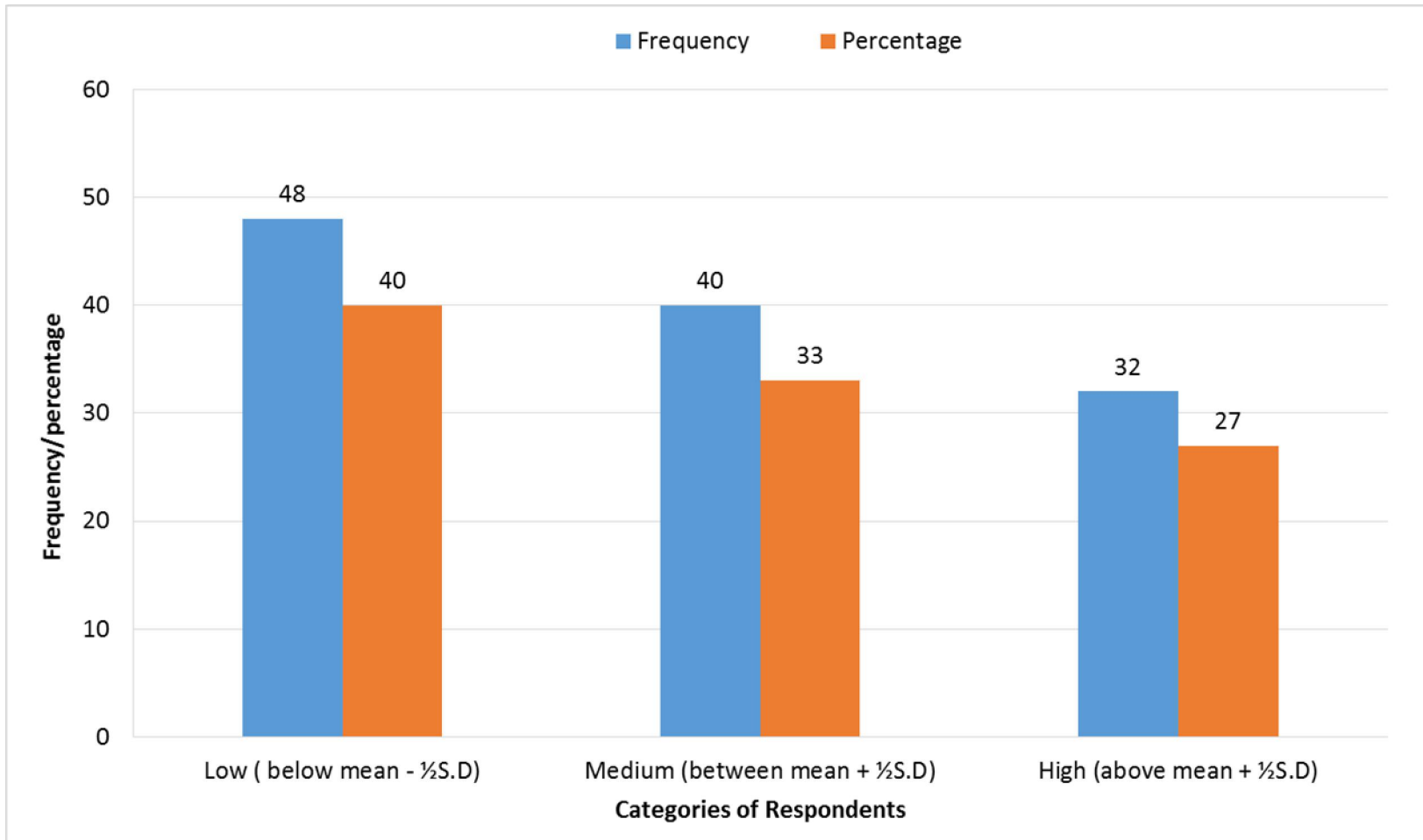
### **4.2 Entrepreneurial behaviour of grape growers**

4.2.1 Overall entrepreneurial behaviour of grape growers.

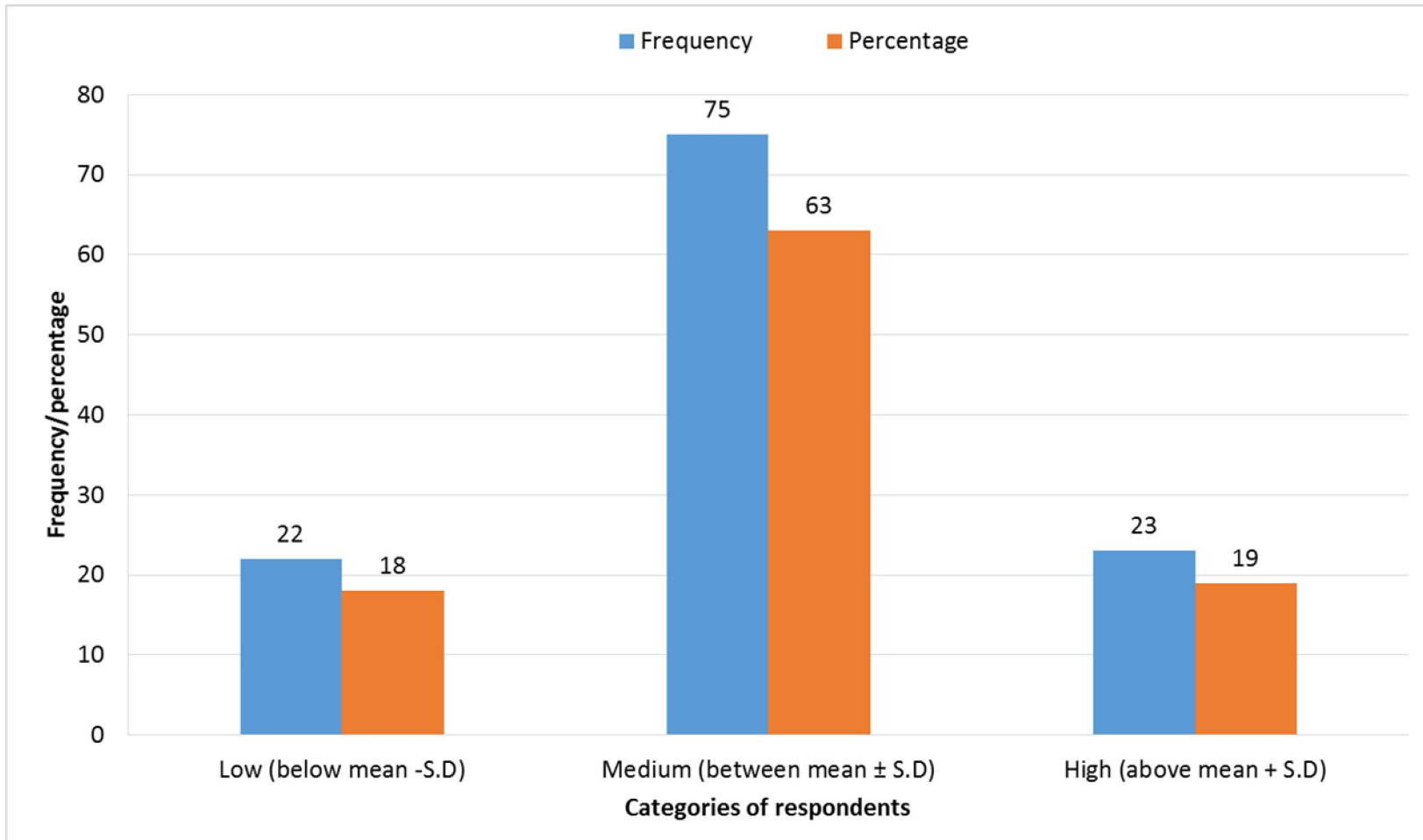
4.2.2 Components of entrepreneurial behaviour.

4.2.3 Correlation coefficient between socio-economic profile with the dependent variables

4.2.4 Regression analysis of independent variables with entrepreneurial behaviour



**Fig. 4.5: Distribution of respondents according to their extension contact**



**Fig. 4.6: Distribution of respondents on the basis of mass media exposure**

#### 4.2.1 Overall entrepreneurial behaviour of grape growers

The data in Table 4.2 and Fig. 4.7 indicated that majority (73.00%) of the respondents had medium entrepreneurial behaviour followed by 15.00% with high entrepreneurial behaviour while as 12.00% had low entrepreneurial behaviour. The findings are in line with the findings of Anitha (2004), Dawar (2008) and Jain (2008).

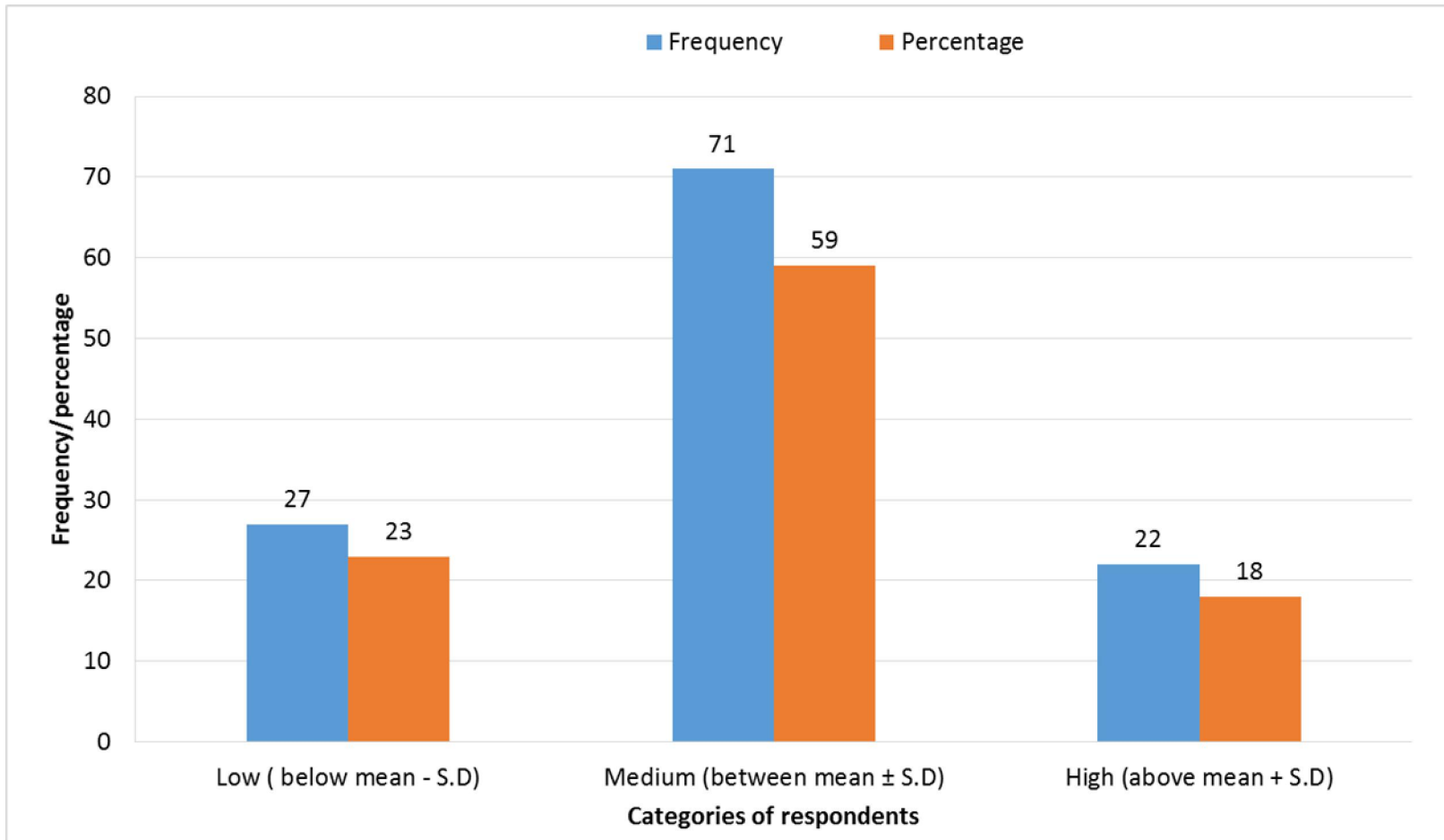
**Table 4.2: Overall entrepreneurial behaviour**

(N=120)

Variable	Categories	Respondents	
		Frequency	Percentage
Entrepreneurial Behaviour	Low (below mean – S.D) ( < 69.39)	14	12.00
	Medium ( between mean + S.D) ( >= 69.39 and <= 88.01)	88	73.00
	High ( above mean + S.D) ( > 88.01)	18	15.00

#### 4.2.2 Components of entrepreneurial behaviour

The data in Table 4.3 and Fig. 4.8 indicated that majority 78.00 per cent of the growers had medium level of innovativeness followed by high and low level of innovativeness 14.00 per cent and 8.00 per cent respectively. The medium level of innovativeness of grape growers might be due to their less education, smaller size of land holding, less extension contact which leads to restricted information about new technologies. The findings are in line with the findings of Thorat (2007).



**Fig. 4.7: Distribution of respondents on the basis of entrepreneurial behaviour**

**Table 4.3: Innovativeness****(N=120)**

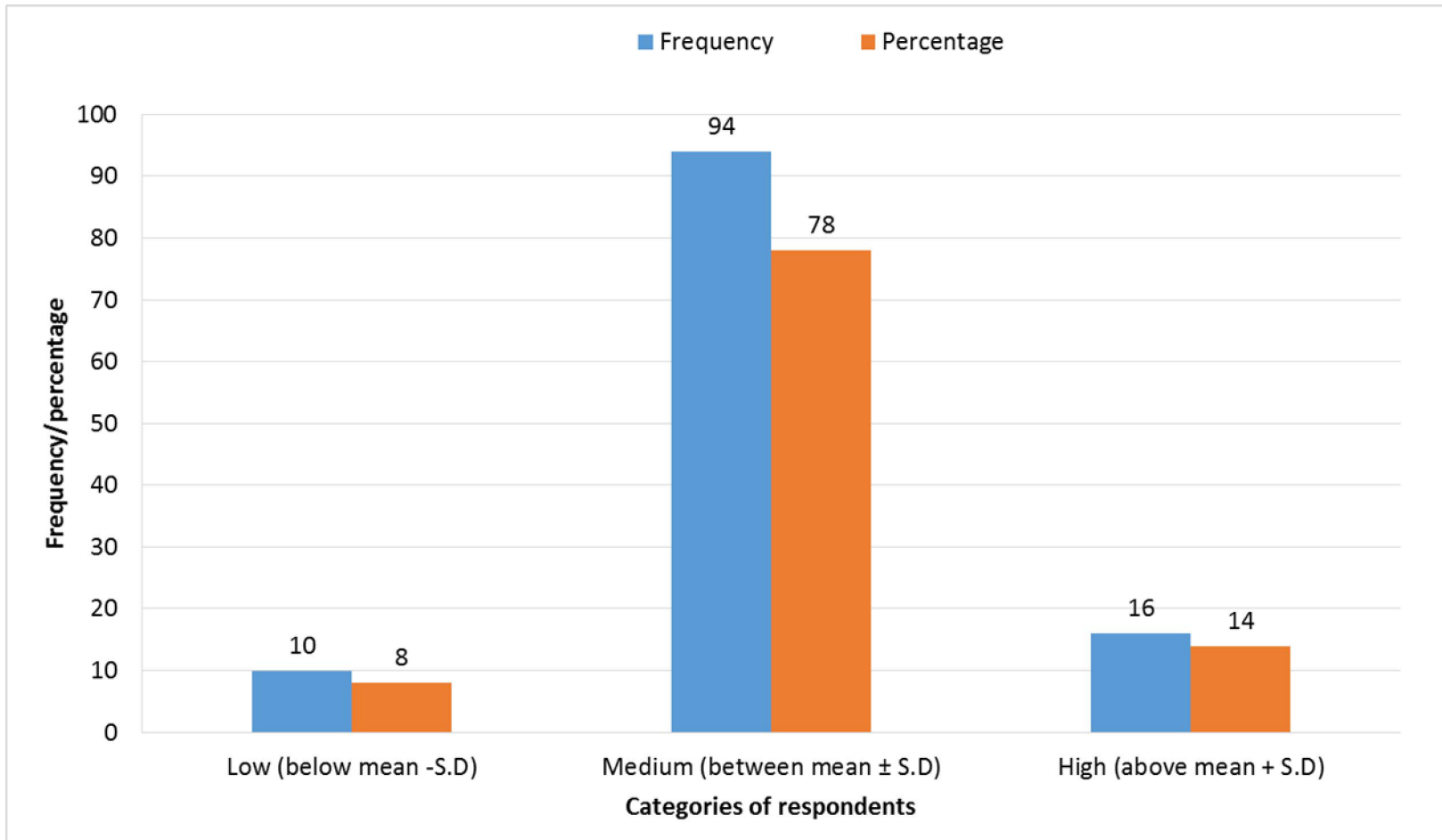
Variable	Categories	Respondents	
		Frequency	Percentage
Innovativeness	Low(below 8.25 )	10	8.00
	Medium(between 8.25-10.61)	94	78.00
	High(above 10.61)	16	14.00

The data in Table 4.4 and Fig. 4.9 indicated that majority 91.00 per cent of the growers had medium level of decision making ability followed by high and low level of decision making ability 8.00 per cent and 1.00 per cent respectively. The possible reason might be that decision making of grape growers especially in Indian conditions is very difficult due to ever changing agro-climatic conditions and lack of stabilized price policy. The findings are in line with the findings of Chaudhari (2006).

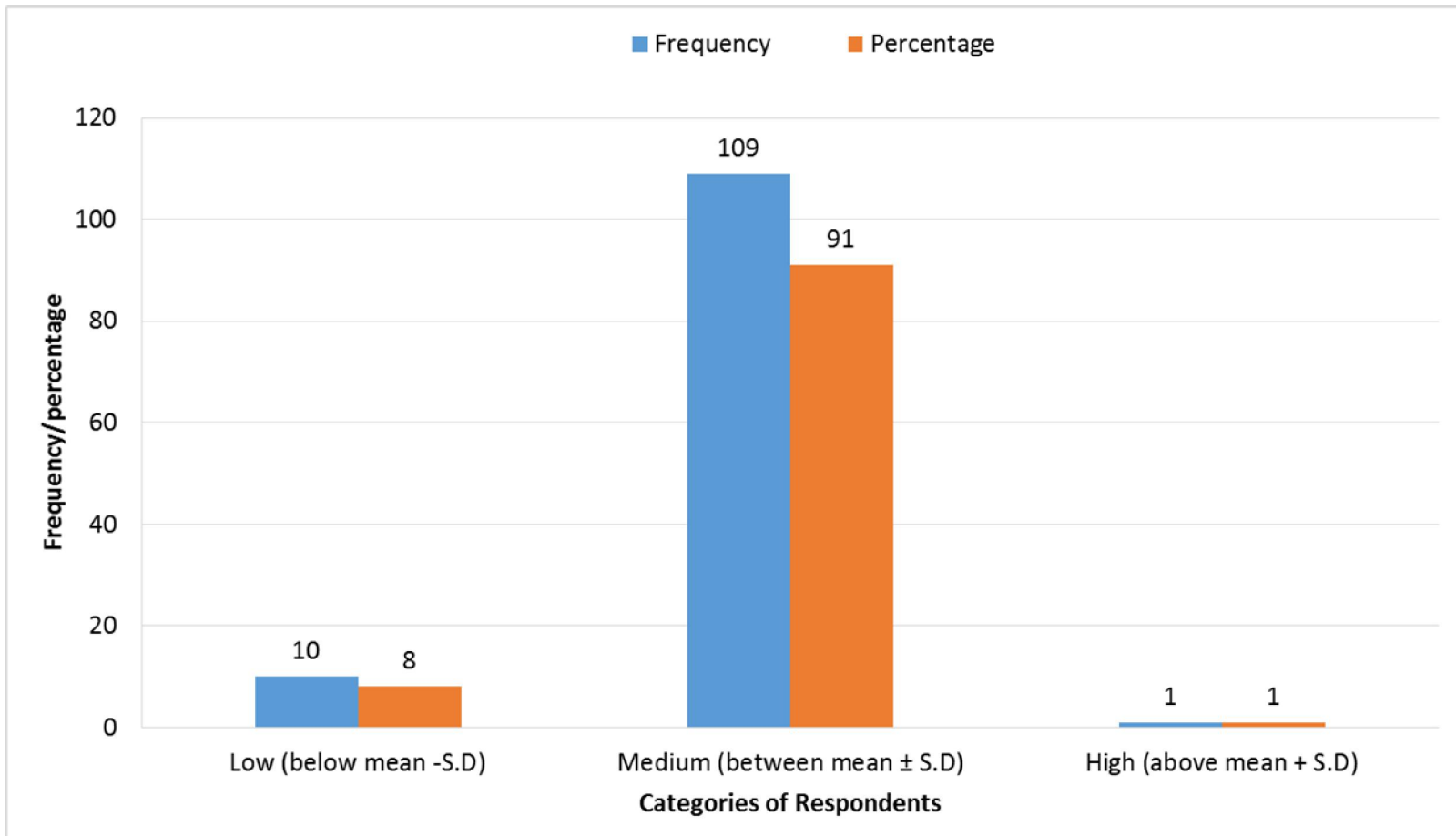
**Table 4.4: Decision Making Ability****(N=120)**

Variable	Categories	Respondents	
		Frequency	Percentage
Decision Making Ability	Low (below 15.83 )	10	8.00
	Medium (between 15.83-24.01)	109	91.00
	High (above 24.01)	1	1.00

The data in Table 4.5 and Fig. 4.10 revealed that majority 41.00 per cent of the growers had low level of information seeking ability followed by medium and high level of information seeking ability 32.00 and 27.00 per cent



**Fig. 4.8: Distribution of respondents on the basis of innovativeness**



**Fig. 4.9: Distribution of respondents on the basis of decision making ability**

respectively. The possible reasons for majority of grape growers to fall in low information seeking ability category might be due to their less education and low extension contact. The findings are in line with the findings of Vijaya Kumar (2011).

**Table 4.5: Information Seeking Ability**

(N=120)

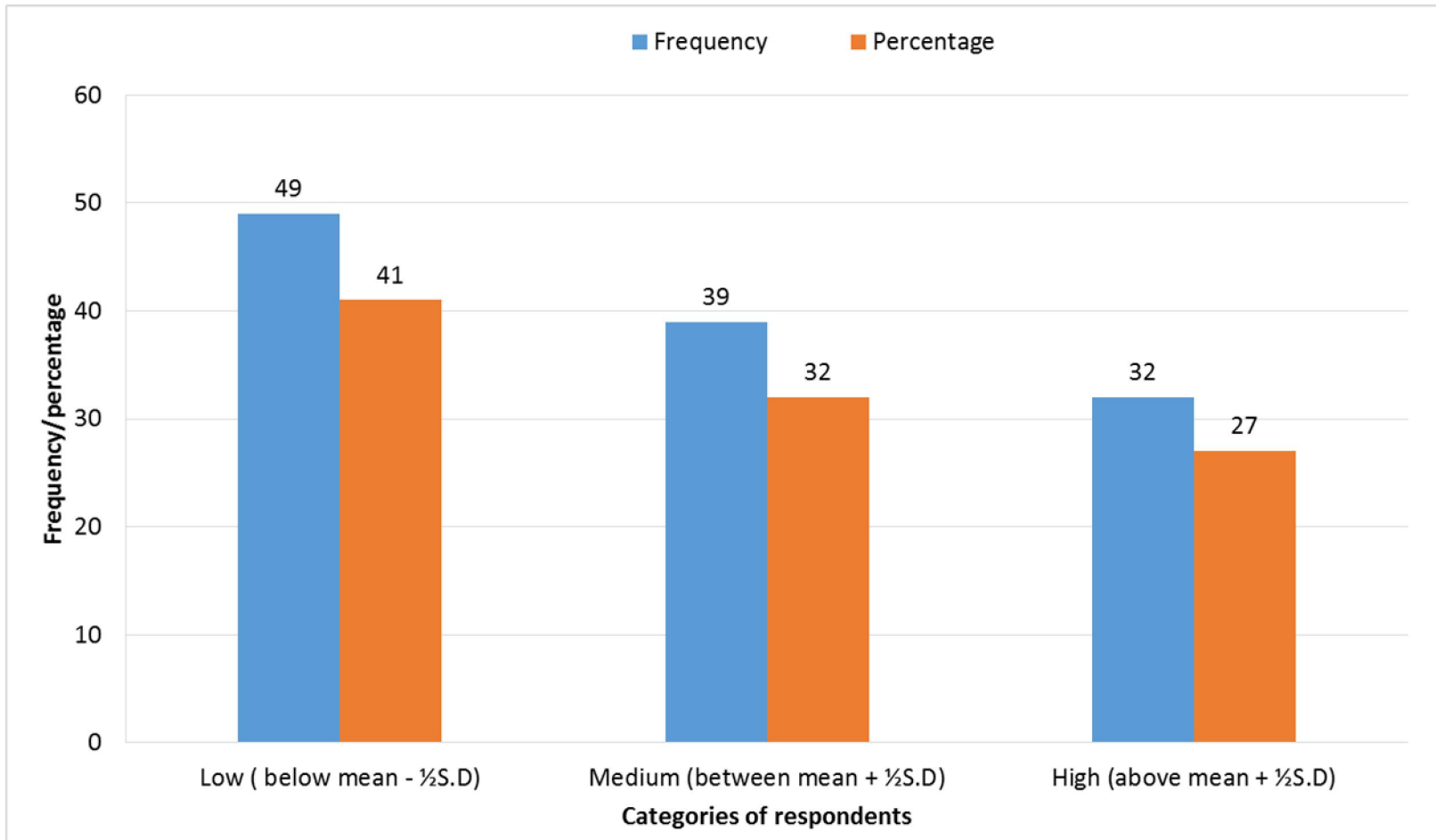
Variable	Categories	Respondents	
		Frequency	Percentage
Information Seeking Ability	Low (below 1.2 )	49	41.00
	Medium (between 1.2-3.7)	39	32.00
	High (above 3.7)	32	27.00

The data in Table 4.6 and Fig. 4.11 showed that majority 52.00 per cent of the growers had medium level of leadership ability followed by high and low level of leadership ability 27.00 and 21.00 per cent respectively. The reason for medium level of leadership ability might be that the grape growers had low level of education and low extension contact which made them followers to a leader but not as a leader. The findings are in line with the findings of Shreekant (2017).

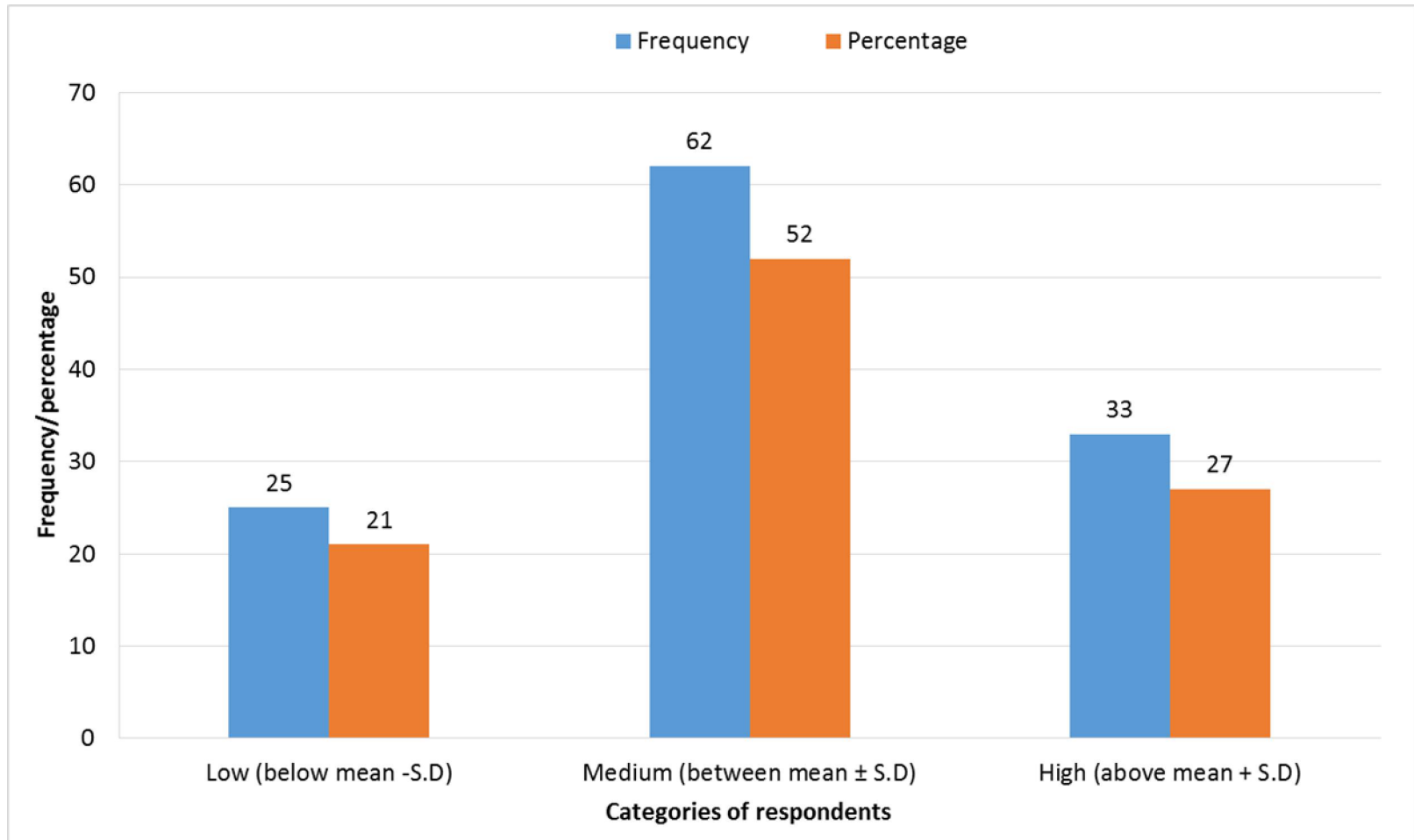
**Table 4.6: Leadership Ability**

(N=120)

Variable	Categories	Respondents	
		Frequency	Percentage
Leadership Ability	Low (below 2.24 )	25	21.00
	Medium (between 2.24-6.56)	62	52.00
	High (above 6.56)	33	27.00



**Fig. 4.10: Distribution of respondents on the basis of information seeking ability**



**Fig. 4.11: Distribution of respondents on the basis of leadership ability**

The data presented in Table 4.7 and Fig. 4.12 indicated that majority 78.00 per cent of the growers had medium level of achievement motivation, 16.00 per cent of the respondents were having high level of achievement motivation and 6.00 per cent of the respondents had low level of achievement motivation. This can be attributed to the social status a respondent feels to keep by achieving greater goals. The findings are in line with the findings of Gupta *et al.* (2013).

**Table 4.7: Achievement Motivation**

(N=120)

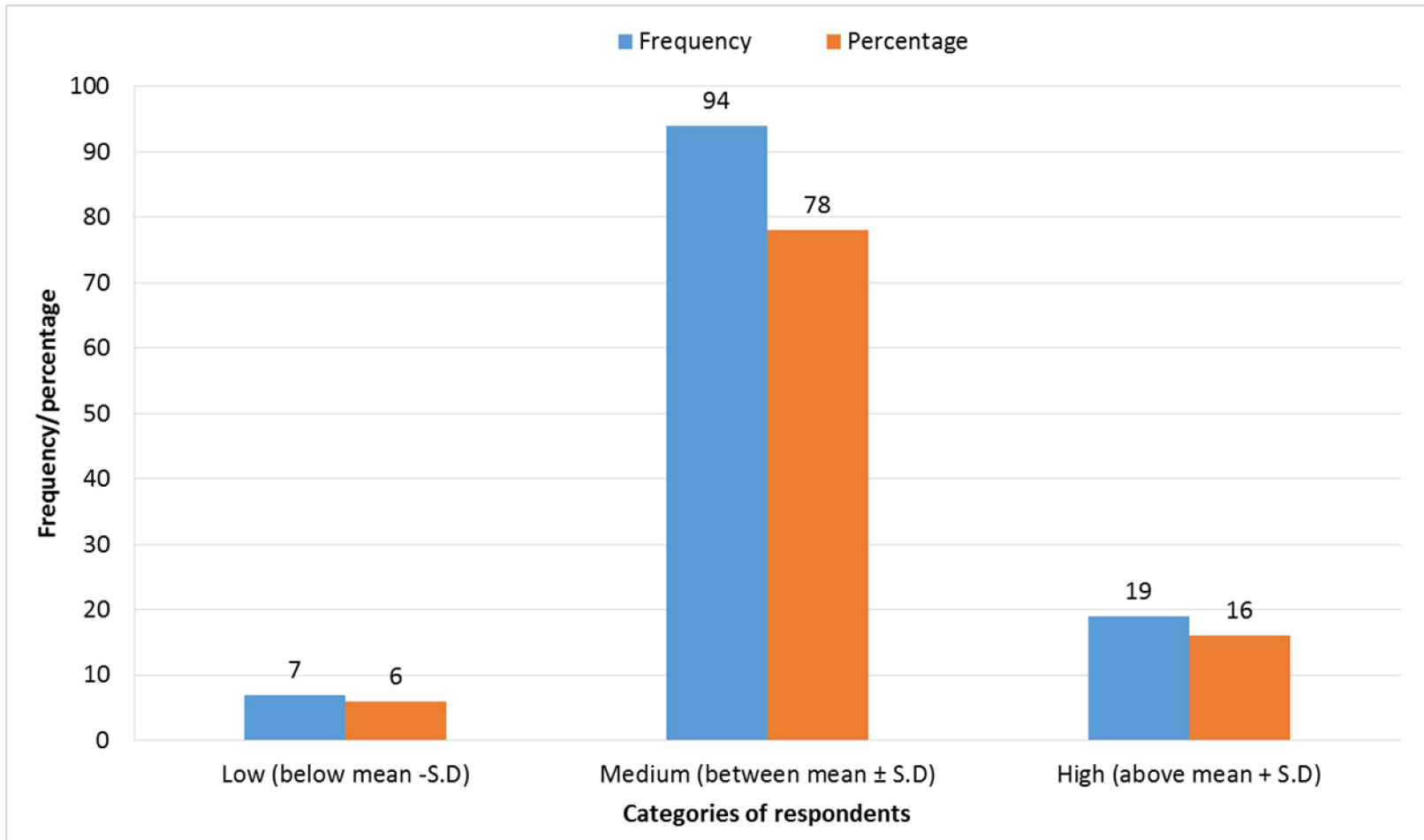
Variable	Categories	Respondents	
		Frequency	Percentage
Achievement Motivation	Low (below 1.69 )	7	6.00
	Medium (between 1.69-4.79)	94	78.00
	High (above 4.79)	19	16.00

The data in Table 4.8 and Fig. 4.13 revealed that majority 66.00 per cent of the growers had low level of risk orientation followed by high and medium level of risk orientation 22.00 per cent and 12.00 per cent respectively. The low risk orientation of grape growers might be due to their inability to face losses as they were financially not sound. The findings are in line with the findings of Sabi (2012).

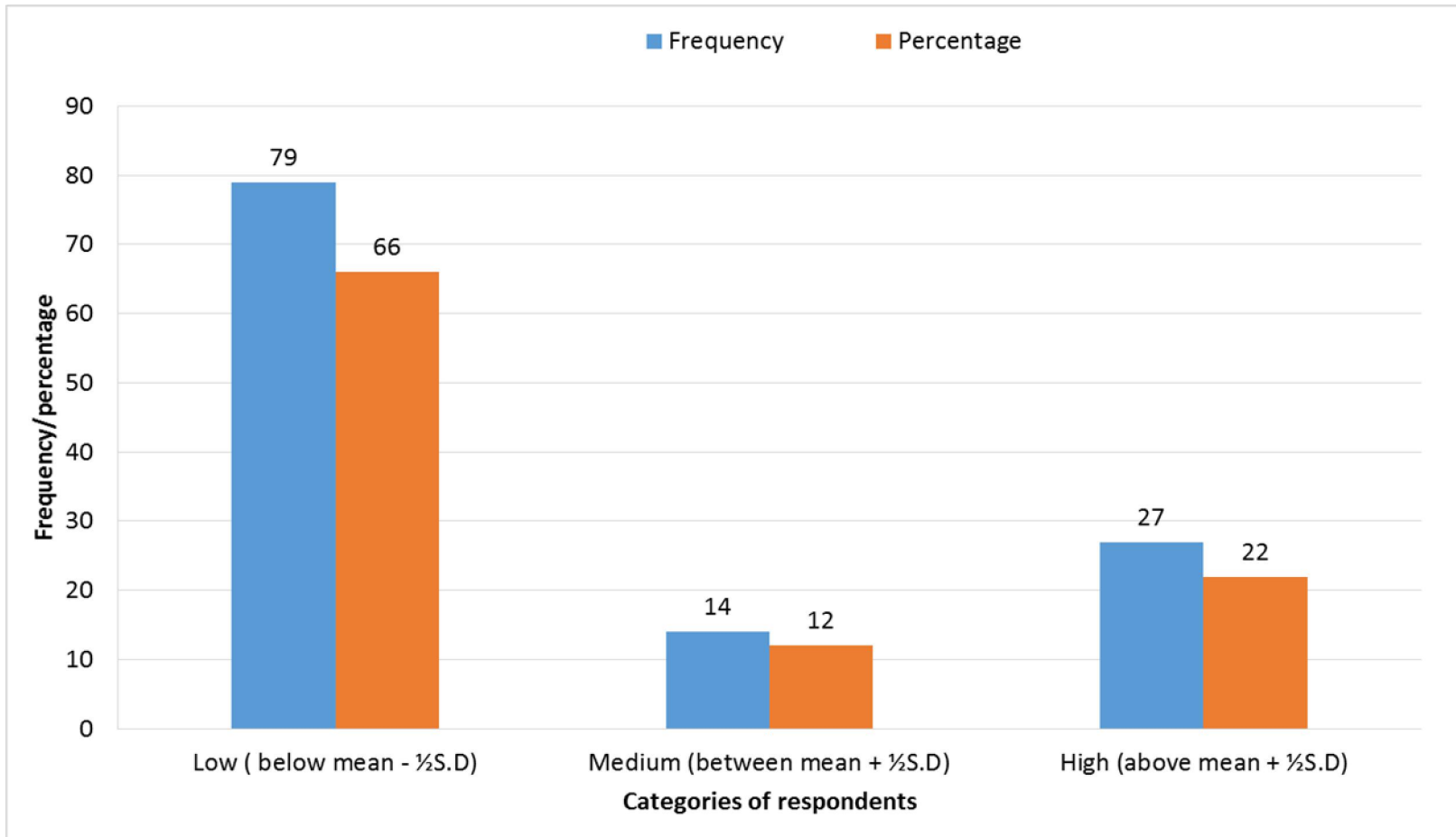
**Table 4.8: Risk Orientation**

(N=120)

Variable	Categories	Respondents	
		Frequency	Percentage
Risk Orientation	Low (below 0.08 )	79	66.00
	Medium (between 0.08-3.92)	14	12.00
	High (above 3.92)	27	22.00



**Fig. 4.12: Distribution of respondents on the basis of achievement motivation**



**Fig. 4.13: Distribution of respondents on the basis of risk orientation**

The data in Table 4.9 and Fig. 4.14 indicated that majority 59.00 per cent of the growers had medium level of management orientation followed by low and high level of management orientation 21.00 per cent and 20.00 per cent respectively. The findings are not in line with the findings of Nagesh (2006) and Patil (2008).

**Table 4.9: Management Orientation**

(N=120)

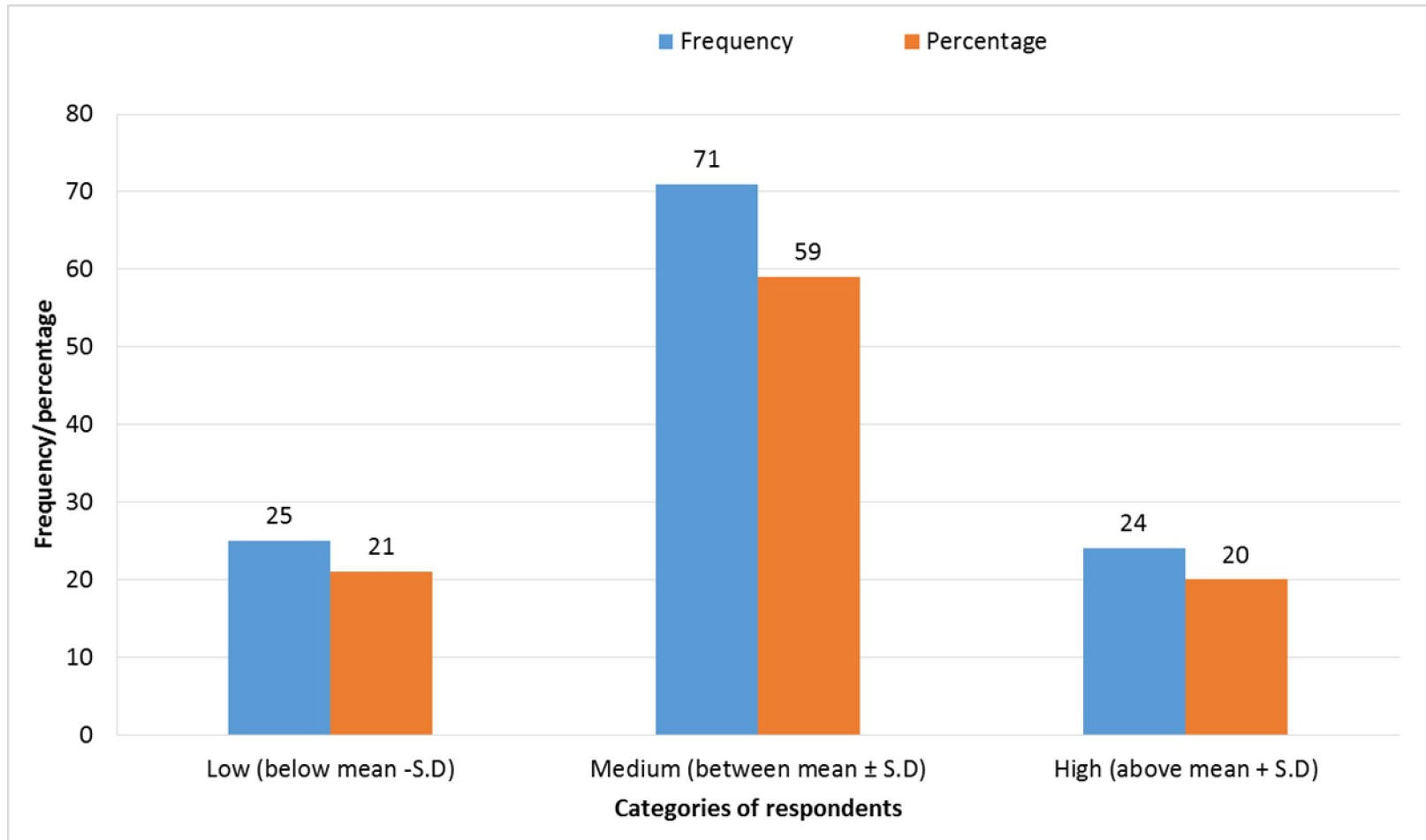
Variable	Categories	Respondents	
		Frequency	Percentage
Management Orientation	Low (below 20.09 )	25	21.00
	Medium (between 20.09-27.07)	71	59.00
	High (above 27.07)	24	20.00

The data in Table 4.10 and Fig. 4.15 revealed that majority 73.00 per cent of the growers had medium level of economic motivation followed by high and low level of economic motivation 19.00 per cent and 8.00 per cent respectively. The findings are in line with the findings of Sharma and Gupta (2013) and Suman (2019).

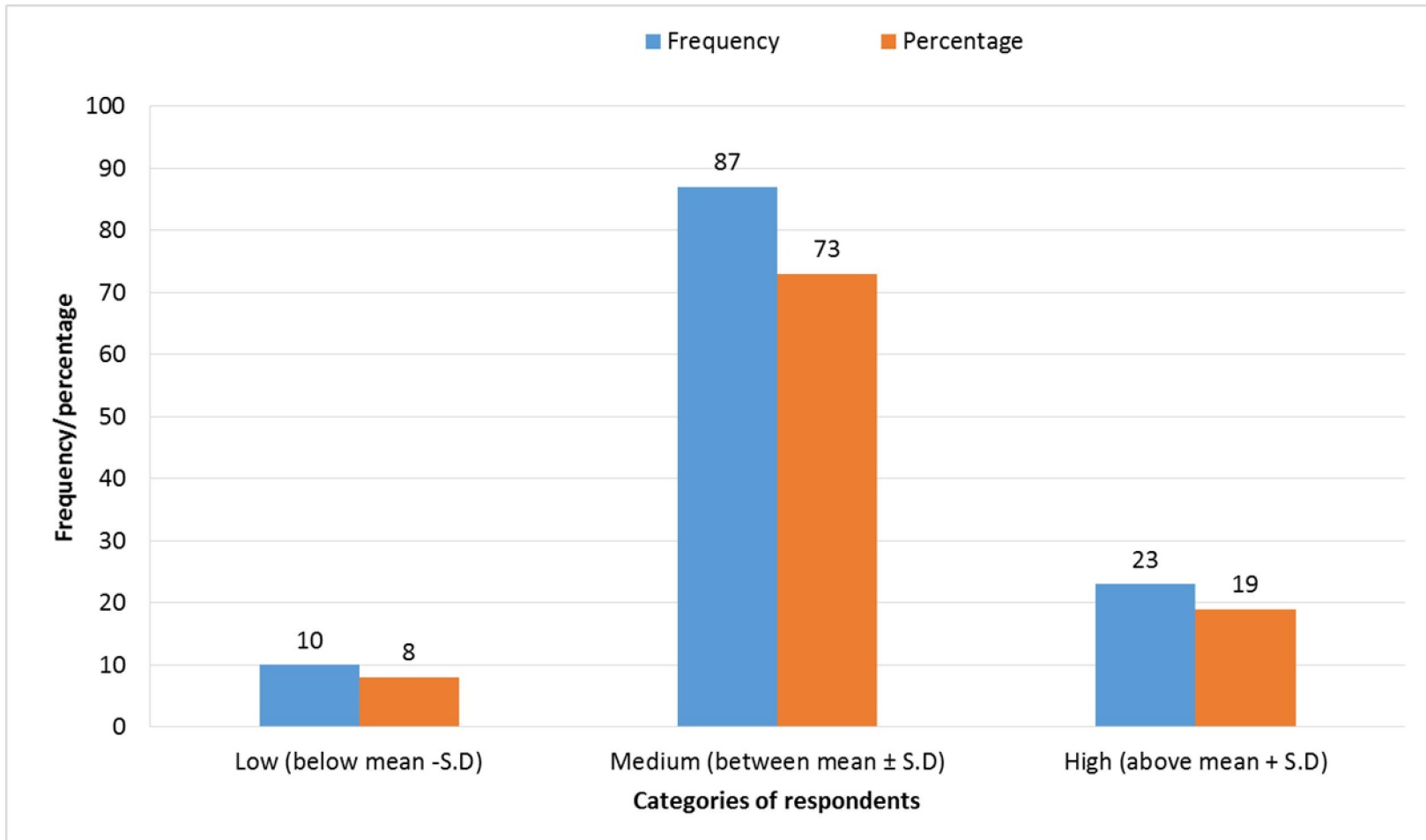
**Table 4.10: Economic Motivation**

(N=120)

Variable	Categories	Respondents	
		Frequency	Percentage
Economic Motivation	Low (below 13.54 )	10	8.00
	Medium (between 13.54-17.76)	87	73.00
	High (above 17.76)	23	19.00



**Fig. 4.14: Distribution of respondents on the basis of management orientation**



**Fig. 4.15: Distribution of respondents on the basis of economic motivation**

The Data in Table 4.11 and Fig. 4.16 showed that majority 82.00 per cent of the growers were having medium level of knowledge followed by 12.00 per cent of the growers had high level of knowledge and 6.00 percent of the growers had low level of knowledge. The agricultural university and state department of horticulture might have covered almost majority of the grape growers under different extension activities regarding the improved grape production technology. The findings are in line with the findings of Ghaswa (2013), Wankhade (2013) and Rashid (2018).

**Table 4.11: Knowledge**

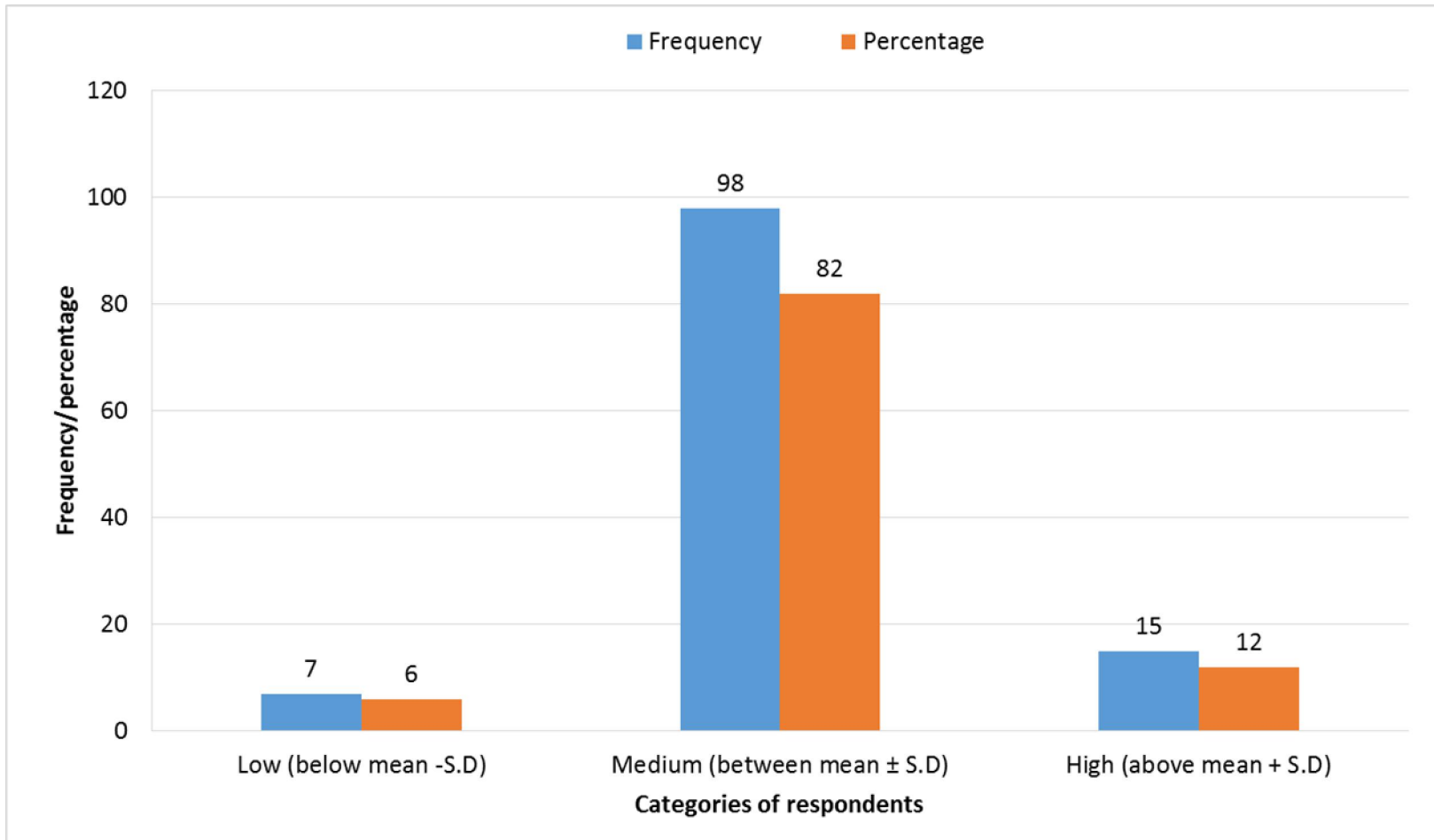
(N=120)

Variable	Categories	Respondents	
		Frequency	Percentage
Knowledge	Low (below 14.34 )	7	6.00
	Medium (between14.34-18.06	98	82.00
	High (above 18.06)	15	12.00

#### 4.2.3 Correlation coefficient between socio-economic profile with the dependent variables

Coefficient of Correlation (r value) was worked out to know the relationship between independent variables such as age, education, annual income, land holding, extension contact, mass media exposure with the components of entrepreneurial behaviour and knowledge.

From Table 4.12, the results reveal that age had negative and significant correlation with the decision making ability whereas it had non-significant relation with other dependent variables. The findings are in line with the findings of Jaisawal and Patel (2012).



**Fig. 4.16: Distribution of respondents on the basis of knowledge**

Education had a positive and significant correlation with the innovativeness, decision making ability, information seeking ability, economic motivation and knowledge of grape growers whereas non-significant correlation with other components. The findings are in line with the findings of Chouhan (2015).

Annual income had a non-significant correlation with the all the dependent variables except for leadership ability and risk orientation were the correlation was found to be significant. The findings are not in line with the findings of Wanole *et al.* (2018).

Land holding had a non-significant correlation with all the dependent variables except for innovativeness where it was significantly correlated. The findings are in line with the findings of Kulkarni and Jahagirdar (2019).

Extension contact had significant correlation with information seeking ability, leadership ability, achievement motivation, risk orientation, management orientation and economic motivation where as it was non-significantly correlated with innovativeness, decision making ability and knowledge. The findings are not in line with the findings of Shivacharan (2015).

Mass media exposure had a significant correlation with all the dependent variables. The findings are in line with the findings of Mehta and Sonawane (2012).

#### **4.2.4 Multiple regression analysis of independent variables with entrepreneurial behaviour**

The Table 4.13 shows that out of six independent variables, 3 variables namely annual income, extension contact and mass media exposure were found to have significant effect on the entrepreneurial behaviour of the grape growers. The R value (0.78) suggests that all independent variables jointly contributed 78 per cent towards the variation in extent of entrepreneurial behaviour. Further, the variables whose regression co-efficient values were found significant (annual

**Table 4.12: Correlation coefficient between socio-economic profile with the dependent variables (N=120)**

Independent Variables	Dependent Variables																	
	Innovativeness		Decision Making Ability		Information Seeking Ability		Leadership Ability		Achievement Motivation		Risk Orientation		Management Orientation		Economic Motivation		Knowledge	
	'r' value	'p' value	'r' value	'p' value	'r' value	'p' value	'r' value	'p' value	'r' value	'p' value	'r' value	'p' value	'r' value	'p' value	'r' value	'p' value	'r' value	'p' value
Age	-0.083	0.369	0.128*	0.032	-0.130	0.156	-0.109	0.235	0.036	0.695	-0.112	0.052	-0.090	0.330	-0.126	0.169	-0.073	0.431
Education	0.206*	0.024	0.363**	0.001	0.257*	0.035	0.109	0.235	0.026	0.780	-0.063	0.494	0.110	0.230	0.154*	0.023	0.064 *	0.025
Annual Income	0.068	0.460	0.183	0.405	0.156	0.890	0.220 *	0.016	0.127	0.165	0.107 *	0.033	0.160	0.080	0.155	0.091	0.023	0.802
Land Holding	0.235*	0.010	-0.064	0.486	-0.109	0.237	-0.061	0.507	0.048	0.601	-0.097	0.293	-0.031	0.736	0.078	0.397	-0.019	0.838
Extension Contact	0.184	0.545	0.660	0.475	0.694*	0.012	0.548 *	0.045	0.104*	0.028	0.033 *	0.009	0.293**	0.001	0.299*	0.001	0.177	0.053
Mass Media Exposure	0.111*	0.025	0.278 *	0.002	0.571**	0.001	0.414 *	0.022	0.096*	0.027	0.018 *	0.032	0.268*	0.003	0.145*	0.014	0.053 *	0.046

\* value less than 0.05 indicates that the correlation is significant.

\*\* indicates correlation is highly significant at 0.01

**Table 4.13: Multiple regression analysis of selected independent variables with entrepreneurial behaviour of grape growers**

Independent variables	Dependent Variables	
	Entrepreneurial Behaviour	
	'b' value	'p' value
Age	-0.015	0.062
Education	-0.041	0.615
Annual Income	0.000*	0.042
Land Holding	-0.023	0.065
Extension Contact	0.201*	0.002
Mass Media Exposure	0.141 *	0.001

R<sup>2</sup> value = 0.78

income, extension contact and mass media exposure) could be termed as good predictors in determining the extent of entrepreneurial behaviour of grape growers. The findings are in line with the findings of Jaswal and Patil (2012).

#### **4.3 Marketing structure of the grapes in the study area**

Marketing structure of the grapes prevalent in the study area was studied with a specific objective of working out the price spread, producer's share in consumer's rupee and marketing efficiency in prevalent marketing channels of the crop.

**Marketing channel:** The analysis of marketing channels was intended to provide a systematic knowledge of the flow of goods and services from its origin, producer, to final user, consumers. Accordingly, the author has tried to identify the different marketing channels or alternative routes the product flow from the point of origin to final destination. The main marketing channels identified were:

Channel I: Producer-Consumer

Channel II: Producer-Commission agent-Wholesaler-Retailer-Consumer

Channel III: Producer -Wholesaler-Retailer-Consumer

Majority of growers ( 60 per cent) expressed that they sold their produce to wholesalers (channel III) only due to the fact that majority of growers belonged to the small land holding category, having no resources to keep the commission agent between them and the wholesalers. Other reasons being pre-harvest agreement, immediate need for cash. About 30 per cent sold their produce to the commission agent (channel II) and 10 per cent sold their produce to retailer (channel I).

From Table 4.14, it is evident that the average net price received by the grower in channel I, channel II and channel III is Rs. 610, 577 and 603 respectively. The cost borne by the producer in channel II is maximum followed by channel III and channel I. Wholesalers price for 3 channels are Rs. 0, 680 and 680 respectively with marketing margin of Rs. 0, 38 and 38 respectively while as retailer's sale price/ consumers purchase price for 3 channels are Rs. 640, 775 and 760 with retailers marketing margin of Rs. 0, 55 and 50 respectively. It is also evident that commission agent has been taking 4% commission in total. It clearly depicts that channel I includes minimum expenditure borne by the producer followed by channel III and channel II respectively.

**Table 4.14: Producer's share in consumer's rupee, marketing efficiency and price spread of the grape growers in different prevailing marketing channels**

(N=120)

S. No.	Particulars	Channel I (Rs/bag)	Channel II (Rs/bag)	Channel III (Rs/bag)
<b>Sale price by the grower</b>		640	640	640
<b>Expenses incurred by the grower Rs/bag</b>				
a) Weighing charges		-	-	-
b)Packaging cost		25	25	25
c)Transport charges		5	10	10
d)Loading / Unloading		-	2	2
e)Commission taken by agent		-	26 (4%)	-
f)Total marketing cost borne by the producer		30	63	37
g)Net price received by the grower		610	577	603
<b>Commission agent</b>				
Purchase price of Commission agent		-	640	-
<b>Wholesaler</b>				
<b>Wholesaler's purchase price</b>		-	640	640
Expenses borne by the wholesaler				
a) Transport charges		-	-	-
b) Loading / Unloading charges		-	2	-
c)Weighing charges		-	-	-
d)Other charges		-	-	-
Marketing margin of wholesaler		-	38	38
Wholesaler's sale price		-	680	680
<b>Retailer</b>				
Retailer Purchase price		-	680	680
<b>Expenses borne by the retailer</b>				
a) Transport charges		-	25	25
b) Loading / Unloading charges		-	10	10
c) Other charges		-	5	-
d) Marketing margin of retailer		-	55	50
<b>Consumer</b>				
<b>Retail sale price/Consumers purchase price</b>		640	775	760

1 bag=5 kgs

In case of grapes, Table 4.15 revealed that marketing cost and marketing margin of respondents in channel II was higher than the channel III followed by channel I which clearly depicts that channel I was more efficient than the channel III followed by channel II as no commission agent was present in channel III and no commission agent and wholesaler in the channel I.

**Table 4.15: Average marketing costs and marketing margins of the grape growers in different prevailing marketing channels (N=120)**

Particulars	Channel I	Channel II	Channel III
Total marketing cost	30	79	69
Total marketing margin	00	119	88

**Table 4.16: Distribution of respondents according to producer's share in consumer's rupee, marketing efficiency and price spread in different marketing channels of grapes (N=120)**

Particulars	Producer's share in consumer rupee (%)	Marketing efficiency	Price spread
Channel I	95.00	21	0
Channel II	74.00	3.9	135
Channel III	79.00	4.8	120

The marketing channel III though had less producer's share than channel I and more price spread but was found to be most prevalent in the study area. The reason might be because the wholesaler exploit the producer through their more accessibility to markets. The efficiency could be increased through awareness regarding the market information by making up-to-date market information available to all growers through various means, including good market information system and various medias which facilitate the markets.

Producer's share :  $P_s = (P_f / P_r)100$

Producer's share= farmer's purchase price/ price paid by consumer x 100

Marketing efficiency was calculated through shepherd's method i.e.,

Market efficiency = Consumer purchase price/ Total market cost+ Marketing margins

Higher the ratio, higher is the marketing efficiency.

Price spread= price paid by consumer – price received by producer

Table-4.16 clearly indicated that channel I had maximum producer's share (95%) in consumer rupee, marketing efficiency (Rs.21) and lowest price spread (Rs.0.00) compared to channel I and II.

It indicates that maximum share of profit is taken by retailers and wholesalers without adding any value to it. This implies that the longer the market channel, more the farmers being exploited by the unnecessary channels or they get lower price or unfair for their production as compared to other middlemen. Hence, appropriate measures are needed here to enable farmers to get fair price for their produce. The high percentage of margin to price difference is indicative of possible large trade profits and poor marketing efficiency in grape crop. It clearly depicts that channel III is most efficient among the three channels.

#### **4.4 Constraints faced by the grape growers and suggest suitable remedial measures**

The data in Table 4.17 indicated the constraints which were faced by grape growers. The problems expressed by the respondents were tabulated along with frequency, percentage and ranks.

In order of priority, majority 85% of the growers reported that no bowers were provided to them', 75.83% of the growers reported the small fruit size of the berries', 61.66% indicated the irregular rains', 35% depicted onset of diseases', 29.16% indicated fluctuation of market prices, 19.16% reported distant markets' and 15% indicated no net availability'.

**Table 4.17: Constraints faced by the grape growers**

**(N=120)**

<b>S. No.</b>	<b>Items</b>	<b>Frequency</b>	<b>Percentage</b>	<b>Ranking</b>
1.	Small fruit size	91	76.00	II
2.	Diseases	42	35.00	IV
3.	No Bowers	102	85.00	I
4.	No Nets	18	15.00	VII
5.	Irregular rains	74	62.00	III
6.	Distant markets	23	19.00	VI
7.	Frequent fluctuation of prices	35	29.00	V

Multiple response

## Chapter-5

### SUMMARY AND CONCLUSION

Grape (*Vitis vinifera* L.), the queen of fruits is botanically a berry and belongs to genus *Vitis*. Grape can be eaten fresh as table grapes or can be used for making jams, juices etc. Grape cultivation is one of the remunerative farming enterprises in India (Sumana *et al.*, 2018). It is considered as one of the most important commercial fruit crops of temperate regions. However, it is also grown successfully in tropical and sub-tropical regions of the world (Kumar, 2017). Globally grape production contributes about 16.00 per cent of total fruit production. Grape is the third most widely cultivated fruit after citrus and banana (Bhat *et al.*, 2017a). Italy ranks first in production of grapes with an annual production of 8,307,514 metric tons followed by France and United States with annual productions of 67 and 62 lakh metric tons (approx.) respectively (Anonymous, 2018).

In India, remarkable success has been achieved in table grape production and yield of fresh grape is the highest in the world (Bhat *et al.*, 2017b). Cultivation of grapes in India has been commercially taken up under a wide range of soil and climatic conditions in the states of Maharashtra, Karnataka, Telangana, Andhra Pradesh and Tamil Nadu. It is one of the most remunerative farming enterprises that had created interest among Indian growers. India is the 13th largest producer of grapes accounting 2.24 per cent of the global production (Anonymous, 2015-16). In India, the area under grape is 1.36 lakh ha with an annual production of 26 lakh Mt approximately (Anonymous, 2016-17).

In Jammu and Kashmir, the area under grape is 321 ha with a production of 648 Mt (Anonymous, 2016-17). Kashmir grapes lived up its reputation for being one of the choicest fruits. Kashmir valley is endowed with congenial agro-climatic conditions for a wide range of temperate fruits. In Kashmir valley the

productivity is highest in district Ganderbal which ranks first in area (187.85 ha) and production (358.43Mt) under grapes (Anonymous 2015-16).

Kashmir grapes are known for its delectable taste, large berry size and are available in off seasons of the year when no other grape variety is ready to harvest from rest of the country. The productivity of grapes is maximum among most of the fruit crops and thus this crop has a great potential in economic upliftment of farmers. It is one of the most remunerative farming enterprise that has inculcated enthusiasm among grape growers of the valley. Since fruit production is capital intensive and risky, a grape grower needs to possess the ability to take risk, innovativeness, decision making, imitative and capacity to marshal resources in order to run the enterprise successfully. In addition to these, a grower must also have leadership qualities, management orientation, achievement motivation, economic motivation and information seeking ability. These characteristics enable him to decide and accept to adopt appropriate scientific farming methods. Entrepreneurial behaviour has been now recognized as a concept, not only vital for starting industries but also in the development of agriculture/horticulture. Thus, in all economic development activities more and more focus is being centered on entrepreneurial behaviour of the people. Understanding of entrepreneurial behaviour is essential to improve the quality of extension services offered by the institutional and non-institutional agencies. All round development of agriculture/horticulture is possible with the effective exploitation of human as well as material resources. In our valley, where human resources are found to be plenty, we can identify individuals in all segments of population who have the requisite entrepreneurial skills. An attempt has also been made to study the constraints faced by grape growers, thereby the efforts can be made to eliminate those constraints in order to increase their entrepreneurial behaviour. The study also focuses on the marketing structure of grapes so as to obviate the problems occurring in the marketing channels. The results of the study are expected to be useful to the extension personnel and the administrators to know the extent of

entrepreneurial behaviour which the grape growers possess and will also help the extension workers to concentrate on a particular category of orchard holders who need the information on specific aspects of grape production for increasing productivity and quality.

At this juncture, it is also logical to analyze to what extent our grape growers are progressive, forward looking and willing to diversify their occupations as development of economy of any nation depends primarily on the important role played by entrepreneurs. Keeping the above facts in view, the study was designed to analyze “**Entrepreneurial Behaviour of Grape Growers in District Ganderbal**”, which was planned with the following objectives:

- To study the socio-economic profile of grape growers.
- To study the entrepreneurial behaviour of grape growers.
- To study the marketing structure of grapes.
- To study the constraints faced by grape growers.

The study was conducted in Kashmir division of Jammu and Kashmir. Multistage purposive cum random sampling procedure was followed for the purpose of study. In Kashmir division, district Ganderbal was selected purposively on the basis of maximum area and production under grapes. Further Horticultural Block, Lar was selected purposively having maximum area under grape crop. A list of grape growing villages was procured from Chief Horticulture Office, Ganderbal. Six villages were selected purposively on the basis of maximum area and 120 grape growers were selected on the basis of proportionate allocation method having minimum of 8 grape vines/trees.

The socio-economic profile of grape growers namely age, education, annual income, land holding, extension contacts and mass media exposure were taken as independent variables whereas knowledge and entrepreneurial behaviour as dependent variables with entrepreneurial behaviour consisting of the following

components viz., innovativeness, decision making ability, information seeking ability, leadership ability, achievement motivation, risk orientation, management orientation and economic motivation of grape growers.

The structured interview schedule was prepared for the collection of data regarding socio-economic background, entrepreneurial behaviour and knowledge of the grape growers as recommended by SKUAST-K. The data was analyzed with the help of suitable statistical techniques i.e., mean, standard deviation, correlation coefficient and regression analysis.

### **Major findings**

#### **Socio-economic background of grape growers**

The result of the study revealed that majority (71%) of the grape growers belonged to age group of 36-60 years and were illiterate (32%). Majority of the grape growers (63%) were having the land holding up to 10 kanals and majority of them (65%) had annual income up to ₹ 2 lakh. The majority growers had low extension contacts and had medium mass media exposure.

#### **Overall entrepreneurial behaviour of grape growers**

About 73 per cent of the grape growers had medium entrepreneurial behaviour followed by high 15 per cent and low 12 per cent entrepreneurial behaviour.

#### **Components of entrepreneurial behaviour**

Majority 78 per cent of the grape growers had medium innovativeness, whereas 14 per cent and 8 per cent of the respondents were having high and low level of innovativeness respectively.

Majority 91 per cent of the grape growers had medium level of decision making ability followed by low 8 per cent and high 1 per cent level of decision making ability.

About 41 per cent of the grape growers had low information seeking

ability whereas, 32 per cent and 27 per cent of the growers had medium and high information seeking ability, respectively.

Majority 52 per cent of the grape growers had medium leadership ability, whereas 27 per cent and 21 per cent of the growers were having high and low leadership ability, respectively.

Majority 78 per cent of the grape growers had medium level of achievement motivation followed by high 16 per cent and low 6 per cent level of achievement motivation.

About 66 per cent of the grape growers had low level of risk orientation, whereas 22 per cent and 12 per cent of the growers were having high and medium level of risk orientation, respectively.

Majority 59 per cent of the grape growers had medium management orientation followed by low 21 per cent and high 20 per cent management orientation.

Majority 73 per cent of the grape growers had medium economic motivation whereas, 19 per cent and 8 per cent of the growers had high and low economic motivation, respectively.

### **Knowledge of grape growers**

Majority 82 per cent of the grape growers had medium level of knowledge, whereas 12 per cent and 6 per cent of the growers were having high and low level of knowledge, respectively.

### **Correlation between selected socio economic profile of the grape growers with dependent variables**

The results revealed that age had positive and significant correlation with the decision making ability whereas it had non-significant relation with other dependent variables.

Education had a positive and significant correlation with the innovativeness, decision making ability, information seeking ability, economic motivation and knowledge of grape growers whereas non-significant correlation with other components.

Annual income had a non-significant correlation with the all the dependent variables except for leadership ability and risk orientation were the correlation was found to be significant.

Land holding had a non-significant correlation with all the dependent variables except for innovativeness where it was significantly correlated.

Extension contact had significant correlation with information seeking ability, leadership ability, achievement motivation, risk orientation, management orientation and economic motivation where as it was non-significantly correlated with innovativeness, decision making ability and knowledge.

Mass media exposure had a significant correlation with all the dependent variables.

#### **Multiple regression analysis of selected independent variables with entrepreneurial behaviour of grape growers**

The results showed that out of six independent variables, 3 variables namely annual income, extension contact and mass media exposure were found to have significant effect on the entrepreneurial behaviour of the grape growers. The R value (0.78) suggests that all independent variables jointly contributed 78 per cent towards the variation in extent of entrepreneurial behaviour. Further, the variables whose regression co-efficient values were found significant (annual income, extension contact and mass media exposure) could be termed as good predictors in determining the extent of entrepreneurial behaviour of grape growers.

#### **Marketing structure of grapes**

Three marketing channels were identified viz. channel 1: Producer-

consumer, channel 2: Producer-commission agent-wholesaler-retailer-consumer, channel 3: Producer-wholesaler-Retailer-consumer and channel 1 was found to be most significant than other remaining two but majority of the respondents market their produce through Channel 3 with marketing efficiency of 4.8 and producer's share in consumer's rupee of 79.

Conclusion and inferences of the study indicated that some interventions should be taken at least to improve the inefficient functioning of fruit marketing system and enhance the participation of farmers in fruit production. Those interventions could be long run or short run solutions. The market system improvements revolve around institutional, legal frames, market linkage, capacity building (education and training) and developing market infrastructure facilities.

#### **Constraints faced by the grape growers**

The data indicated the constraints which were faced by grape growers. The problems expressed by the respondents were tabulated along with frequency, percentage and ranks.

In order of priority, majority 85% of the growers reported that no bowers were provided to them', 75.83% percent of the growers reported the small fruit size of the berries', 61.66% indicated the irregular rains', 35% indicated onset of diseases', 29.16% indicated fluctuation of market prices, 19.16% indicated distant markets' and 15% indicated no net availability'.

#### **CONCLUSION**

The results of the study revealed that majority of the grape growers belonged to age group of 36-60 years and were illiterate. Majority of the grape growers were having the land holding up to 10 kanals and majority of them had annual income up to ₹ 2 lakh. The growers had low extension contacts and had medium mass media exposure. The majority of the growers had medium innovativeness, decision making ability, leadership ability, achievement motivation, management orientation and economic motivation. The majority of

growers had low information seeking ability and risk orientation. The overall entrepreneurial behaviour and knowledge of grape growers about recommended package of practices was found to be medium.

**Suggestions for promoting the entrepreneurial behaviour and overcoming the problems faced by grape growers**

The overall entrepreneurial behaviour of grape growers was found to be medium level and could be promoted by means of educational programmes through KVK's, demonstration camps, field visits and visit of experts from department of Agriculture and Horticulture. The extension functionaries involved in Agriculture and Horticulture sectors should arrange such programmes so that the knowledge of grape production technology can be increased and thereby the entrepreneurial behaviour of same may be enhanced. Interaction of the grape growers with different extension personnel, progressive farmers play an important role in broaden the vision of them. In order to achieve this purpose, more and more extension activities should be organized by Horticulture / Agriculture Departments, State Agricultural Universities and other concern organization which will encourage the farmers for active participation. By this way, we can give the exposure to grape growers to become good entrepreneurs

It is also evident from the study that most of the farmers market their produce at main market at Parimpora. Hence, strengthening the market infrastructure at district level will ensure efficient marketing system for grape growers and also reduce the cost of transportation. Government should come up with programs which will help the growers in selling the grapes to distant markets to get higher returns and should check the exploitation by commission agents. Government and the farmers should established agro-processing units on co-operative basis to reduce the distress sale and to avoid glut in the market in the peak period.

It is also observed from the study that many constraints are faced by grape growers. Therefore, Horticulture Department, SKUAST-K and other concerned

departments have to put their efforts in providing the timely and knowledgeable information to the growers through demonstration camps, short term training programs, field visits or mass media. The extension functionaries should take the initiatives at the grass root level in developing the contacts with the growers and they should be encouraged to take part in various extension activities like farmer's day, Kisan melas, trainings etc.

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**Sher-e-Kashmir**  
**University of Agricultural Sciences and Technology of Kashmir.**  
**Faculty of Agriculture, Wadura, Sopore-193201.**  
**Division of Agriculture Extension & Communication**

**Entrepreneurial Behaviour of Grape Growers in District Ganderbal [J&K]**  
**INTERVIEW SCHEDULE**

**VILLAGE:**

**DATE:**

**RESPONDENT NO:**

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**PART-1**

**SOCIO-PERSONAL & ECONOMIC PROFILE OF GRAPE GROWERS**

**NAME OF THE FARMER:**

**MOBILE NO:**

**1. AGE:**

**2. EDUCATION:**

Illiterate(0), Primary school(1), Middle school(2), High school(3), Graduate(4),  
Above  
graduate(5) .....

**3. LAND HOLDING: (In kanals)**

Irrigated	
Unirrigated	
Land under Grape Orchard	
No. of grape trees	
Total	

**4. ANNUAL INCOME:**

a) Main occupation..... Rs.....

b) Secondary occupation.....Rs.....

Total (Rs).....

**5.EXTENSION CONTACTS:**

**For seeking information regarding grapes whom do you contact?**

S. No.	Information Sources	Frequency of contact		
		Frequently	Occasionally	Never
<b>A</b>	Horti. Technicians			
<b>B</b>	H.D.O			
<b>C</b>	District SMS			
<b>D</b>	Scientists (SKUAST-K)			
<b>E</b>	Input dealer			
<b>F</b>	Any other			

**6. MASS MEDIA EXPOSURE:**

Please state what are the various mass media channels you have utilized for getting information

and the degree of contact with them?

S.no.	Category	Regularly(3)	Occasionally(2)	Rarely (1)	Never (0)
<b>A</b>	Newspaper				
<b>B</b>	Radio				
<b>C</b>	Television				
<b>D</b>	Any other				

**7. INNOVATIVENESS:**

S.No	Statement	Most likely(2)	Least likely(1)
A	Do you feel restless till you try out a new technology, you have heard about?		
B	Do you usually wait to see what results other obtain before you try out the new technology?		
C	Somehow do you believe that traditional ways of running an enterprise, processing and packing are the best?		
D	Often new practices and technologies about various activities are not successful, however if they are promising would you like to adopt them.		
E	Do you feel cautious about the new practice?		
F	Keeping yourself up to date with information on the new technologies, but does that mean that you try out all the new technologies?		

**8. DECISION MAKING ABILITY:**

S. No	Category	Choosing the most appropriate alternative			
		Self	Elders	Husband/Wife	Children
A	How do you decide on choosing between traditional or modern methods of farming?				
B	How do you decide about different varieties of saplings for plantation?				
C	How did you decide the time of marketing of your produce?				
D	How did you decide the quantity of fertilizers used to your grape plants?				
E	Who will watch the profit / loss?				
F	Who would keep the written records maintained?				

**9. INFORMATION SEEKING ABILITY:**

S. no.	Category	Exposure of farmer to diff. sources			
		Frequently (3)	Occasionally (2)	Rarely (1)	Never (0)
A	How many demonstrations have been conducted on your grape orchard?				
B	How many times you participate in extension meetings?				
C	How many discussions you have with H. D. O?				
D	Do you watch any agriculture/horticulture programme?				
E	How many times you have participated in Krishi mela/ farmers day?				
F	How many times you have seen Exhibition on Horticulture?				
G	How many times you had read an extension publications?				

**10. LEADERSHIP ABILITY:**

S. No	Category	Degree to which individual initiates action of others		
		Always(2)	Sometimes(1)	Never(0)
A)	Did you participate in group discussions on new farm practices/ new technologies?			
B)	Do village people regard you as good source of information on new farm practices?			

C)	Whenever you see/hear a new farm practice/ technologies did you initiate discussion about it with your colleagues?			
D)	Do you offer new suggestions to problems?			
E)	Do you assign the farm work to your family members?			

**11. ACHIEVEMENT MOTIVATION:**

S.No	Statement	Response categories		
		Agree(3)	Undecided(2)	Disagree(1)
A)	It is better to be content with whatever little one has, than to be always struggling for more			
B)	No matter what I have done I always want to do more			
C)	Work should come first even if one cannot get proper rest in order to achieve ones goals			
D)	One should succeed in occupation even if one has to neglect his family			
E)	Would like to try hard at something really difficult even if it provides that I cannot do it			
F)	The way things are now-a-days discourage one to work hard			

**12. RISK ORIENTATION:**

S.No	Category	Response Category				
		Strongly agree	Agree	Undecided	Disagree	Strongly disagree
A)	It is good for an entrepreneur to take risk when he knows his chance of success is fairly high					
B)	It is better for an entrepreneur not to try new methods unless most others have them done with success					
C)	An entrepreneur should diversify his / her unit to avoid greater risks involved in single activity					
D)	An entrepreneur should rather take more of a chance in making a big profit than to be content with a smaller but less risking profit					
E)	An entrepreneur who is willing to take greater risks than average person, usually do better financially.					
F)	Trying out entirely new method involves risk, but it is worth it					

### 13. MANAGEMENT ORIENTATION

	Statement	Response Categories				
		SA	A	UD	DA	SDA
<b>1</b>	<b>Planning Orientation</b>					
A)	One need to consult an agriculture expert for establishment of an enterprise					
B)	It is possible to increase the profit / returns through production plan					
C)	It is not necessary to think a head of the cost involved in establishing an enterprise					
<b>2</b>	<b>Production Orientation</b>					
A)	It is a good practice to use good quantity/quality of raw material					
B)	Use of skilled labour increases efficiency					
C)	Mechanization of the unit effects output of the enterprise					
<b>3</b>	<b>Marketing Orientation</b>					
A)	Grading of the produce increases the price					
B)	Market demand should be kept into the consideration					
C)	Market news is not much useful to an entrepreneur					

### 14. ECONOMIC MOTIVATION:

S.No	Statement	Response Category				
		SA	A	UD	DA	SDA
A)	An entrepreneur should work towards large yields and economic profits.					
B)	An entrepreneur should try new ideas which may earn him more money					
C)	An entrepreneur should diversify his / her unit to increase monetary profits in comparison of single unit					
D)	The most successful entrepreneur is one who makes the most profit.					
E)	An entrepreneur must earn his living but the most important thing in life cannot be defined in economic terms					



**PART-III**

**Study of marketing structure of Grapes**

A) Location of the market: .....

B) Marketable Surplus of grape growers .....

i) Total Grape production(Kg) .....

ii) Home consumption(Kg) .....

iii) Marketable surplus(Kg) .....

iv) Marketable surplus as percentage of total production .....

C) Disposal pattern : .....

D) Channels prevalent:

Channel I. Producer-Consumer

Channel II. Producer-Commission agent-Wholesaler-Retailer-Consumer

Channel III. Producer- Wholesaler-Retailer-Consumer

**MARKETING COSTS, MARGINS, PRICE SPREAD OF GRAPE  
(Amount in Rs/ box).**

		<b>Channel I</b>	<b>Channel II</b>	<b>Channel III</b>
Producer	Producer's Sale Price			
	Expenses borne by Grower/box			
	a) Weighing charges			
	b) Packaging cost			
	c) Transport charges			
	d) Loading and unloading			
	e) Other charges			
	f) Commission taken by agents (%)			
	Net price received by the grower/producer			
Commission	Commission agent's purchase price			

Agent	Expenses borne by commission agent a) Transport charges b) Loading / Unloading charges c) Other charges			
	Commission agents price (sale price)			
	Marketing margins of the agent			
Wholesaler	Wholesaler's Purchase Price			
	Expenses borne by the wholesaler a) Transport charges b) Loading / Unloading charges c) Weighing charges d) Other charges			
	Wholesaler's Price (sale price)			
	Marketing Margins of the Wholesaler			
Retailer	Retailer's purchase price			
	Expenses borne by the retailer a) Transport charges b) Loading / Unloading charges c) Other charges			
	Retailer's Price (sale price) / Consumer's Purchase price			
	Marketing margins of retailer			

**Producer's Share in Consumers Rupee, Marketing Efficiency and Price Spread**

<b>S. No.</b>		<b>Channel I</b>	<b>Channel II</b>	<b>Channel III</b>
1	Producer's share in Consumer's rupee			
2	Marketing Efficiency (by Shpherd's or Acharya's method)			
3	Gross Price spread (Amount)			

**Part IV**

**CONSTRAINTS FACED BY THE GRAPE GROWERS:**

1

2

3

**SUGGESTIONS TO OVERCOME THE PROBLEMS:**

1

2

3

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**Faculty of Agriculture, Wadura - 193 201**

**CERTIFICATE**

Certified that all the corrections/amendments as suggested by External Examiner Prof. S. K. Kher, Former Professor, Agricultural Extension Education during Viva-Voce examination held on 28-10-2019 have been incorporated in the manuscript entitled “**Entrepreneurial Behaviour of Grape Growers in District Ganderbal**” submitted by **Ms. Farah Farooq (Regd. No. 2017-A-1141-M).**

**(Dr. Quadri Javeed Ahmad Peer)**  
Chairman  
Advisory Committee