

## **Influence of Age and Gender on the Performance**

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**Abstract:** *The study investigated the different performance levels of the workers in the Chittoor Sugar factory located at the Chittoor town of South India. It was also studied how the factors age and gender influence the performance levels of the workers in the firm. Upon study it has been found that the two variables under investigation have their direct effect on the performance of the workers to varying degrees. Workers in the medium range on age, perform better compared to those on the extremes. The gender too is found to have its influence on the performance and the female workers are relatively more productive.*

**Keywords:** *Age, Gender, Influence, Performance, Workers*

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### **I. Introduction**

It is a common observation that the old people fail to function as effectively as the younger persons at certain tasks. This is mainly attributed to the age factor (Gelderblom, 2006). The body of the old persons is not that much strong as the younger ones to perform certain tasks at the same efficiency of the youngsters. There are some notable differences between the older and younger people psychologically as well. At certain tasks the older people can perform better than the younger employees due to the experience factor, for example the older people can give better advices against the younger ones. The modern studies indicate that the age too is a determinant of the performance of the individuals i.e., the performance of the individuals will gradually deteriorate or improve with age depending upon their work (Warr, 1994).

Apart from age, gender is another factor that could affect the performance of the certain employees as it has been commonly observed and this is due to the differences in their physical and psychological differences. But, some modern studies indicate that the difference in gender is not valid today as it was before 1990s (Kimmel, 2000) and the argument of the modern life style of both the genders is not different as was it used to be.

Now a days the men and women are treated equally in all the arenas of life (Moore, 1999) and the organizations are no exception. Both men and women are competing for the same job position. This is because in the globalization of business all the individuals are given the equal opportunity to work in the organizations. Hence it necessary to know whether all the individuals can work and compete that the same rate irrespective of their age and gender. If it is known in advance about their performance levels are the same at the job then they could be treated alike in the organization especially concerning the financial benefits.

Hence, the aim of this research study is to investigate such influence. The influence of age and gender on the performance of the workers in the Chittoor Sugar factory located at the Chittoor town of South India – as it has not been studies before.

### **II. Related Literature**

All the workers are aging alike other individuals and due to this the body under goes age changes naturally. It is a common observation that in general the body of the person in the 70s is not as strong as the body of the person in is 30s. 70 year olds have poorer eyesight than most 30 year olds (Margrain & Boulton, 2005). Yet on the contrary most 70 year olds have more experience from life and work than most 40 year olds. During the entire span of work life, age changes, including both growth and decline, take place (Baltes & Baltes 1990). The early phases of life involve more growth than decline, with the reverse happening in the late phases of life, and perhaps also in the final phases of work life (Per Erik Solem, 2008). But there is no clear-cut point at which decline exceeds growth, and some growth and opportunities for either improving or preserving abilities continue even up to the age of 90 (Schaie 1996).

Job performance is defined as the effectiveness of job behavior in real work settings (Warr, 1994). While some studies prove that the performance decreases with age some other studies prove that though work ability seems to be decreasing with age, job performance is found to be more stable (Salthouse & Maurer 1996). This is due to the fact that - most professions have no simple or concise way of measuring individual productivity or job performance (Gelderblom 2006) and this makes it difficult to establish the exact effects of age on job performance. Due to this - most reviewers of research conclude that in general job performance does not appear to decline with increasing age (Stagner 1985; Waldman & Aviolo 1986; McEvoy & Cascio 1989; Salthouse & Maurer 1996; Warr 1994, 1998; Czaja 2001). However, results are contradictory, and some

reviewers conclude with a parabolic relationship showing initial increase, a period of stability and an eventual decrease towards the end of the career (Skirbekk 2004; Gelderblom 2006) or else a parabolic relationship only for low complexity jobs (Sturman 2003). But, the reviewers agree that the patterns of age changes in job performance vary according to job characteristics. If the job requires quick reactions or heavy physical work, age may be a disadvantage, even as early as the thirties (WHO, 1993). If experience or expertise could improve the performance of job-related tasks, age becomes an advantage throughout the work life (Warr, 1994). Some studies indicate that the performance decline starts earlier in physically strenuous jobs than in mentally demanding jobs (Ilmarinen 1999; Capanni et al. 2005).

The study (Elsadig Mohamed and Khalifa Gawi, 2012) found out that age affects EFL (English as a Foreign Language) learning because early exposure to language instructions constantly results in better performance and the results show that learning English at an earlier age is an important factor in enhancing the skills of English language. Another study (Fauzilah Salleh et al, 2012) concludes that there are no significant differences between sales performance and business traders' demographic characteristics such as age.

Some studies show that traders, young and old can each play a role in determining the success of a business based on sales. For example the study of Heck et al. (1995) concluded that more the business owners' age better performance. Another study by Orser and Foster (1992) produced the same results that a business owner of 40 years and older have a chance to earn more than those younger than 40 years old.

There are notable differences between men and women both physical and psychological too. Naturally, these differences might give rise to the way men and women function at their work for example an average woman can't work at the same efficiency level of an average man at labor works. The studies indicate that the men and women are psychologically different (Golman, 1995). The modern management studies also predict that organizational performance of the employees depends on their emotional intelligence (Goalman, 1995). Some of the interesting studies on the performance of the employees based on gender differences are brought into light in this section. Although many studies have indicated that there are notable differences between the male and female employees (Brush, 1992), some have proved that there are no difference in the productivity of men and women (Ahl, 2002). The argument of the later is because the modern studies are with the view that a person's gender (masculinity or femininity) is based on differences in social experiences (Bem, 1993; Korabik, 1999) and sex may not completely determine a person's gender (Fischer et al., 1993).

The modern studies indicate that nowadays there is a gender convergence rather than divergence, and women and men nowadays are far more alike than they were some decades ago (Kimmel, 2000). This is because even from the childhood the male and female are treated alike in all walks of life and the society is not discriminating between them. The modern society has erased the boundaries between the life style of both the sexes. Moore (1999) distinguishes between 'traditionalists' (i.e., female with traditional values, adhering to stereotypical female work roles) and 'moderns' (i.e., later generation female who are more similar to, than different from their male counterparts). Up to the early 1990s research on female entrepreneurship identified gender differences with respect to individual characteristics. Brush (1992; p. 13) concludes that: "women business owners are more different from than similar to men in terms of individual level characteristics such as education, occupational experience, motivations, and circumstances of business start-up/acquisition". However, contemporary research indicates that for a range of individual characteristics (including psychological, attitudinal and personal background factors) there are more similarities than differences between female and male entrepreneurs (e.g., Ahl, 2002). Ahl (2002) finds that the scarce research (usually studies with few observations) focusing upon organization refers to a distinctive management style of female entrepreneurs as compared to that of male entrepreneurs. Ahl (2002, p. 108) argues that "The 'female underperformance hypothesis' did not hold when put to rigorous tests accounting for structural factors" and if preferences are taken into account there appears to be no support for the proposed gender differences in entrepreneurial performance. Consequently the study of (Ahl, 2002, p. 125) indicates that the female are the "engine of economic growth". Blom (2003) argues that – as compared to men – women in the western countries have a better chance of succeeding in business due to their better performance. The study (Solem & Blekesaune 2005) says that women more often than men say that work is very important to them and hence they yield better performance against men. Some studies claim that there is no performance variation between men and women as we see a gender convergence rather than divergence, and women and men nowadays are far more alike than they were some decades ago (Kimmel, 2000).

The results of some of the studies on this issue are outlined here. Some studies reported no difference between male and female in performance in the examinations of the medical students (Holmes et al., 1978). In contrast, others found female students outperformed male on both clinical evaluations and written examination (Plauché and Miller, 1986).

Inmyxai and Takahashi (2010), conducted a study to examines and compare the performance contrast of male and female headed firms. This research discovered that differences exist between male and female headed firms in terms of determinants factors of firm performance. The study (Fauzilah Salleh et al, 2012)

concludes that there are no significant differences between sales performance and business traders' gender. But, this study is contrary to the studies (by Orser and Foster (1992); Heck et al. (1995) and Coleman (2000)) carried out to identify gender differences in the performance of annual sales and profits and it found that there were significant differences on performance of small industry run by men and women. Similarly, studies (Coleman, (2000); Minoos and Charles (2003)) indicate that gender has a significant impact on the performance of micro-businesses. However the study of Minoos and Charles (2003) on the gender differences in small business ownership gave ambiguous results.

The study of (Jabbar, Akram Aziz and Samina Zeb, 2011) on the performance of the school students indicates that the - female students excelled from male students in the S.S.C examination Boards of intermediate and secondary education. The study of (Muhammad Sarwar, Muhammad Alam, Muhammad Nadeem Anwar and Riffat-un-Nisa Awan) reveals that the male teachers show greater degree of deviation and hence perform worse than the female teachers upon study on the school teachers in Pakistan. According to Hyde, (1981), William and Bedward (2001) there are no consistent male-female differences in problem-solving ability, analytical skills, competitive drive, motivation, sociability, or learning ability

### **III. Problem and Objectives**

There has been no known research regarding the influence the two variables age and gender on the performance of the workers in the Chittoor sugar factory located at the Chittoor town of south India. This study therefore aims to investigate and explore that relationship. Conforming to the above investigation the research problem is defined as follows.

**To study the influence of age and gender on the worker's performance in the Chittoor Sugar factory located at the Chittoor town of Andhra Pradesh, South India.**

In accordance with the problem definition, the objectives of the study are defined to as: a) To investigate the age and gender of the workers b) To study the different performance levels of workers c) To study the influence of age and gender on the performance of workers.

### **IV. Research Methodology**

Based on the research questions (given later), the research design (Kothari, 2001) is developed that could facilitates further research and this is mainly survey research. The proposed research involves empirical testing of problem statements set forth for the study.

#### **4.1 Research Universe and Sample**

This research is focused on the Chittoor Sugar factory located at the Chittoor town in the state of Andhra Pradesh, south India. The mother tongue of the local people is Telugu, a South Indian language. The firm employs 652 employees of whom 32 employees hold a supervisory role.

For the purposes of this research study simple random sampling has been used and the researcher was free to choose his sample from the universe of the firm. In the simple random sampling technique, every unit in the universe has the equal chance of being chosen for the study. The researcher posed no defining criteria in selecting the elements from the sample. Simple random sampling is the very primitive sampling techniques and is easiest to implements.

The sample size of the research comprised 112 of the 621 workers and 16 of the 32 supervisors. The sample of 112 workers at the firm, were randomly selected (chosen) by the researcher at the firm. The researcher placed no requirements on the workers while taking the samples.

**Table 1 - Population, Sample and Response Rates**

	<b>Workers</b>	<b>Supervisors</b>
Population	621	32
Sample	112	16
Responses		16
Response Rates		100 %

#### **4.2 Data Collection**

For the purposes of this research, the questionnaire was used to gather the necessary information. In an attempt to make it beneficial for both the researcher and the firm, and so as not to disrupt operations at the firm, the researcher visited the firms frequently and collected the data from the respondents (the managers or supervisors of the chosen employees) by giving the questionnaires during the firm's lunch break.

The performance questionnaire was given to the supervisors or managers of the employees chosen to rate the worker's performance by scoring each individual question on the questionnaire on a scale from 1 to 5. While the respondents answer the questionnaire, if they find any difficulty or ambiguity the researcher attended

them to solve their problem and got the needed data. Each rater was allowed a period of half an hour for the completion and return of the questionnaires.

Another important point is that, majority of the respondents were not good at English language. So, the questionnaire involved in this study was translated in to their mother tongue, the *Telugu language* so that to make their task easier.

In this way the need data was collected from the firms by the researcher personally present with the respondents and this data collection took a period of over a month.

#### **4.3 Data Collection Instrument**

The employee performance was captured and recorded using the *Performance Questionnaire* of the *University of the Fraser Valley* employee services performance appraisal questionnaire.

The rating describes the employee's performance on each item and the evaluation scale has five (5) possible ratings (1-5). The relative meaning of the numbers from 5 to 1 is given as: *Excellent* - performance is consistently above acceptable performance levels, *Good* - performance is occasionally above acceptable performance levels and otherwise meets acceptable performance levels, *Satisfactory* - performance consistently meets acceptable performance levels, *Sometimes-unsatisfactory* - performance is occasionally below acceptable performance levels but otherwise meets acceptable performance levels and *Unsatisfactory* - performance is consistently below acceptable performance levels.

The supervisor or manger of the respective employee should respond to this performance questionnaire, judging the performance of his/her subordinate.

Following this a total score is calculated for each employee (worker) as per the instructions on the questionnaire. Then that score is calculated on the scale of five again and this final score will indicate the performance of the employee, again as given in the above description. Each of the 112 workers performance appraisal scores, gathered from the performance appraisal questionnaire was analyzed using the SPSS.

#### **4.4 Reliability and Validity of the Questionnaire**

This performance appraisal instrument is a component of the institute, the *University of the Fraser Valley's* larger performance management system. The performance management system embraces the firms stated values and seeks to ensure fairness, objectivity and consistency, while allowing sufficient flexibility to create the appropriate climate for positive interaction, communication and feedback regarding performance. Management of employees' performance is embedded in effective management processes and based on the following five processes: planning for performance, compacting, managing performance, measuring performance, and developing and encouraging performance.

The performance appraisal instrument consists of a number of performance areas, with key performance indicators such as: job outputs, people management (including supervision and leadership); interpersonal relationships, communication skills, intra-personal relations and punctuality beyond other factors according to the website of the employee services department of the University of the Fraser Valley.

This performance management system was designed more than ten years ago and has been continuously used through years and each employee under goes one performance appraisal a year in the respective departments of the university. The latest revision to the instrument was done in the year 2011 August. All performance management matters are documented in the employee services department of the university and this instrument has been proven to exhibit good results on the performance of the employees at the university since its inception, according to the *university website*.

#### **4.5 Data Capturing**

Once all the questionnaires were collected by the researcher, the researcher coded the gathered data as needed for the study. These scores were then captured by the researcher into a Microsoft Excel spreadsheet for SPSS analysis later. These scores were then imported into SPSS for analyses.

The data was presented in a manner that allowed for easy analysis and testing using the Statistical Product and Service Solutions (SPSS). Once the data was imported into a SPSS spreadsheet, from the Microsoft Excel spread sheet, the researcher proceeded to calculate the necessary performance scores as per the respective scoring keys provided along with the questionnaire.

### **V. Ethical Considerations**

The main rules of data collection as stated by Bless and Higson Smith (2000) are: a) voluntary participation b) the right to privacy c) Freedom and d) Anonymity e) Confidentiality. All these five ethical rules of research have been met in this research study. The data collected for this research didn't involve any confidential information to great degree and hence, the researcher managed to collect the data from the firm with no difficulty. In order not to waste the valuable time of the workers and their managers, and not to disrupt

the work in the firm, as advised by the firm managers, the researcher visited the firm during the lunch breaks and collected the data in a span of over a month.

### **VI. Tests and Results**

The cross tabulations were derived from the SPSS tool, for the different cases as needed in the study. Once this is done, various statistical tests were done depending on the needs of the study.

Questions, Tests, Results and interpretations concerning the research study are discussed in this section. Basing on the test results we have to accept or reject the concerned problem statements.

#### **Question One**

**Q1 - There is significant difference between male and female workers in terms of performance**

**Group Statistics**

	Gender	N	Mean	Std. Deviation	t - value	Level of significance
Performance	Male	103	73.2816	8.01765	0.262	NS
	Female	9	72.5556	7.48517		

The t-value is found to be not significant at any level. Hence, this analysis implies that - there is significant difference between male and female in terms of performance levels.

#### **Question Two**

**Q2 - There is significant variance among respondents age in terms of performance**

**One way ANOVA – Performance**

	Sum of Squares	Df=n - 1	Mean Square	F	Sig.
Between Groups	129.329	3	43.110	0.677	NS
Within Groups	6880.090	108	63.705		
Total	7009.420	111			

Form the One Way ANOVA test given in the above table, ‘F’ is not significant at any level. This implies that -“there will be significant variance among the employees age group in terms of performance”. The employees in the lesser age group show a different performance level then the relatively older employees.

### **VII. Findings**

The findings of this research study based on the cross tabulations and statistical tests are given in this section. **1)** The study concludes that the male and female employees exhibit different levels of performances at their work. **2)** Under the sample studied the female workers are more productive than the male workers. **3)** The study indicates that the performance of the employees generally varies with age **4)** the performance of the employees generally increases with age up to 45 yrs. **5)** after 45 years of age the performances of the employee decreases gradually.

### **VIII. Discussion**

This section is going to discuss, how the findings of this research work are relating to the other findings already established in different studies. It is good news that that are no contradicting findings out of this study and all the finding are in congruent with the established facts in the performance literature.

**a)** The study indicates that the male and female employees exhibit different levels of performances at their work. Under the sample studied the female workers are more productive than the male workers and this has already been asserted (2009) by Hackman, M. Z., and Johnson, C. E., in their studies apart from many other studies.

**b)** The study states that the performance of the employees generally increases with age and after 45 years of age the performances of the employee decreases gradually. This might me due to the increasing age factor.

With growing experience, naturally individuals gain more insight into their works and they will be in a position to handle their jobs in easier manner. They will get more skill out of the job, when they have been doing it for a long time and this finding is in agreement with the established proofs that, more skilled employees can perform well at jobs. This finding of the study, well agrees with the common saying, 'practice makes a man perfect'.

But, after crossing 45 years of age, the performance gradually starts to decline, according to a finding of the study. This is also true because, when the employees cross the middle age, they are stepping towards the older age. This will naturally make them weak, both psychologically and physically too. This might affect the performance of the employees at their jobs and this finding in accordance with the study (Celie .F and others, 2010) aside many others.

### **IX. Limitations of the Study**

Some of the limitations of this research study are: 1) only a sample is studied and not all the workers were studied in this research. 2) Only the select firm and not all other firms and industries were examined for this study. 3) The study is limited is geographically confined to a particular place. 4) In any research study the finance is the main financial constraint, the easily available questionnaires are used for this study. The performance questionnaire used in this study is the free versions available on-line. The other complex questionnaires are costly to purchase. So, the questionnaires used might have some inherent in-efficiencies. 5) Due to these reasons the research findings might not be the general results.

### **X. Conclusions**

The two variables chosen for this study – Age and Gender - indeed have their respective influences on the performance of the workers under study. Change in these factors, age and gender will bring out a change in the performance of the workers. The study shows that with increasing age the workers tend to exhibit relatively better performance up to 45 years of age and later on the performance declines. The gender too has its influence on the worker's performance and the female workers are more productive under the sample of the study.

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