CHAPTER-4

ANALYSIS, INTERPRETATION AND DISCUSSION OF RESULTS

1. To study the difference between high effective group of principals and low effective group of principals on their job satisfaction.

2. To study the difference between high effective group of principals and low effective group of principals on their work commitment.

3. To study the difference between high effective group of principals and low effective group of principals on their emotional maturity.

4. To study the difference between high effective group of principals and low effective group of principals on their hardiness.

5. To find out the relationship between principals’ effectiveness and their job satisfaction.

6. To find out the relationship between principals’ effectiveness and their work commitment.

7. To find out the relationship between principals’ effectiveness and their emotional maturity.

8. To find out the relationship between principals’ effectiveness and their hardiness.

9. To study the combined and individual effects of selected independent variables viz., job satisfaction, work commitment, emotional maturity and hardiness on the effectiveness of school principals.

10. To find out the difference in principals’ effectiveness in relation to age.

11. To find out the difference in principals’ effectiveness in relation to gender.

12. To study the effectiveness of principals in relation to their length of experience.

13. To find out the difference in job satisfaction of male and female principals.

14. To find out the difference in work commitment of male and female principals.

15. To find out the difference in emotional maturity of male and female principals.

16. To find out the difference in hardiness of male and female principals.
CHAPTER 4

ANALYSIS, INTERPRETATION AND DISCUSSION OF RESULTS

The present research was proposed to study the effectiveness of secondary school principals. After collection, data was tabulated, scored, analysed and interpreted by means of descriptive and inferential statistics. The analysis of data was done in order to make inferences and generalisations about the population. The purpose of data analysis was to reduce data into intelligible and interpretable form so that the relations of research problem can be studied and conclusions drawn. Before starting the data analyses the data were subjected to data screening for finding the incorrect values, missing values and outliers entered into the spread sheet that can render our data non normal and then preliminary analysis for testing the assumptions was conducted which provide the desirable results and fulfil the required assumptions for the analysis techniques. For computation of needed statistics and application of appropriate statistical tests data were analysed on Statistical Package for Social Science (SPSS, version 16). A part of data was manually treated.

Objective 1: To study the difference between high effective group of principals and low effective group of principals on their job satisfaction.

In order to study the difference between high effective group of principals and low effective group of principals on their job satisfaction, following null hypothesis was formulated.

*Hypothesis 1: There is no statistical significant difference in job satisfaction of high effective group of principals and low effective group of principals.*

<table>
<thead>
<tr>
<th>Job Satisfaction</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>df</th>
<th>t-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Effective Group of Principals (HEGP)</td>
<td>135</td>
<td>76.18</td>
<td>10.47</td>
<td>268</td>
<td>13.88**</td>
</tr>
<tr>
<td>Low Effective Group of Principals (LEGP)</td>
<td>135</td>
<td>58.56</td>
<td>10.40</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

** Significant at 0.01 level
A close perusal of the Table 4.1 reveals that the mean value of job satisfaction of high effective group of principals (JSHEGP) is 76.18 with a standard deviation of 10.47 and the mean value of the job satisfaction of low effective group of principals (JSLEGP) is 58.56 with a standard deviation of 10.40. On applying t-test, a t-ratio of 13.88 is obtained, which is statistically significant at .01 level. Therefore, null hypothesis, Ho.1: there is no statistical significant difference in job satisfaction of high effective group of principals and low effective group of principals is rejected. This means there is a significant difference in the job satisfaction of high effective group of principals and job satisfaction of low effective group of principals. Higher mean score of job satisfaction of high effective group of principals (HEGP) than the job satisfaction of low effective group of principals (LEGP) has been graphically represented in Figure 4.1 implying that job satisfied principals are more effective than job dissatisfied principals.

![Figure 4.1: Comparison of mean of job satisfaction scores of high effective group of principals (HEGP) and low effective group of principals (LEGP)](image-url)
The first finding of the present research study i.e., job satisfied principals were found to be more effective than job dissatisfied principals is in consonance with the findings of numerous researchers. For instance (Basavara, 2013; Nagadiman, Eliyana, & Ratmawati, 2013; Salehi & Gholtash, 2011; Wilson, 2009; Foote, et al., 2008; Almutairi, 2005; Brooks, 2000; Sosik, 1997) have consistently reported positive relationship between job satisfaction and principals’ effectiveness. Other researchers (Bhat & Pujj 2012; Hassani, Jalilian, & Khaleghinezhad, 2012; Khanifar, Emami, Maleki, Abdolhosseini, & Rezalou, 2012; Rastouli, Hossenian, & Dokanee, 2012; Shah, Rehman, Akhtar, Zafar, & Riaz, 2012; Swaggert, 2012; Battal, 2011; Simatwa, 2011; Mahmood, 2011; Ahmad, Ahmad, & Shah, 2010; Wilson, 2009; Friedman, et al., 2008; Khaefelli, & Dostar, 2006; Garcia-Bernal, Gargallo-Castel, Marzono-Navarro & Rivera-Torres, 2005; Scott, 2004; Pascoe, Ali & Warne, 2002; Woods & Weasmer, 2002; George, 2001; Judge, Bono, & Patton, 2001; Brooks, 2000; Darwish, 2000; Shann, 1998; Yousef, 1998; Raut, 1995; Russ & McNeilly, 1995; Sauter & Murphy, 1995; Saxena, 1995; Wrong, et al., 1995; Baugh & Roberts, 1994; Igbaria & Guimaraes, 1993; Borg & Riding, 1993; Clark & Larkin, 1992; Vandenberg & Lance, 1992; Karugu, 1980; Korman, 1977; Mowday, et al., 1974; Lawler, 1973; Herzberg, 1966) have also reported that job satisfied principals, teachers and employees are more effective as compared to their job dissatisfied counterparts.

There are ample evidences in support of the present finding. More recently, Anuar Bin Hussin (2011) proved that job satisfaction dimensions (pay, promotion, work itself, supervision and co-workers) can contribute to 17.8 % to increase the job performance in the organisation. Similarly, Ziegler, et al., (2012) have reported that job satisfaction is a better predictor of job performance (i.e., higher satisfaction related to higher performance). Job satisfaction increased principals’ persistence in their role (Boris-Schacter & Merrifield, 2000).

The finding under discussion may be explained in a number of ways. Fist job satisfaction provides the motivation to the principals (Besong, 2007; Fadipe, 2000) and teachers (Bishay, 1996; Schonfeld, 1990) to perform well. Through correlation analysis, teachers’ motivation has been found to be significantly related to teachers’ job satisfaction by Davis & Wilson (2000). Some past researches proved motivation to be related to job satisfaction (Thomas & Velthouse, 1990; Rosenholtz, 1991; Friedman & Farber, 1992). Mittal (1992) revealed a positive and significant
correlation between work motivation and job satisfaction. If employees in an organisation are motivated, they will render services to the employer and customers very efficiently and effectively (Mbuu, 2003). Therefore, job satisfied and motivated teachers are better in accomplishing their tasks and affect the students’ learning positively (Ngimbudzi, 2009). Wisniewski and Gargiulo (1997) maintain that high attrition rates amongst teachers can be attributed to job dissatisfaction. Second job satisfaction is correlated to enhanced job performance (Laschinger, 2001; Miller, 1978). Positive work values, high levels of employee motivation, and lower rates of absenteeism, turnover and burnout (Begley & Czajka, 1993; Chiu, 2000; Tharenou, 1993). Job satisfaction is one of the most important factors in career success. It is a factor that will increase efficiency and personal satisfaction (Rasuoli, Hossenian, & Dokanee, 2012). On the other hand teacher dissatisfaction appears to be a main factor in teachers leaving the profession in many countries (Huberman, 1993; Woods, et al., 1997). Thus job satisfaction leads to principal retention in the job which in turn contributes to the increased commitment and it is expected that job security and commitment help a principal to enjoy the job of principalship and work to the fullest so as to attain the maximum achievement of his students and thereby increasing his own effectiveness as a school principal. Third, job satisfaction is also correlated with other kinds of desirable behaviour at work—there is less sabotage, stealing, doing work badly on purpose, and spreading rumours or gossip to cause trouble (Mangione & Quinn, 1975). Karuga (1980) confirmed that job satisfaction and dissatisfaction among elementary teachers and head teachers in Nairobi, Kenya had some relationship with high morale, quality input, reduction in absenteeism and turnover. Mwamwenda (1995) found that a lack of job satisfaction resulted in frequent teacher absenteeism from school, aggressive behaviour towards colleagues and learners, early exits from the teaching profession, and psychological withdrawal from the work. Fourth, job satisfaction is also found to be associated with the attitude towards work. Kumar & Patnaik (2004) reported that job satisfaction and attitude towards work are highly correlated. Robbins (2003) reported that a person with a high level of job satisfaction holds positive attitudes towards the job, while a person who is dissatisfied with his or her job holds negative attitudes towards the job. DeBruyne (2001) linked job satisfaction to job performance and indicated that administrators have a significant impact on the school environment, and the type of environment that they create is highly predictive of the level of satisfaction for the teaching staff. Fifth plausible
explanation of the present finding lies in the role of job satisfaction in perception of stress. Job satisfaction enables teacher to perceive less stress in the job and it was reported by Adam (2000), Brewer & Lander (2003), Ghali (2004), Haberman (2005), and Bindu (2007) and job satisfaction and occupational stress have negative relationship with each other. As a result, highly satisfied persons experience less stress and thereby feel healthy. Sixth, present finding may be explained in terms of fourth finding of the present research. Hardiness and job satisfaction are positively correlated (Cash, 2009) as a result job satisfaction provides principals with the resilience that helps them to face the challenges of administrative job, consider themselves as influential on events and be fully involved with their jobs. Thus, job satisfied principals are hardy principals who can perform well even under unfavourable conditions of job. Finally, present finding may be explained in terms of significant relationship between job satisfaction and work commitment. Researchers for instance (Lok & Crawford, 2004; Ngamchokchaicharoen, 2003; Stander & Rothmann, nd) have reported significant positive relationship between job satisfaction and work commitment which means greater job satisfaction results in greater work commitment, indicating that job satisfied leaders are committed leaders. Work committed leaders are effective leaders which is also the second finding of the present study.

Finding of the present study is contrary to the evidences of (Juma, Simatwa, & Ayodo 2011, Bagozzi, 1980) who found out no direct relationship between job satisfaction and performance. Researchers (Oplatka & Mimon, 2008; Regan & Brooks, 1995; and Greenberg & Baron, 1994) have reported that job dissatisfaction results in high performance in female principals.
Objective 2: To study the difference between high effective group of principals and low effective group of principals on their work commitment.

In order to study the difference between high effective group of principals and low effective group of principals on their work commitment, following null hypothesis was formulated.

Hypothesis 2: There is no statistical significant difference in work commitment of high effective group of principals and low effective group of principals.

Table 4.2

Showing the comparison of work commitment between high effective group of principals (HEGP) and low effective group of principals (LEGP) respondents:

<table>
<thead>
<tr>
<th>Work Commitment</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>df</th>
<th>t-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Effective Group of Principals (HEGP)</td>
<td>135</td>
<td>85.88</td>
<td>13.93</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low Effective Group of Principals (LEGP)</td>
<td>135</td>
<td>53.26</td>
<td>14.89</td>
<td>268</td>
<td>18.59**</td>
</tr>
</tbody>
</table>

** Significant at 0.01 level

An inspection of Table 4.2 shows that the mean value of work commitment of high effective group of principals (WCHEGP) is 85.88 with a standard deviation of 13.93 and the mean value of the work commitment of low effective group of principals (WCLEGP) is 53.26 with a standard deviation of 14.89. On applying the t-test, a t-ratio of 18.59 is obtained, which is statistically significant at .01 level. Therefore, null hypothesis, Ho.2: there is no statistical significant difference in work commitment of high effective group of principals and low effective group of principals is rejected. This means there is a significant difference in the work commitment of high effective group of principals and work commitment of low effective group of principals.

Higher mean score of work commitment of high effective group of principals (HEGP) than the work commitment of low effective group of principals (LEGP) has been graphically represented in Figure 4.2 implying that principals who are committed towards work are more effective as compared to the principals who are not committed towards their work.
Figure 4.2: Comparison of mean of work commitment scores of high effective group of principals (HEGP) and low effective group of principals (LEGP)
This finding is consistent with the previous research findings of (Susanty & Miradipta, 2013; Khanifar, Emami, Maleki, Abdolhosseini, & Rezalou, 2012; Sarminah, 2011; Ahmad, Ahmad, & Shah, 2010; Chan, 2006; Kim, 2006; Khaefellahi & Dostar, 2006; Foote, 2005; Bienstock, et al., 2003; Laschinger, 2001; Darwish, 2000; Mowday, 1998; Russ & McNeilly, 1995; Wrong, et al., 1995; Igbaria & Guiamaraes, 1993; Clark & Larkin, 1992; Locke, 1992; Vandenbarg & Lance, 1992; Hacket, 1989; Williams & Hazer, 1986; Henne & Locke, 1985; Miller, 1978; Mobley, 1977; Steers, 1977; Mowday, et al., 1974; and Porter, Steers, Mowday, & Boulian, 1974) have reported that those who are committed towards their work are more effective than those who are not committed towards their work. Work commitment is an attitude involving employee loyalty to the organisation (Smith & Hoy, 1992). Highly committed individuals might be less absent from work, perform more effectively (Meyer & Maltin, 2010).

This finding may be explained in terms of job satisfaction and work commitment. Job satisfaction of principals increases the commitment and dedication in job. Majority of researches showed a positive relationship between satisfaction and commitment (Hassani, Jalilian, & Khaleghinezhad, 2012; Harrison & Hubbard, 1998; Morrison, 1997; Spector, 1997; Ting, 1997; Boshoff & Mels, 1995; Knoop, 1995; Kreitner & Kinicki, 1992; Johnston, et al., 1990; Norris & Niebuhr, 1984; Miskel, et al., 1983; Aranya, et al., 1982). Commitment pertains to dedication and involvement in the job. Researchers (Maehr, 1989; Rosenholtz, 1989) suggested that the personal involvement of employees at all levels is necessary for any effective organisation. Several researchers, for instance (Freund, 2005; Chiu-Yueh, 2000; Busch, et al., 1998; Mannheim, et al., 1997) have found that job satisfaction was a significant predictor of work commitment. Job satisfaction is seen as one of the determinants of work commitment (Mannheim, et al., 1997). It is thus expected that highly satisfied workers will be more committed to the organisation.
Objective 3: To study the difference between high effective group of principals and low effective group of principals on their emotional maturity.

In order to study the difference between high effective group of principals and low effective group of principals on their emotional maturity, following null hypothesis was formulated.

**Hypothesis 3: There is no statistical significant difference in emotional maturity of high effective group of principals and low effective group of principals.**

Table 4.3

Showing the comparison of emotional maturity between high effective group of principals (HEGP) and low effective group of principals (LEGP)

<table>
<thead>
<tr>
<th>Emotional Maturity</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>df</th>
<th>t-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Effective Group of Principals (HEGP)</td>
<td>135</td>
<td>77.58</td>
<td>14.33</td>
<td>268</td>
<td>26.88**</td>
</tr>
<tr>
<td>Low Effective Group of Principals (LEGP)</td>
<td>135</td>
<td>135.35</td>
<td>20.45</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

** Significant at 0.01 level

It is evident from the Table 4.3 that the mean value of emotional maturity of high effective group of principals (EMHEGP) is 77.58 with a standard deviation of 14.33 and the mean value of the emotional maturity of low effective group of principals (EMLEGp) is 135.35 with a standard deviation of 20.45. On applying t-test, a t-ratio of 26.88 is obtained, which is statistically significant at .01 level. Therefore, null hypothesis, Ho.3: there is no statistical significant difference in emotional maturity of high effective group of principals and low effective group of principals is rejected. This means there is a significant difference in the emotional maturity of high effective group of principals and emotional maturity of low effective group of principals. Lower mean score of emotional maturity of high effective group of principals (HEGP) than the emotional maturity of low effective group of principals (LEGP) has been graphically represented in Figure 4.3 implying that emotionally mature principals are more effective than the emotionally immature principals. (Negative value of emotional maturity is interpreted positively because of the scoring pattern of
emotionally mature scale in which lower scores correspond to emotional maturity and higher scores correspond to emotional immaturity.

Figure 4.3 Comparison of mean of emotional maturity scores of high effective group of principals (HEGP) and low effective group of principals (LEGP)
The present finding of this research study i.e., emotionally mature principals were found to be more effective principals than emotionally immature principals is in consonance with the findings obtained by other researchers. For instance (Mehta, 2013; Mudasir, 2012; Connelly & Ruark, 2010; Mills, 2009; Erez, Johnson, Misangyi, LePine, & Halverson, 2008; Hoy & Miskel, 2001; McClelland, 1998) have reported that the emotionally mature principals are more effective as compared to the emotionally immature principals. Finding also concurs with the works of (Ghamrawi, Shaland, & Ghamrawi, 2013; Hamidi & Azizi, 2012; Mirza & Redzuan, 2012; Ekeh & Oladayo, 2011; Sand, Cangemi & Ingram, 2011; Greenockle, 2010; Lee & Shute, 2010; Mills, 2009; Moore, 2009b; Bipath, 2008; Schoo, 2008; Abdulllah, 2007; Hyatt, Hyatt, & Hyatt, 2007; Schultz, 2007; Singh, Manser, & Mistry, 2007; Cook, 2006; Dong, 2006; Illies, Scott, & Judge, 2006; Kerr, Garvin, Heaton, & Boyle, 2006; Barent, 2005; Egley & Jones, 2005; Rosete & Ciarrochi, 2005; Hartley, 2004; Leban & Zulauf, 2004; Srivastava & Bharamanaikar, 2004; Sala, 2003; Wong & Law, 2002; Day, 2000; George, 2000; Judge, Higgins, Thoresen, & Barrick, 1999) have reported that emotionally intelligent principals are effective leaders. Emotional maturity is one of the dimensions of emotional intelligence.

This finding also draws support from the findings obtained by Mattoo (1987), Wangoo (1984), Gupta (1976), and Chhaya (1974) who have consistently reported that emotional stability was one of the chief characteristics of effective teachers.

Numerous explanations may be offered for positive impact of emotional maturity rather than emotional immaturity on principals’ effectiveness. First, emotional maturity helps in adjustment (Mahmoudi, 2012; Soundarrajan, 2012; Hameed & Tahira, 2010; Anderson, 2008; Shakuntala, 2001; Veeraghavan, 1984) which in turn helps in developing and maintaining positive relationship with others, emotional maturity thereby helps in principals’ adjustment at their workplace that is essential for developing healthy relationship with their colleagues and creating rapport with their students for better accomplishment of their goals of administration. On the other hand emotionally immature persons suffer from problems in adapting with individuals and community.

This explanation is validated by the findings obtained by Gupta (2010), Kulkarni (2000), Agarwal (1988), and Singh (1987) who have demonstrated that adjusted
teachers are effective in comparison to maladjusted teachers. Secondly, emotional maturity promotes sound mental health (Cartier, 2011; Singh & Todkar, 2011; Kedarnath, 2001) that a state of full and harmonious functioning of the total personality and it reflects a maximum of success, satisfaction and excellence and allows one to flourish and fully enjoy life. Thirdly, emotional maturity caters the development of individual’s self conceptions (Campbell, et al., 2003) and higher self confidence in individuals (Jha, 2002; Agnihotri, 1987) which is vital for developing better self perception and self esteem of a person that helps in developing a sound confident personality which is of prime importance in effective administration.

The connection between emotional stability and job performance has also been established (Dudley, Orvis, Lebiecki, & Cortina, 2006; Hogan & Holland, 2003; Judge, et al., 2002; Barrick, Mount, & Judge, 2001; Salgado, 1998, 1997; Hough, 1992; Barrick & Mount, 1991; Tett, Jackson, & Rothstein, 1991; Hough, Eaton, Dunnette, Kamp, & McCloy, 1990) and individuals who are low in emotional stability are more likely to be irritable, depressed, or anxious and these traits inhibit the completion of workplace tasks (Barrick & Mount, 1991). Emotional maturity is considered as a significant predictor of the level of success which includes general level of well being in terms of emotional, mental and physical health. Emotionally stable persons are confident (Gaddis & Foster, 2013). In this way emotional maturity relates to personal and interpersonal domain of a principal which enables him to strike mutually healthy balance between his own needs and the needs of the teachers and students which is the demand of effective administration.

The present finding may also be explained in terms of emotional intelligence. George (2000), Barling, et al., (2000), Law, et al., (2004) have indicated that emotional intelligence is important to the process of leading and is an essential component of effective leadership and leaders high in emotional intelligence are more effective. Emotional intelligence is a strong predictor of job performance (Javidparvar, Hosseini, & Berjisian, 2013; Nikkheslat, Asgharian, Saleki, & Hojabri, 2012; O’Boyler, Humphrey, Pollack, Hawver, & Story, 2011; Gresham, 2010). Emotionally intelligent employees are capable employees (Othman & Anugerah, 2009; Norsidah, 2008; Rozeman, 2007; Stough, 2003 all cited in (Alavi, Mojtahedzadeh, Amin, & Savoji, 2013) indicated that emotional intelligence is a useful predictor of job satisfaction and organisational commitment. Individuals with
high EQ are more committed to their jobs, commitment predicts job satisfaction and satisfied employees are effective employees.

Numerous researchers have defined emotional maturity in terms of emotional intelligence (Landau in Behnke & Greenan, 2011, p.65; Ashkanasy, Hartel, & Zerbe, 2000) thereby suggesting a close relationship between the two.

Moreover, Dalip Singh (2006) considered emotional maturity as one of the important component of emotional intelligence. It was quoted by M. Beard (2012) in his blog that emotional maturity is the appropriate application of emotional intelligence indicating that emotionally mature person is also emotionally intelligent. Van Rooy & Viswesvaran (2004) after conducting a meta-analysis of 69 emotional studies concluded that emotional intelligence is a predictor of job performance. Emotional intelligence can be the difference between effective and ineffective schools (Moore, 2009b; Williams, 2008; Patti, 2007, Fullan, 2001).

Emotional intelligence comprises specific skills, behaviours and attitudes that can be learned, applied and modelled by individuals to improve personal satisfaction and career effectiveness (Nelson & Low, 2003). Thus, emotionally mature principals in turn are emotionally intelligent principals who have the ability to understand teachers' feelings of their schools in carrying out their job of supervision.

Another potential explanation of this research finding may be found by taking into consideration the Emotion Regulation Ability (ERA) emotion regulation is the ability to control the experience and expression of emotion (Gross, 2002) and it is particularly important in school setting where the social rules are levied that principals should express only the positive emotions in the school so the principal has to find appropriate ways of regulating his negative emotions of anger, disgust, frustration and sadness etc. Referring to the Bernard's criteria (1984) of evaluating the emotionally mature persons, it can be said that an emotionally mature individuals has the ability to control and manage his emotions in a proper and constructive way i.e., emotionally mature individual generally evaluate, handle, control and use emotions quickly thus have high emotion regulation ability. It has been demonstrated by researchers that individuals with higher emotion regulation ability are better able to forecast their feelings for future events (Dunn, Brackett, Ashton-James, Schneiderman, & Salovey,
2007) School principals manage, monitor and regulate their emotions to achieve effectiveness.

Emotionally mature principals with higher emotion regulation ability may be better able to predict which circumstances led to negative emotion related situations and as such can take suitable precautionary measures prior to that and thus may be able to create positive and pleasant environment in the school and may be better in interacting more positively with their colleagues for better results.

Present finding is refuted by the works of (Barbuto & Burbach, 2006; Brown, Bryant, & Reilly, 2006; Barchard, 2003) who have reported that emotional intelligence has no statistical significance in leadership effectiveness.
Objective 4: To study the difference between high effective group of principals and low effective group of principals on their hardness.

In order to study the difference between high effective group of principals and low effective group of principals on their hardness, following null hypothesis was formulated.

**Hypothesis 4: There is no statistical significant difference in hardness of high effective group of principals and low effective group of principals.**

| Table 4.4 |
| Showing the comparison of hardness between high effective group of principals (HEGP) and low effective group of principals (LEGP) |

<table>
<thead>
<tr>
<th>Hardiness</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>df</th>
<th>t-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Effective Group of Principals (HEGP)</td>
<td>135</td>
<td>112.13</td>
<td>17.83</td>
<td>268</td>
<td>6.51**</td>
</tr>
<tr>
<td>Low Effective Group of Principals (LEGP)</td>
<td>135</td>
<td>96.16</td>
<td>22.23</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Significant at 0.01 level

An examination of the Table 4.4 reveals that the mean value of hardness of high effective group of principals (HHEGP) is 112.13 with a standard deviation of 17.83 and the mean value of the hardness of low effective group of principals (LLEGP) is 96.16 with a standard deviation of 22.23. On applying t-test, a t-ratio of 6.51 is obtained, which is statistically significant at .01 level. Therefore, null hypothesis, Ho.4: there is no statistical significant difference in hardness of high effective group of principals and low effective group of principals is rejected. This means there is a significant difference in the hardness of high effective group of principals and hardness of low effective group of principals. Higher mean score of hardness of high effective group of principals (HEGP) than the hardness of low effective group of principals (LEGP) has been graphically represented in Figure 4.4 implying that the hardy principals are more effective than the non hardy principals.
Figure 4.4 Comparison of mean of hardiness scores of high effective group of principals (HEGP) and low effective group of principals (LEGP)
This finding is in line with results of the studies of (Bartone & Snook, 2009; Notman, Henry, Latham, Potaka, Slowley, & Ross, 2009; Vogt, et al., 2008; Al-Qarout, 2006; Bartone, 2006; Bartone, Johnsen, Eid, Brun, & Laberg, 2002; Bartone & Snook, 2000; Milan, Bourne, Zazanis, & Burton, 2002; Bartone, 1999) who have confirmed the importance of psychological hardiness, as a factor influencing leader effectiveness and reported the role of hardness in better performance.

The present research finding revealed that hardy principals shows higher effectiveness than non-hardy principals. This finding is also in line with the findings obtained by Cash (2009), Sansone, Wiebe, & Morgan (1999), Wiebe & Williams (1992) who have reported that hardness increases an individual’s task effectiveness. There is a meaningful relation between hardiness and performance (Mohammadamini, 2005; Gould, et al, 2002; Maddi & Hess, 1992; Maddi & Kobasa, 1979). Maddi, et al., (2006), McCalister, Dolbier, Webster, Mallon, & Sternhardt (2006), Rush, Schoel, & Barnard (1995) pointed out that hardiness was expected to have direct relationships with outcomes such as satisfaction and performance. Also, the finding directly draws support from Maddi’s (2004, p.295) which concluded the role of hardness in better performance. The hardness theory asserts that individuals possess higher levels of hardness sense greater feelings of involvement and control in their work (Maddi & Kobasa, 1984) thus helping in eliciting productive performance. Since more impressive evidences are available to the effect that hardness contributes in work involvement and task effectiveness, the finding of present research strongly strengthens further these evidences. Hardiness may contribute to one’s performance in variety of domains (Maddi, Harvey, Khoshaba, Lu, Persico, & Brow 2006).

The performance benefits of hardiness may be particularly pronounced when performing tasks in stressful situations such as in school settings.

Hardiness manifests itself in feelings and behaviours characterised as commitment, control and challenge. Commitment reflects a dedication to oneself and to one’s work. Control is the extent to which an individual influences life events to ensure a particular outcome. Challenge refers to life events and one’s response to those events. These 3Cs of hardy attitudes provide the courage and motivation to do the hard work of turning stressful circumstances from potential disasters into growth opportunities instead (Maddi, 2002). Thus, hardy principals are fully involved and committed towards their job; can safely manage their environments and resolve stressful...
conditions in the school setting; are flexible, open minded and considers changes as incentives to grow. These special attributes of hardy principals contribute to their enhanced performance thereby increasing their effectiveness.

Another plausible explanation of the finding under discussion may be found in buffering role of hardiness on stress-illness and stress-burnout relationships. Research studies with a variety of occupational groups have found that hardiness functions as significant moderators or buffer in the stress–health relation. (Rasouli, Hossenian, & Dokanee, 2012; Taylor, Pietrobon, Taverniers, Leon, & Fern, 2011; Azeem, 2010; Eschleman, et al., 2010; Crust & Azadi, 2010; Lopez, Bolano, & Pol, 2010; Nezhada & Besharat, 2010; Ramzi & Besharat, 2010; Cash, 2009; Hystad, Eid, Laberg, Johnsen, & Bartone, 2009; Subramanian & Vinodkumar, 2009; Wadye, 2009; Bartone, Roland, Picano, & Williams, 2008; Day & Schleicher, 2006; Almedom, 2005; Peltier, et al., 2005; Schellenberg, 2005; Cole, et al., 2004; Lopez, Haigh, & Burney, 2004; O’rourke, 2004; Chan, 2003; Crowley, Hayslip, & Hobdy, 2003; Britt, et al., 2001; Judkins, 2001; Soderstrom, Dolbier, Leiferman, & Steinhardt, 2000; Maddi & Hightower, 1999; Maddi, 1999; Suzanne, 1999; Florian, et al., 1995; Sharpley, et al., 1995; Sweetman, et al., 1992; Gill & Harris, 1991; Wiebe, 1991; Pierce & Molloy, 1990; Westman, 1990; Allred & Smith, 1989; Contrada, 1989; Rhodewalt & Zone, 1989; Roth, et al., 1989; Banks & Gannon, 1988; Genellen & Blaney, 1984; Kobasa & Maddi, 1984; Kobasa, Maddi, & Kahn, 1982; Kobasa, 1979).

Hardy people react more effectively to stressful situation, they tend to use coping strategies aimed at turning the stressful situation into a more benign situation, such as task focused coping, and whereas non hardy persons engage in emotion focused coping or avoidance (Maddi, 2002; Kobasa, 1979). Similarly, Maddi & Hightower (1999) found that hardiness was positively related to an active coping pattern and negatively related to disengagement and denial.

According to Funk (1992) hardy individuals are able to remain healthy under stress by possessing commitment control and challenge characteristics. Hardy persons remain healthy both physically and mentally under stressful conditions and hardy individuals suffer from fewer illnesses in comparison than non hardy individuals. As far as appraisal of a same stressful situation is concerned hardy people appraise stressful
situations differently than non-hardy. Hardy people appraise stressful situations less threatening, because of their belief that they can control the situation and even they believe that they can learn from it and they are optimistic and more confident of their abilities especially in pressure situations. Therefore, hardy principals face the problems and try to resolve them by transforming them into meaningful conditions, on the other hand non-hardy principals indulge in avoiding the situation and problem that would lead to maladjustment in the school which in turn hampers their effectiveness in administering the schools.

Moreover, it has been reported that hardiness has a positive effect on job satisfaction (Cash, 2009; Judge, et al., 1998; Manning, et al., 1988; Fisher, 1985). Al-Qarout (2006) found a positive statistical relationship between the hardiness behavior and job satisfaction among the headmasters of Government schools in the Northern districts of the West Bank. More recently, Rasouli, et al., (2012) found a positive and meaningful relationship between hardiness and job satisfaction and stress among faculty members of Islamic Azad University, Mahabad. Hardiness is positively associated with job satisfaction (Rasouli, et al., 2012) which is expected to be one of the important factors in increasing the effectiveness of school principals. This is also the first finding of the present research study.
Objective 5: To find out the relationship between principals’ effectiveness and their job satisfaction.

In order to study the relationship between principals’ effectiveness and their job satisfaction, following null hypothesis was formulated.

_Hypothesis 5: There is no statistical relationship between principals’ effectiveness and their job satisfaction._

Table 4.5

Showing the relationship (correlation coefficient) of principals’ effectiveness and job satisfaction:

<table>
<thead>
<tr>
<th>Variables</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>r (Pearson Product)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Principals’ Effectiveness</td>
<td>500</td>
<td>150.33</td>
<td>14.22</td>
<td>0.599**</td>
</tr>
<tr>
<td>Job Satisfaction</td>
<td>500</td>
<td>69.59</td>
<td>14.13</td>
<td></td>
</tr>
</tbody>
</table>

**Correlation is significant at 0.01 level

The Pearson product moment correlation between principals’ effectiveness (dependent variable) and job satisfaction (independent variable) as depicted in Table 4.5 is statistically significant at .01 level. This means there is a significant relationship between principals’ effectiveness and their job satisfaction. Therefore, the null hypothesis, Ho.5: there is no relationship between principals’ effectiveness and their job satisfaction is rejected. It means there is a significant relationship between principals’ effectiveness and their job satisfaction. This shows that principals’ effectiveness increases with the increase in job satisfaction.

This finding is in consonance with the findings of numerous researchers. For instance (Basavaraj, 2013; Nagadiman, Eliyana, & Ratmawati, 2013; Salehi & Gholtash, 2011; Wilson, 2009; Foote, et al., 2008; Almutairi, 2005; Brooks, 2000; Sosik, 1997) have found a positive and significant relationship between principals’ effectiveness and job satisfaction. It means principals’ effectiveness increases with the increase in job satisfaction. The result contradicts to the results of Yoon & Jabeom (2003) who have found no relationship between job satisfaction and teachers’ effectiveness.
Objective 6: To find out the relationship between principals’ effectiveness and their work commitment.

In order to study the relationship between principals’ effectiveness and their work commitment, following null hypothesis was formulated.

**Hypothesis 6: There is no statistical relationship between principals’ effectiveness and their work commitment.**

Table 4.6

Showing the relationship (correlation coefficient) of principals’ effectiveness and work commitment:

<table>
<thead>
<tr>
<th>Variables</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>r (Pearson Product)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Principals’ Effectiveness</td>
<td>500</td>
<td>150.33</td>
<td>14.22</td>
<td>0.675**</td>
</tr>
<tr>
<td>Work Commitment</td>
<td>500</td>
<td>68.84</td>
<td>20.01</td>
<td></td>
</tr>
</tbody>
</table>

**Correlation is significant at 0.01 level**

The Pearson product moment correlation between principals’ effectiveness (dependent variable) with work commitment (independent variable) as depicted in Table 4.6 is statistically significant at .01 level. Therefore, the null hypothesis, Ho.6 there is no relationship between principals’ effectiveness and their work commitment is rejected. This means there is a significant relationship between principals’ effectiveness and their work commitment. This shows that principals’ effectiveness increases with the increase in work commitment.

This finding is similar to those in (Daneshfard & Ekvaniyan, 2012; Jofri, et al., 2011; Lee, 2010; Malik, et al., 2010; Petrides & Furham, 2006; Ssesanga & Garrett, 2005; Arifin, et al., 2004; Lok & Crawford, 2004; Carmeli, 2003; Ngamchokchaicharoen, 2003; Stander & Rothmann, nd) who have found a significant positive relationship between work commitment and job satisfaction showing that with the increase in work commitment job satisfaction also increases. In other words, greater job satisfaction results in greater work commitment, indicating that job satisfied leaders are committed leaders and committed leaders are effective principals which is also the second finding of the present study.
Objective 7: To find out the relationship between principals’ effectiveness and their emotional maturity.

In order to study the relationship between principals’ effectiveness and their emotional maturity, following null hypothesis was formulated.

_Hypothesis 7: There is no statistical relationship between principals’ effectiveness and their emotional maturity._

**Table 4.7**

Showing the relationship (correlation coefficient) of principals’ effectiveness and emotional maturity

<table>
<thead>
<tr>
<th>Variables</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>r (Pearson Product)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Principals’ Effectiveness</td>
<td>500</td>
<td>150.33</td>
<td>14.21</td>
<td>-.707**</td>
</tr>
<tr>
<td>Emotional Maturity</td>
<td>500</td>
<td>98.87</td>
<td>31.37</td>
<td></td>
</tr>
</tbody>
</table>

**Correlation is significant at 0.01 level**

The Pearson product moment correlation between principals’ effectiveness (dependent variable) and emotional maturity (independent variable) as depicted clearly in Table 4.7 is statistically significant at .01 level. Therefore, the null hypothesis, Ho.7: there is no relationship between principals’ effectiveness and their emotional maturity is rejected. This means there is a significant relationship between principals’ effectiveness and their emotional maturity. This shows that principals’ effectiveness increases with the increase in emotional maturity. (Negative value of emotional maturity is interpreted positively because of the scoring pattern of emotional maturity scale in which lower scores corresponds to emotional maturity and higher scores correspond to emotional immaturity).
Objective 8: To find out the relationship between principals' effectiveness and their hardiness.

In order to study the relationship between principals' effectiveness and their hardiness, following null hypothesis was formulated.

*Hypothesis 8: There is no statistical relationship between principals' effectiveness and their hardiness.*

Table 4.8

<table>
<thead>
<tr>
<th>Variables</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>r (Pearson Product)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Principal Effectiveness</td>
<td>500</td>
<td>150.33</td>
<td>14.21</td>
<td>0.264**</td>
</tr>
<tr>
<td>Hardiness</td>
<td>500</td>
<td>105.30</td>
<td>22.08</td>
<td></td>
</tr>
</tbody>
</table>

**Correlation is significant at 0.01 level**

The Pearson product moment correlation between principals' effectiveness (dependent variable) and hardiness (independent variable) as depicted in Table 4.8 is statistically significant at .01 level. Therefore, the null hypothesis, Ho.8: there is no relationship between principals' effectiveness and their hardiness is rejected. This means there is a significant relationship between principals' effectiveness and their hardiness. This shows that principals' effectiveness increases with the increase in their hardiness.

This finding is in agreement with the findings of the studies of (Bartone & Snook 2009; Milan, Bourne, Zazanis, & Burstone, 2002; Bartone, 1999) which have reported hardiness as the strongest personality predictor of leader performance.
Objective 9: To study the combined and individual effects of selected independent variables viz., job satisfaction, work commitment, emotional maturity and hardiness on the effectiveness of school principals.

In order to study the combined and individual effects of selected independent variables viz., job satisfaction, work commitment, emotional maturity and hardiness on the effectiveness of school principals. Following null hypothesis was formulated.

Hypothesis 9: There are no combined and individual effects of selected independent variables viz., job satisfaction, work commitment, emotional maturity and hardiness on the effectiveness of school principals.

Table 4.9.1 Model Summary for Regression Analysis

<table>
<thead>
<tr>
<th>Predictors</th>
<th>R</th>
<th>R²</th>
<th>R² Adjusted</th>
<th>Std. Error</th>
<th>R² Change</th>
<th>F change</th>
</tr>
</thead>
<tbody>
<tr>
<td>EM</td>
<td>.707</td>
<td>.500</td>
<td>.499</td>
<td>10.0624</td>
<td>.500</td>
<td>498.038**</td>
</tr>
<tr>
<td>EM, WC</td>
<td>.801</td>
<td>.642</td>
<td>.641</td>
<td>8.52373</td>
<td>.142</td>
<td>197.023**</td>
</tr>
<tr>
<td>EM, WC, H</td>
<td>.806</td>
<td>.649</td>
<td>.647</td>
<td>8.44984</td>
<td>.007</td>
<td>9.729**</td>
</tr>
<tr>
<td>EM, WC, JS</td>
<td>.808</td>
<td>.652</td>
<td>.649</td>
<td>8.41959</td>
<td>.003</td>
<td>4.571**</td>
</tr>
</tbody>
</table>

** Significant at 0.01 level

In order to find out the combined and individual effects of the selected independent variables viz, job satisfaction, work commitment, emotional maturity and hardiness on the effectiveness of principals, stepwise regression analysis was applied.

The results of multiple regression analysis are presented in Table 4.9.1, 4.9.2 and 4.9.3.
**Table 4.9.2 ANOVA for Regression Analysis**

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>65760.502</td>
<td>4</td>
<td>16440.125</td>
<td>231.912**</td>
</tr>
<tr>
<td>Residual</td>
<td>35090.312</td>
<td>495</td>
<td>70.890</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>100850.814</td>
<td>499</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Significant at .001 level**

**Table 4.9.3 Coefficients for Regression Analysis**

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta (β)</td>
</tr>
<tr>
<td>Constant</td>
<td>153.817</td>
<td>4.145</td>
<td>-.501</td>
</tr>
<tr>
<td>Emotional Maturity</td>
<td>-.227</td>
<td>.016</td>
<td>-.501</td>
</tr>
<tr>
<td>Work Commitment</td>
<td>.290</td>
<td>.024</td>
<td>.408</td>
</tr>
<tr>
<td>Hardiness</td>
<td>-.063</td>
<td>.019</td>
<td>-.098</td>
</tr>
<tr>
<td>Job Satisfaction</td>
<td>.081</td>
<td>.038</td>
<td>.080</td>
</tr>
</tbody>
</table>

**Significant at 0.01 level**

A close perusal of Tables 4.9.1, 4.9.2 and 4.9.3 reveals that job satisfaction, work commitment, emotional maturity and hardiness in combination contributed significantly to the effectiveness \( F (4, 495) = 231.912, p < 0.01 \) of school principals.

Using the total scores of job satisfaction, work commitment, emotional maturity and hardiness to predict effectiveness of school principals results in a multiple R of .808 which accounted for 65.2% variance of principals’ effectiveness scores. In other words 65.2% of the variance in the dependent variable i.e., principals’ effectiveness is explained by the independent variables job satisfaction, work commitment, emotional maturity and hardiness and 34.8% of the variance in principals’ effectiveness is explained by some other variables which investigator has not included in the present study.
Further, the Table 4.9.2 shows that the F-value is 231.912 which is significant at the 0.01 level. It means job satisfaction, work commitment, emotional maturity, and hardiness are contributing significantly to principals' effectiveness. Therefore, the null hypothesis, Ho.9: there is no contribution of job satisfaction, work commitment, emotional maturity and hardiness to the variance of principals' effectiveness is rejected. This indicates that the contribution of the predictor variables in predicting principals' effectiveness could have not occurred by chance.

As apparent from the standardised coefficient (β), bearing t value that is significant at .001 level, emotional maturity has the strongest predicting power (β = -.501; < 0.01) for effectiveness of school principals and contributed 50 % in effectiveness of school principals (R^2 Change = .50, F (1, 498) = 498.038; p < 0.01). However, the negative sign is obtained due to negatively worded items on emotional maturity scale suggesting that higher the score on emotional maturity scale corresponding to emotional immaturity and lower score on EMS indicate emotional maturity.

Work commitment emerged as the next significant potential predictor (β = .408; p < 0.01) of the effectiveness of school principals exhibiting a positive influence and contributed around 14.2 % (R^2 change = .142, F (1, 497) = 197.03; p < 0.01) of variance in explaining effectiveness of school principals. It means increase in work commitment level also corresponds to increase in effectiveness of school principals.

In the same way, hardiness further increases the variance by 0.70 % making the prediction to improve further (R^2 change = .007, F (1, 496) = 9.729; p < 0.01)

Similarly, job satisfaction increases the variance by 0.30 % making the prediction to improve further (R^2 change = .003, F (1, 495) = 4.571; p < 0.01). Figure 4.5 gives an account of the relative percent contribution of the predictors in terms of shared common variance in the dependent variable, principals' effectiveness.
Figure 4.5 Percent contribution of predictors in the dependent variable principals’ effectiveness.

The total principals’ effectiveness score of any individual not included in this sample can be predicted by using the following regression equation.

\[ Y = B_1 X_1 + B_2 X_2 + B_3 X_3 + B_4 X_4 + C \]

Where, \( Y \) = Dependent Variable
\( X_1, X_2, X_3, X_4 \) = The Raw Score of Independent Variables
\( B_1, B_2, B_3, B_4 \) = Regression Coefficient
\( C \) = Constant

Hence, \[ Y = .081X_1 + .29X_2 - .227X_3 - .063X_4 + 153.817 \]

So the total principals’ effectiveness score of school principals can be predicted by inserting the value of \( X_1, X_2, X_3, \) and \( X_4 \) in the above equation.
Objective 10: To find out the difference in principals’ effectiveness in relation to age.

In order to study the difference in principals’ effectiveness in relation to age, following null hypothesis was formulated.

**Hypothesis 10:** Principals of different age groups do not differ significantly in their effectiveness.

Table 4.10

Showing the comparison of principals’ effectiveness of age groups between principals above 45 years and upto 45 years

<table>
<thead>
<tr>
<th>Age of Principals</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>df</th>
<th>t-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Principals’ Effectiveness Above 45 Years of Age</td>
<td>258</td>
<td>151.78</td>
<td>13.24</td>
<td>498</td>
<td>3.19**</td>
</tr>
<tr>
<td>Principals’ Effectiveness Upto 45 Years of Age</td>
<td>242</td>
<td>147.84</td>
<td>14.47</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Significant at 0.01 level**

It can be inferred from the Table 4.10 that the mean value of principals’ effectiveness above 45 years of age is 151.78 with a standard deviation of 13.24 and the mean value of the principals’ effectiveness upto 45 years of age is 147.84 with a standard deviation of 14.47. On applying t-test, a t-ratio of 3.19 is obtained, which is statistically significant at .01 level. Therefore, null hypothesis, Ho.10: principals of different age groups do not differ significantly in their effectiveness is rejected. This means principals of different age groups differ significantly in their effectiveness. Higher mean score of principals’ effectiveness above 45 years of age than the principals’ effectiveness upto 45 years of age has been graphically represented in Figure 4.5 implying that principals of above 45 years of age are more effective than the principals who are upto 45 years of age.
Figure 4.6 Comparison of mean of principals' effectiveness scores of age groups between principals above 45 years of age and principals up to 45 years of age.
This finding is corroborated by the findings of Shakir (2013) and Ibukun, Oycwole, & Abe (2011) who have reported that principals above 45 years of age are more effective as compared to the principals up to 45 years of age. The present study also confirms the findings obtained by the researchers (Stemple, 2004; Ogunsanya, 2001; Okolo, 2001) who have reported that age tended to affect the principals effectiveness and older principals are more effective as compared to their younger counterparts. It may be because of the reason that the older principals had generally spent more years on their job, attended more seminars, conferences, workshops and participated in more number of relevant professional development programmes that exposed them to new and better techniques of school administration and a long stay in school leadership positions may equip them with more adequate knowledge to function effectively. Hence, the present finding upholds the popular adage that—experience is the best teacher. Finding is also supported by the finding of (Zhongshan, 2008) who has found that job satisfaction increases with the increase in age and higher the teacher’s age, the higher the level of job satisfaction and the lower the teacher’s age, the lower the job satisfaction level. Therefore, satisfied teachers are effective teachers. This finding may be explained in terms age and work commitment. For instance, researchers (Finegold, et al., 2002; Sommer, et al., 1996; Allen & Meyer, 1993; Smith & Hoy, 1992) have reported that older workers are likely to be more committed to their organisation as compared to their younger colleagues. Therefore, the principals of above 45 years of age are more effective as compared to the principals up to 45 years of age.

Another explanation of the present finding may be the relationship between length of experience and commitment. Researchers (Sommer, et al., 1996) have reported that there is a significant relationship between length of experience and commitment, those who were older had a greater level of commitment. Committed leaders are effective leaders this is also the second finding of the present research study.

Another plausible explanation of the present finding lies in the role organisational citizenship behaviour of employees in performance. Organisational commitment has been found to be an important predictor of organisational citizenship behaviour. (LePine, Erez, & Johnson, 2002; Organ & Ryan, 1995; Schappe, 1998). It is very
Important within the organisation as it promotes organisational effectiveness and competitive advantage. Age has been found to be a contributing factor to organizational citizenship behaviour, with older members more likely to be involved with the organisation (Pettit, et al, 2004; Wagner & Rush, 2000).

This finding can also be explained in this way that with the experience principals potentiality increases and they are more adaptable to the environment and more ready to cope up with stress.

The present finding is in conflict with the finding of Basavaraj (2013) who have found that younger principals are more effective than their older counterparts. Finding is also inconsistent with the findings of researchers (Nanda, 1992; Ferrandino, 1984; Williams, 1984; Usmani, 1988; Glasscock, 1991) who have reported that age had no effect on principals’ effectiveness.

The relationship between age and principals’ effectiveness is not clear as the empirical results have been mixed. This variation of results indicated that there is a need of further in depth studies to clarify the role of age in the effectiveness of school principals.
Objective 11: To find out the difference in principals’ effectiveness in relation to gender.

In order to study the difference in principals’ effectiveness in relation to gender following null hypothesis was formulated.

_Hypothesis 11: Principals of different genders do not differ significantly in their effectiveness._

<table>
<thead>
<tr>
<th>Table 4.11</th>
</tr>
</thead>
</table>

**Showing the comparison of principals’ effectiveness on the basis of their gender**

<table>
<thead>
<tr>
<th>Gender</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>df</th>
<th>t-value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Male Principals’ Effectiveness</strong></td>
<td>306</td>
<td>150.82</td>
<td>13.62</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Female Principals’ Effectiveness</strong></td>
<td>194</td>
<td>149.75</td>
<td>14.57</td>
<td>498</td>
<td>0.832*</td>
</tr>
</tbody>
</table>

*Not significant at .05 level

A glance at Table 4.11 clearly shows that the mean value effectiveness of male principals is 150.82 with a standard deviation of 13.62 and the mean value of the effectiveness of female principals is 149.75 with a standard deviation of 14.57. On applying t-test, a t-ratio of 0.832 is obtained, which is statistically not significant at .05 level. Therefore, null hypothesis, Ho.11: principals of different genders do not differ significantly in their effectiveness is accepted. This means there is no statistical significant difference between the principals’ effectiveness on the basis of their gender. In other words, effectiveness of principals is not influenced by their gender differences. This can be observed clearly from mean scores of male and female principals which have been graphically represented in Figure 4.7.
Figure 4.7 Comparison of means of principals' effectiveness of male and female principals.
This finding is corroborated by the findings of Shakir (2013) who reported no significant difference between the principals' effectiveness on the basis of their gender. This finding is also quite in conformity with the findings of studies conducted by several researchers. For instance (Basavaraj, 2013; Olorunsola, 2012; Ibukan, Oyewole, & Abe, 2011; Wexler-Eckman, 2004; Barter, 2001; Osezuah, 2000; Mertz & McNeely, 1998; Moehlman, 1988) have reported that male and female principals do not differ significantly in their effectiveness. Result is also similar with the findings of (Tuttle, 2006; Taj, 1992; Nanda, 1992; Usmani, 1988) who have found that gender had no effect on principal effectiveness. The reason for the insignificant difference that existed between male and female principals' effectiveness may be due to improved commitment to duty by both male and females.

But the present finding disagrees with the findings obtained by (Ogunyinka & Adedoyin, 2013; Akiri & Ugdorugbo, 2008; Adigwa, 2004; Wile, Hare, Grobman, & Hiries, 1996) who have reported male principals to be more effective than their female counterparts. Present research finding is also refuted by (Jamil, Ramzan, Atta, Younis, Kareem, & Jan, 2012; Brooks & Jones, 2010; Khan, Saeed, & Kiran, 2009; Asuquo & Usoro, 2008; Kawana, 2004; Rush, 1993; Burton, 1990; Schulman, 1989; Spalding, 1987; Ashraf, 1972) who have reported female principals to be more effective than their male counterparts.

The comparison of male and female principals in principals' effectiveness has been loaded with contradictions. Some studies have found that male principal were effective than female principals and other studies have found female principals more effective than male principals. These inconsistent and contradictory findings indicated that there is a need of in depth studies to clarify the role of gender on the effectiveness of school principals.
Objective 12: To study the effectiveness of principals in relation to their length of experience.

The total sample of the school principals is divided into three groups on the basis of length of experience data. These are divided into three groups: Group 1-Principals having (0-10) years of experience. (b) Group 2-Principals having (11-20) years of experience. (c) Group 3-Principals having 21 and above years of experience. Sample wise distribution of the principals included in the sample on the basis of their length of experience is graphically shown in Figure 4.8

![Figure 4.8 Distribution of principals in different groups of length of experience](image-url)
Chapter 4  
Analysis, Interpretation & Discussion of Results

Mean Scores of Principals' Effectiveness in different groups of length of experience

<table>
<thead>
<tr>
<th>Experience</th>
<th>Mean Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-10 Years</td>
<td>138.19</td>
</tr>
<tr>
<td>11-20 Years</td>
<td>151.38</td>
</tr>
<tr>
<td>21 and Above</td>
<td>165.52</td>
</tr>
</tbody>
</table>

In order to find out the impact of length of experience on the effectiveness of school principals, the following null hypothesis was formulated.

**Hypothesis 12: There is no statistical significant difference in the principals' effectiveness in relation to their length of experience.**

As there is one independent variable (length of experience) having three groups (0-10), (11-20), & (21 and above). Therefore, One-Way ANOVA was applied to test the above null hypothesis.

**Table 4.12**

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>60488.146</td>
<td>2</td>
<td>30244.073</td>
<td>372.406</td>
<td>.000</td>
</tr>
<tr>
<td>Within Groups</td>
<td>40362.667</td>
<td>497</td>
<td>81.213</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>100850.814</td>
<td>499</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

F (2, 499) = 372.406; p < 0.01
An inspection of the Table 4.12 reveals that principals’ effectiveness at different length of experience differed markedly and significantly ($F (2, 499) = 372.406; p <0.01$) from one another clearly indicating a significant effect of length of experience on the effectiveness of school principals as shown in Table 4.12, $F$-value is 372.406 which is statistically significant at .01 level indicating that length of experience has a significant influence on the effectiveness of school principals. This finding is corroborated by the findings of Shakir (2013) who reported that length of experience has a significant influence on the effectiveness of secondary school principals.

As, a significant $F$-value is obtained from the one-way analysis of variance, it shows only that the means are not all equal. To examine the specific significant differences among the three groups compared or to determine which specific groups differ significantly from one another, Schéffe’s test (or $s$ test) was applied between the possible pairs.

<table>
<thead>
<tr>
<th>Groups</th>
<th>Mean Difference</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>A and B (0-10 and 11-20 years)</td>
<td>-13.18*</td>
<td>.000</td>
</tr>
<tr>
<td>A and C (0-10 and 21 and above years)</td>
<td>-27.33*</td>
<td>.000</td>
</tr>
<tr>
<td>B and C (11-20 and 21 and above years)</td>
<td>-14.15*</td>
<td>.000</td>
</tr>
</tbody>
</table>

*The mean difference is significant at .05 level.

A close perusal of the Table 4.13 reveals that the mean differences are significant at .05 level.

Mean difference of first group (A and B) i.e., principals having 0-10 years and 11-20 years experience was found to be significant indicating that principals having 11-20 years experience are more effective as compared to principals having 0-10 years of experience. This finding is corroborated by the findings of Shakir (2013) who reported that principals having 11-20 years of experience are more effective than the principals who have 0-10 years of experience.

Mean difference of second group (A and C) i.e., principals having 0-10 years and 21 and above years of experience was found to be significant indicating that principals
having 21 and above years of experience are more effective as compared to principals having 0-10 years of experience. This finding is in consonance with the findings of Shakir (2013) who have reported that principals having 21 and above years of experience are more effective than the principals who have 0-10 years of experience.

Similarly, the mean difference of third group (B and C) i.e., principals having 11-20 years and 21 and above years of experience was found to be significant indicating that principals having 21 and above years of experience are more effective as compared to principals having 11-20 years experience.

This finding is in line with the finding of Shakir (2013) who reported that principals having 21 and above years of experience are more effective as compared to the principals belonging to 11-20 years of experience.

Therefore, we can safely infer that principals having 21 and above years of experience are more effective as compared to principals having 11-20 years and 0-10 years of experience. This finding is corroborated by the finding of Shakir (2013) who have reported that principals who have 21 and above years of experience are more effective than the principals having 11-20 and 0-10 years of experience as a principal.

After analysing all the possible pairs (A and B), (A and C), and (B and C) it can be safely said that the effectiveness of school principals increases with the increase in their length of experience. A possible explanation for this may be offered from the fact that as the experience increases, principals become more proficient, confident and feel more adjusted with their job of administration which in turn may enhance their effectiveness.

This finding is corroborated by the findings obtained by the researchers. For instance (Shakir, 2013; Dude, 2012; Kadir, Niyazi, & Celal, 2012; Ibukun, Oyewole, & Abe, 2011; Brooks & Jones, 2010; Kain, 2010; Rice, 2010; Deng & Gibson, 2008; Earley & Weindling, 2007; Fernandez, et al., 2007; Fink & Brayman, 2006; Vanderhaar, Munoz, & Rodosky, 2006; Thomas & Cheese, 2005; Howson, 2004; Oplatka, 2004; Ravi, 2003; Kouzes & Posner, 2002; Licuanan, 2002; Brady, 2001; Wilson & Dalton, 1998; Cull, 1992; Taj, 1992; Moehlman, 1988) have reported that experience has a major impact on the effectiveness of the principals, this shows that principals' years
of experience significantly influenced their leadership effectiveness; more experienced principals performed better than the less experienced ones.

A plausible reason for the present research finding may be that the principals and teachers having more experience as a principal (Naz, Fazil, & Sulman, 2012), and as a teacher (Kazemi, 2009; BarghiJani, 2007 as cited in Mohammadi, et al., 2012) are more satisfied than the principal and teacher who is having less experience. As duration of principalship is more, the satisfaction level also increases. In other words, more experienced principals are more satisfied principals and in turn they are more effective principals. This is also the first finding of the present study.

Another explanation of the present finding may be the relationship between tenure and commitment. Researchers (Sommer, et al., 1996) have reported that there is a significant relationship between tenure and commitment, those who had been in the same job longer had a greater level of commitment. Committed leaders are effective leaders; this is also the second finding of the present study.

Present finding is contrary to the findings of (Walker, 2009; Fidler & Atton, 2004; Nanda, 1992; Ferrandino, 1984; Williams, 1984) who have found no significant relationship between principals’ effectiveness and their length of experience.
Objective 13: To find out the difference in job satisfaction of male and female principals.

In order to study the difference in job satisfaction of male principals and female principals, following null hypothesis was formulated.

*Hypothesis 13: There is no statistical significant difference between the job satisfaction of male and female principals.*

**Table 4.14**

Showing the comparison of job satisfaction of male and female principals

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>df</th>
<th>t-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male Principals</td>
<td>306</td>
<td>70.83</td>
<td>13.67</td>
<td>498</td>
<td>2.15*</td>
</tr>
<tr>
<td>Female Principals</td>
<td>194</td>
<td>68.05</td>
<td>14.71</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Significant at 0.05 level

A glance at the Table 4.14 exhibits that the mean value of job satisfaction of male principals (JSMP) is 70.83 with a standard deviation of 13.67 and the mean value of the job satisfaction of female principals (JSFP) is 68.05 with a standard deviation of 14.71. On applying t-test, a t-ratio of 2.15 is obtained, which is statistically significant at 0.05 level. Therefore, null hypothesis, Ho.13: there is no significant difference in job satisfaction of male principals (JSMP) and job satisfaction of female principals (JSFP) is rejected. This means there is a statistical significant difference in the job satisfaction of male principals (JSMP) and job satisfaction of female principals (JSFP). Higher mean score of job satisfaction of male principals (JSMP) than the job satisfaction of female principals (JSFP) has been graphically represented in Figure No.4.10 implying that the male principals are more satisfied than their female counterparts as far as their job satisfaction is concerned.
Figure 4.10 Comparison of mean of job satisfaction of male principals (JSMP) and job satisfaction of female principals (JSFP)
The finding under discussion is consistent with the findings of (Basavaraj, 2013; Kumari, 2010; Sodoma & Else, 2009; Bryant, 2001) who have reported that male and female headmasters differ significantly in respect of their job satisfaction. The present finding is also corroborated the findings reported by earlier studies of (Rajendran & Veerasakaran, 2013; Swaggert, 2012; Ali, et al., 2011; Battal, 2011; Zhongshan, 2008; Bowling, 2007; Crossman & Harris, 2006; Brogan, 2003; Barry, 2002; Sousa-Poza & Sousa Poza, 2000; Chiu, 1998; Graham & Messner, 1998; Lacy & Sheehan, 1997; Bishay, 1996; Olaimat, 1994; Fitzpatrick & White, 1983; Darmody & Smythm, (n.d) who have indicated the existence of differences in job satisfaction and reported that male principals and head teachers are more satisfied as compared to their female counterparts. But, the present finding contradicts to the results of (Sangeeta & Kumar, 2013; Mohammadi, Ghafourian, & Khorshidi, 2012; Naz, Fazil, & Sulman, 2012; Mahmood, Nudrat, Asdaque, Nawaz, & Haider, 2011; Ahmad, Ahmad, & Shah, 2010; Brown, 2009; DeNobile & McCormick, 2006; Tasnim, 2006; Bender, Donohue, & Heywood, 2005; Ghazi, 2004; Chaudhary, 2004; Bogler, 2002; Huang, 2001; Kostelios, 2001; Delgado, 2001; Gappa, 2000; Sloane & Williams, 2000; Klecker & Loadman, 1999; Ma & Macmillan, 1999; Newby, 1999; Clark, 1997; Klecker, 1997; Hill, 1994; Wingard & Patitu, 1993; Bedeian, et al., 1992; Konicek, 1992; Witt & Nye, 1992; Hodson, 1989; Fansher & Buxton, 1984; Quinn, Staines, & McCollough, 1974) who have reported female principals to be more satisfied than their male counterparts. This finding is also opposite to the inferences drawn by several researches. For instance (Ozel & Baser, 2013; Abushaira, 2012; Ali, Tanveeruz-Zaman, Akhtar, & Tabassum, 2012; Ferguson, et al., 2012; Ejimofor, 2007; Taylor, 2007; Kim, 2005; Lombardo, 2005; Donohue & Heywood, 2004; Stemple, 2004; Auster, 2001; Devito, 1998; Royalty, 1998; Thaker, 1996; Hulin, 1964) have indicated no significant differences between the male and female principals in relation to the job satisfaction.
Objective 14: To find out the difference in work commitment of male and female principals.

In order to study the difference in work commitment of male principals and female principals, following null hypothesis was formulated.

**Hypothesis 14:** There is no statistical significant difference between the work commitment of male and female principals.

### Table 4.15

**Showing the comparison of work commitment of male and female principals**

<table>
<thead>
<tr>
<th>Work Commitment</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>df</th>
<th>t-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male Principals</td>
<td>306</td>
<td>73.77</td>
<td>20.61</td>
<td>498</td>
<td>7.19**</td>
</tr>
<tr>
<td>Female Principals</td>
<td>194</td>
<td>61.18</td>
<td>16.44</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Significant at .01 level**

An inspection of the Table 4.15 indicates that the mean value of work commitment of male principals (WCMP) is 73.77 with a standard deviation of 20.61 and the mean value of the work commitment of female principals (WCFP) is 61.18 with a standard deviation of 16.44. On applying t-test, a t-ratio of 7.19 is obtained which is statistically significant at 0.01 level. Therefore, null hypothesis, Ho.14: there is no significant difference in work commitment of male and female principals is rejected. This means there is a statistical significant difference in the work commitment of male and female principals. Higher mean scores of work commitment of male principals than the female principals has been graphically represented in Figure 4.11 implying that work commitment of male principals (WCMP) was more than the work commitment of female principals (WCFP) i.e., male principals are more committed towards their work as compared to their female counterparts.
Figure 4.11 Comparison of mean of work commitment of male principals (WCMP) and work commitment of female principals (WCFP).
This finding is corroborated by the findings of (Akintaya, 2010; Adekola, 2006; Akintayo, 2006; Ajaja, 2004; Lok & Crawford, 2004; Brown, 2003; Williams & Warrens, 2003; Dodd-McCue & Wright, 1996; Aranya, Kushmir, & Valency, 1986) who have reported a significant difference between work commitment of male and female respondents and found male respondents to be more committed towards their work as compared to their female counterparts.

Also present finding of the research is in disagreement with the findings of (Dude, 2012; Morris, Wood, & Yaacob, 2001; Mathieu & Zajac, 1990; Lincoln & Kalleberg, 1991; Mowday, et al., 1983; Hrebinak & Alutto, 1972; Grusky, 1966) who have inferred that female are more committed towards their work. Present finding disagrees with the findings of several researchers. For instance (Hawkins, 1998; Aven, Parker, & McEvoy, 1993; Kushman, 1992; Powell, 1990; Lorence, 1987; Bruning & Snyder, 1983) have reported that male and female demonstrate equal amount of work commitment.

The present finding is not clear as the empirical results have been mixed. This variation of results indicated that there is a need of further in depth studies to clarify the finding discussed above.
Objective 15: To find out the difference in emotional maturity of male and female principals.

In order to study the difference in emotional maturity of male and female principals, following null hypothesis was formulated.

Hypothesis 15: There is no statistical significant difference between the emotional maturity of male and female principals.

Table 4.16

<table>
<thead>
<tr>
<th>Emotional Maturity</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>df</th>
<th>t-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male Principals</td>
<td>306</td>
<td>101.64</td>
<td>31.65</td>
<td>498</td>
<td>3.13**</td>
</tr>
<tr>
<td>Female Principals</td>
<td>194</td>
<td>92.73</td>
<td>29.97</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

** Significant at .01 level

On perusal of the Table 4.16 it is clear that the mean value of emotional maturity of male principals (EMMP) is 101.64 with a standard deviation of 31.65 and the mean value of the emotional maturity of female principals (EMFP) is 92.73 with a standard deviation of 29.97. On applying t-test, a t-ratio of 3.13 is obtained which is statistically significant at 0.01 level. Therefore, null hypothesis, Ho.15: there is no significant difference in emotional maturity of male and female principals is rejected. This means there is a statistical significant difference in the emotional maturity of male and female principals. Higher mean scores of emotional maturity of male principals (EMMP) than the emotional maturity of female principals (EMFP) has been graphically represented in Figure 4.12 implying that the male principals are less mature than the female principals because in the scoring pattern of emotional maturity scale lower scores corresponds to emotional maturity and higher scores corresponds to emotional immaturity.
Figure 4.12 Comparison of mean of emotional maturity of male principals (EMMP) and emotional maturity of female principals (EMFP)
**Objective 16:** To find out the difference in hardiness of male and female principals.

In order to study the difference in hardiness of male and female principals, following null hypothesis was formulated.

**Hypothesis 16:** There is no statistical significant difference between the hardiness of male and female principals.

<table>
<thead>
<tr>
<th>Table 4.17</th>
</tr>
</thead>
</table>

**Showing the comparison of hardiness of male principals (HMP) and hardiness of female principals (HFP)**

<table>
<thead>
<tr>
<th>Hardiness</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>df</th>
<th>t-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male Principals</td>
<td>306</td>
<td>102.46</td>
<td>20.17</td>
<td>498</td>
<td>4.09**</td>
</tr>
<tr>
<td>Female Principals</td>
<td>194</td>
<td>110.70</td>
<td>24.48</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Significant at .01 level**

An examination of the Table 4.17 shows that the mean value of hardiness of male principals (HMP) is 102.46 with a standard deviation of 20.17 and the mean value of the hardiness of female principals (HFP) is 110.70 with a standard deviation of 24.48. On applying t-test, a t-ratio of 4.09 is obtained, which is statistically significant at 0.01 level. Therefore, null hypothesis, Ho.16: there is no significant difference in hardiness of male and female principals (HFP) is rejected. This means there is a statistical significant difference in the hardiness of male and female principals. Higher mean scores of hardiness of female principals (HFP) than the hardiness of male principals (HMP) has been graphically represented in Figure 4.13 implying that female principals are more hardy than the male principals.
Figure 4.13 Comparison of mean of hardness of male principals (HMP) and hardness of female principals (HFP)
The present finding of this study commensurate with the findings obtained by the several researchers. For instance (Sheard, 2009; Voyce, 199; O'Brien, 1994; Hannah, et al., 1986) have reported females to be more hardy then males.

A plausible reason for this finding may be that female principals experienced more pressure than male principals as they are expected to perform well not only in their professional career but also as mothers and wives at home. In a way they are already trained for bearing stress and its management in performing their different roles at homes. The coping strategy that female principals reported in dealing with complex issues in managing the school has helped in being successful school principals (Morojele, Chikoko, & Ngcobo, 2013). Therefore, these social, personal and psychological factors may be the reason that female principals are more hardy than their male counterparts.

This finding may be explained in terms of coping with stress. More recently, Zhen Yan (2013) Professor in Department of Physiology and Biophysics at the University at Buffalo conducted a study to pinpoint why females are better at coping with stress than men. He found that while men tend to react with the “fight or flight” response, women generally turn to the less aggressive “tend and befriend” response. In other words, while men might respond to a stressful situation by lashing out or avoiding the issue, women are more likely to seek out social support. A State University of New York at Buffalo study, published in Journal Molecular Psychiatry, provides further insight into the sexes’ differing stress responses. Researcher found that the hormone estrogen has a protective effect on the brain that causes female to respond better to repeated stress exposure than male. These findings could not only lead to new ways of treating stress-related disorders in male and female, but also shed light on sex differences in mental health problems more broadly.

But the finding under discussion is refuted by the findings of (Kaur, 2011; Latha, 2001; Ahuja, et al., 1999) in which males are reported to be more hardy than their female counterparts. This finding is also inconsistent with the findings of (Al-Qarout, 2006; Sharpley & Yardley, 1999; Block, 1992; Shepperd & Kashani, 1991; Kash. 1987) who have reported no significant differences between hardness of males and females.

NEXT CHAPTER DEALS WITH SUMMARY, FINDINGS, CONCLUSION, IMPLICATIONS, RECOMMENDATIONS AND SUGGESTIONS