

# Original Article: Comparison of Spiritual Intelligence, Loneliness, and Mental Health of Mothers of Deaf and Non-Deaf Children in Ilam

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## ABSTRACT

This study aimed to compare spiritual intelligence, loneliness, and mental health of mothers of deaf and non-deaf children in Ilam. The statistical population included all mothers of deaf and normal children in Ilam in the academic year of 2016-2017. Likewise, the study sample included 100 mothers of deaf kids selected through the available sampling technique.

The data collection instruments used in this study were the King spiritual intelligence questionnaire (SISRI), general health questionnaire (GHQ-28), and the third version of the Loneliness Scale (UCLA). The data were analyzed using SPSS software version 23.

The results revealed a significant difference between mothers of deaf and non-deaf kids in Ilam in terms of spiritual intelligence, feeling of loneliness, and mental health ( $t = 0.2$ ). Based on the obtained results of the proposed research, spiritual intelligence plays the leading role in personal beliefs in various fields, particularly in promoting mental health. Therefore, concerning spiritual intelligence and how it deals with the feeling of loneliness and its explanation can assist mothers in realizing the concept of life and solving problems as well as their own and the other perceptions.

## Introduction

Child-birth is the most aesthetic and exciting moment in parents' lives, accompanied by numerous difficulties and sorrows. However, the hope to have a healthy and normal child can relieve and build trust in them, leading to a faster acceptance of the child. Parents' awareness of

their child's disability has turned all hopes and aspirations into despair, giving way to attempting to fix or overlap a problem. Due to their child's problems, parents of kids with physical disabilities frequently face various stress factors and psychological and social pressures. For instance, these parents deal with more stress and depression than others [1].

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One of the evident natural phenomena in all structures of human societies is the existence of differences. A healthy, humane, and efficient educational system receives and perceives these variations through various capabilities and potentials. While what motivates research in the humanities, prominently in psychology, to explore issues of mental health and environmental compatibility is the requirement for a healthy community where all members feel comfortable and secure. In current years, mental health, spiritual intelligence, and relevant facets have shed their light among professionals and government officials. However, diverse segments of the population and having disabled and exceptional children in particular needs are also concerned. And apart from what they require in normal circumstances, it worries the family and parents. The psychological pressures compiled with these issues and their concern for their child's future narrow the domain for them and inevitably turn to the related centers and institutions. They bring to somehow cope with these issues [2].

Families with children having physical disabilities are exposed to numerous discomforts and issues impacting the maintenance and care of their kids as well as leading to the family losing its normal life process. The permanence of this circumstance may collapse the family system or the rejection of a disabled child due to the need to prevent such an event promptly and with the necessary arrangements. Also, this is not practical unless there is a perfect knowledge of families and their disabled children and the programs that should be chosen concerning this data and cognition [3].

The extra care by some kids with disabilities impacts their parents' interaction. The disability occurrence in children leads to various emotional disorders and economic issues in the family. So each member in the mentioned system suffers from crises caused by the existence of a disabled person. The relationships become cold and gloomy, and family social relationships are limited, too. Other kids suffer from emotional and social problems, and in general, the family's mental health, which guarantees their health and individual-social capital, is severely endangered. Although families of children with

disabilities experience more stress, it may indicate higher marriage compatibility by themselves [4].

Comparing the families having kids with disabilities to those with normal children, not only do their parents have less mental health than those with normal kids, but they likely have a significant level of anxiety, depression, and physical disability. Thus their social performance is impaired than the normal group [5].

Much research investigated the mental health of mothers of kids with disabilities (i.e., the blind and deaf), and merely one study has been carried out on the simultaneous examination of spiritual intelligence and mental health of the mothers mentioned above. Concerning the performed research, in none of them, all three parameters of spiritual intelligence, loneliness, and mental health in mothers of deaf kids have been investigated simultaneously. Other researchers can examine these three factors in other disabilities based on the results of this study which even can be done in other cities by changing the statistical population of this applied study. This can be utilized for observing the fathers of deaf children. Generally speaking, this research is theoretically of high significance making a multi-parameter research domain for parents of deaf children and other disabilities [8].

The mother, who spends the most time with the deaf kid, is more prone to stress. Families having kids with hearing failures encounter various challenges. In the meantime, mothers have more responsibilities towards these children due to their traditional role as caregivers, facing more psychological issues [9]. For this, it is prominent to examine these mothers' situations in this study.

The significance of this issue is notable so that using the obtained result of the proposed study can be optimal and beneficial for providing the essential mental health conditions for the mothers mentioned above. Of course, it is worth noting that similar research have been conducted in Kermanshah and Ardabil. Still, due to the diverse cultural, climatic, and social context in these two cities with Ilam. However,

their results cannot be applied in Ilam. Therefore, in its particular vein, the results were extracted for practical usage in the underlying institutions in Ilam city.

### *Research Methodology*

The statistical population, sample, and sampling method, as well as the research instruments (including the King Spiritual Intelligence Scale (SISRI-24), general health questionnaire (GHQ-28), and the third edition of the UCLA Loneliness Scale), the way to perform and data collection method, as well as the analysis method and statistical data, are provided.

The statistical population of the research includes all mothers of deaf students in special schools and mothers of normal school children who studied in particular and ordinary schools, respectively, in Ilam in the academic year of 2016-2017. The sample included 100 mothers of deaf boys and girls in special schools and 100 mothers of normal ones of both genders in ordinary schools in Ilam city, and due to the limited deaf population, sampling was not performed. The total and whole population were chosen as the sample volume. To select the sample of mothers with normal students, the multi-stage random cluster method is used, i.e., 10 schools were randomly selected among the schools of Ilam city, 2 classes from each school, and 5 mothers from each class.

### *Research Instruments*

In this scrutiny, the data collection instruments include three questionnaires, as mentioned in the following:

#### *1. King Spiritual Intelligence Scale:*

In recent years, a novel concept has been introduced as spiritual intelligence. Some researchers believe that in addition to

#### *Psychometric Profile of King Spiritual Intelligence Questionnaire (SISRI)*

In the English version of this questionnaire Cronbach's alpha for the whole scale is 0.92 and

intelligence (IQ) and emotional intelligence (EQ), there is a third intelligence known as spiritual intelligence (SQ). Spiritual intelligence combines the concepts of "spirituality" and "intelligence" in a new concept and is the intelligence that creates the whole and causes integration [10]. It refers to a capacity for deep perception of existential issues and insights into multiple consciousness levels. Likewise, it implies awareness of the soul as the existence basis or as the innovative life force for evolution. Spiritual intelligence can be developed through practice and help an individual to distinguish reality from sensory error [11]. Its concept includes a kind of adaptation and problem-solving behavior including the highest developmental levels in various areas of cognition, morality, emotion, interpersonal, etc., and the person in harmony with the surrounding phenomena, and assists in achieving internal and external integrity. This intelligence gives the individual an overview of the life and all experiences and events that can be enabled to frame and reinterpret the associated experiences to conceptualize the relevant knowledge. Furthermore, it allows man to be creative, change rules, and correct situations [6].

King Spiritual Intelligence Questionnaire (SISRI) is among the instruments designed and developed by King in 2008 to measure spiritual intelligence. This questionnaire consists of 24 items, and a higher score indicates more spiritual intelligence. This questionnaire has a total of four subscales as follows:

- Critical Existential Thinking (CET) with 7 items,
- Personal Meaning Production (PMP) with 6 items,
- Transcendent Awareness (TA) with 7 items, and
- Conscious State Expansion (CSE) with 4 items.

for its subscales are as follows: CET subscale has an alpha of 0.78, PMP has an alpha of 0.78, TA with an alpha of 0.78 and CSE with an alpha of 0.91.

In a study in Iran, the face and content validities of the questionnaire were confirmed based on the experts' opinions. The reliability of the questionnaire dimensions was further obtained as follows: CET as 0.76, PMP as 0.78, and CSE as 0.72, as well as TA to be 0.80. The total reliability of the questionnaire was 0.91 with Cronbach's alpha. The reliability of the questionnaire's test-retest was also reported in a study as 0.67 [7].

### *King Spiritual Intelligence Questionnaire (SISRI) Scoring*

As mentioned, the King Spiritual Intelligence Questionnaire (SISRI) has 24 items, each of which is scored on a Likert scale from 0 to 4. Finally, the individual scores were achieved between 0 and 96, with a higher score indicating intelligence to be more spiritual. Thus, in each item, rate the options are scored as follows:

- Completely incorrect: Score 0
- False: Score 1
- Somewhat correct: Score 2
- Very correct: Score 3
- Completely correct: Score 4

**Note:** Question 6 should be scored reversely.

The subscales of this questionnaire are further calculated as follows:

- **Critical Existential Thinking:** This subscale has 7 items, and its total score is between 0 and 28. The items of this subscale are as follows: 1, 3, 5, 9, 13, 17, and 21.
- **Personal Meaning Production:** This subscale has 5 items, and its total score is between 0 and 20. The items of this subscale are as follow: 7, 11, 15, 19, and 23.
- **Transcendent Awareness:** This subscale has 7 items, and its total score is between 0 and 28. The items of this subscale are as follows: 2, 6, 10, 14, 18, 20, and 22.
- **Awareness State Expansion:** This subscale has 5 items, and its total score

is between 0 and 20. The items of this subscale are as follows: 4, 8, 12, 16, and 24.

### *Reliability and Validity*

To determine the reliability of the questionnaire, a retest method was used, which indicated the acceptable reliability of the questionnaires. In King (2008) research, the reliability coefficient of the spiritual intelligence questionnaire was 0.95; and in Hoveida and Naderi (2009), the reliability coefficient of the organizational citizenship behavior questionnaire was 0.89. Similarly, Mousavi *et al.* (2011) reported the reliability of the questionnaire with Cronbach's alpha coefficient for the components of CET, TA, PMP, and SCE as 0.78, 0.74, 0.68, and 0.72, respectively. In this investigation, the reliability coefficient of the spiritual intelligence questionnaire was 0.82, and the reliability coefficient of the organizational citizenship behavior questionnaire was 0.92, as well. Regarding that reliability beyond 0.70 as being desirable, it can be inferred that research questionnaires have high reliability. In this study, Cronbach's alpha coefficient for the dimensions of spiritual intelligence has been calculated in the following tables, respectively.

### *2. General Health Questionnaire (GHQ-28)*

The General Health Questionnaire is a "screening questionnaire" based on the self-reporting method utilized in the clinical setting to track patients with mental disorders.

In this questionnaire, two main categories of phenomena are regarded:

1. The individual inability to have a "healthy" activity,
2. Emergence of new phenomena with a disabling nature.

Some symptom levels can be detected by standardized psychiatric interviews. However, below a certain level, the likelihood of the disorder is less than the threshold level, and it cannot be diagnosed [12].

The general health questionnaire can be considered a set of items including the lowest levels of common symptoms in various mental disorders. Thus, it can identify people with a mental health condition as a general category that distinguishes them from those who consider themselves healthy. Hence, the purpose of this questionnaire is not to obtain a particular diagnosis in the hierarchy of mental illness. However, its primary purpose is to distinguish between mental illness and health [12].

The main version of the General Health Questionnaire consists of 60 items, but some shorter versions have been provided, the most important of which are mentioned as follows: GHQ-30, GHQ-21, and GHQ-12.

The 28-item form of the Public Health Questionnaire has the advantage of being designed for all social members. This questionnaire as a screening tool can determine the likelihood of the individual mental disorder. At the moment, by implementing this questionnaire, they have been able to get an extended range of results in various populations to prove the existence of a relationship between the main form of the general health questionnaire and that of the brief tracking (i.e., the screening test) with psychiatric diagnoses, and provide a perception of the relationship between self-reporting and clinical observation estimation.

This questionnaire has 4 subscales, as mentioned in the following

- The subscale of physical symptoms,
- Anxiety and insomnia,
- Impaired social functioning, and

- Depression.

The mean test time is about 10 to 12 min.

Based on this test, 5 scores are obtained for each individual, of which 4 are relevant to the subscale, and one is obtained from the total scores of the subscales, which is the total score. There are four subscales based on a statistical analysis of responses (i.e., factor analysis).

The first subscale (A) includes items about how people feel about their health and how fatigued they are and is associated with physical symptoms. The items of this subscale are specified in the questionnaire in items 1 to 7.

The second subscale (B) includes items related to anxiety and insomnia, of which seven numbers related to this subscale are identified in items 8 to 14.

The third subscale (C) measures how individuals can cope with professional aspirations and everyday life issues. Further reveals their feelings about how to manage everyday life situations. Seven items related to this subscale are listed in items 15 to 21.

The fourth subscale (D) includes items related to major depression and suicidal ideation, and the seven distinguishing ones in the questionnaire are identified by items 22 to 28.

If we attempt to use the General Health Questionnaire (GHQ) as a screening test, we will get better results based on the 0-0-1-1 scoring method. The statistical calculations have indicated that although the factor in each of the subscales is 59% of the variance; however, the four subscales are not significantly independent of each other (Table 1).

**Table 1.** Correlations between subscales and overall GHQ scale

Subscales	Scale B	Scale C	Scale D	Total Scale (Overall 28 Items)
Scale A	0.85	0.52	0.33	0.79
Scale B	-	0.75	0.61	0.90
Scale C	-	-	0.44	0.75
Scale D	-	-	-	0.63

According to Table1, it can be concluded that the degree of correlation between the subscales

is less than the one between each subscale and the overall scale. The correlations between the

subscales demonstrate the existence of a general factor, and in the 28-item collection of the general health questionnaire, 32% of the variance set is the general factor.

A correlation coefficient of 0.90 between the subscales B and the overall score can be attributed to the fact that anxiety is a fundamental phenomenon that is the common denominator of mental disorders syndrome. However, three other subscales will allow researchers to obtain other dimensions of cognitive semiotics.

The general health questionnaire (GHQ) provides researchers with accessible information beyond what is obtained from a general questionnaire. For instance, a

researcher who wants to distinguish severely depressed people can select only those with high scores on scale D from those with high scores on the overall scale.

Researchers who use the General Health Questionnaire before and after an event such as a social transformation or the implementation of a therapeutic approach can compare the degree of external factor impact in the domains by comparing pre-test and post-test scores to determine different cognitive signs.

## Results

Table 2 indicates the demographic characteristics by group

**Table 2.** Frequency and percentage of sample distribution by mothers with normal and deaf children

Group	Frequency	Percentage	Cumulative Percentage
Mother of a deaf child	100	850%	50%
Mother of a normal child	100	50%	100%
Total	200	100%	

According to Table 2, out of 200 people, 100 mothers had normal children, and 100 had deaf children.

Table 3 illustrates the demographic characteristics of the sample members by level of education.

**Table 3.** Frequency and percentage of sample distribution by education level

Age groups (years)	Frequency	Percentage	Cumulative frequency
20-25	30	26.1	26.1
26-30	31	27	53
31-35	39	33.9	87
36-40	13	11.3	98.3
Over 40	2	1.7	100
<b>Total</b>	<b>115</b>	<b>100</b>	

**Mean: 35.3, Minimum: 22, Maximum: 56**

Based on Table 3, descriptive characteristics of the research participants' educational status are provided. The highest frequency was related to university education (32%), and the lowest frequency was related to master's degree (9.5%).

Table 4 depicts the demographic characteristics of the sample members by year of marriage.

**Table 4.** Descriptive characteristics of the participants' year of marriage

Variable	Mean	SD	Minimum	Maximum
Year of Marriage	18.96	10.14	3	55

According to Table 4, out of 200 people, the average year of marriage of mothers with normal and deaf children is 18.96 years, and the standard deviation is 10.14 years. The participants' year of marriage range is further extended from 3 to 55 years.

In this study, three variables of spiritual intelligence, mental health, and feeling of loneliness were compared between mothers with deaf children and mothers of normal children. The descriptive indicators are presented in the following tables.

*Variables*

**Table 5.** Descriptive indicators of spiritual intelligence scores and its components in the research groups

Variable Group	Mothers with deaf children		Mothers with normal children	
	Mean	SD	Mean	SD
Spiritual Intelligence	28.89	7.03	61.86	14.26
CET	9.72	2.83	19.38	4.92
PMP	5.55	2.46	14.54	3.45
TA	11.37	2.80	18.34	4.74
CSE	2.25	2.34	9.60	3.93

Table 4 illustrates the mean and standard deviation of spiritual intelligence and its components in the study groups. As can be seen, the mean and standard deviation of spiritual intelligence scores in mothers with deaf children are 28.89 and 7.03, respectively and in the group of mothers with normal children are 61.86 and 14.26, respectively. Therefore, it can be mentioned that the average spiritual intelligence in mothers of normal children is higher than

mothers with deaf children. As evident in Table 6, the average components of spiritual intelligence in the group of mothers with normal children are higher than mothers with deaf children. As can be visible in Table 6, the average components of spiritual intelligence in the group of mothers with normal children are higher than mothers with deaf children.

*2. General health and its components*

**Table 6.** Descriptive indicators of general health scores and their components in the research groups

Variable Group	Mothers with deaf children		Mothers with normal children	
	Mean	SD	Mean	SD
Total score of general health	37.94	7.41	16.74	13.93
Physical symptoms	8.89	3.42	4.69	3.76
Anxiety and insomnia	10.52	2.99	4.49	4.17
Inadequate social action	10.05	2.14	5.26	4.18
Depression	8.39	2.79	2.30	3.69

Table 6 demonstrates general health's mean, standard deviation, and components in the study groups. The mean and standard deviation of general health scores in mothers with deaf children are 37.94 and 7.41, consecutively, and in the group of mothers with normal children are 16.74 and 13.93, respectively. Hence, it can be

noted that mothers of normal children have better general health than mothers of deaf children. In addition, the group of mothers with normal children is in a better situation based on general health components.

*1. Loneliness*

**Table 7.** Descriptive indicators of loneliness scores in the research groups

Variable Group	Mothers with deaf children		Mothers with normal children	
	Mean	SD	Mean	SD
Loneliness	61.07	6.38	33.29	10.61

**Table 8.** The results of student t-test analysis based on spiritual intelligence in the research groups

Variable Group	Mothers with deaf children		Mothers with normal children		t	P
	Mean	SD	Mean	SD		
Spiritual Intelligence	28.89	7.03	61.86	14.26	-20.73	0.0001

Table 7 presents the mean and standard deviation of loneliness in the study groups. Vividly, the mean and standard deviation of loneliness scores in mothers of deaf children are 61.07 and 6.3, consecutively, and in the group of mothers with normal children are 33.29 and 10.61, respectively.

Both student t-tests and multivariate analysis of variance were applied to test the hypotheses. Concerning the use of parametric tests for observing the statistical assumptions of distribution normality and the same variance of groups, the assumptions of normality of

distribution and homogeneity of variances were examined before analysis. The results revealed that the hypothesis of normal data distribution and homogeneity of variances is confirmed.

*Main Hypothesis 1. There is a difference between the spiritual intelligence of mothers of deaf and normal children*

To test the primary hypothesis 1, a t-test was used to examine the differences between the means. The results of these calculations are presented in Table 9.

**Table 9.** The results of student t-test analysis on spiritual intelligence in research groups

Variable Group	Mothers with deaf children		Mothers with normal children		t	P
	Mean	SD	Mean	SD		
Spiritual Intelligence	28.89	7.03	61.86	14.26	-20.73	0.0001

Based on Table 8, the difference between spiritual intelligence in the study groups is significant with ( $t = -20.73$  and  $p \leq 0.0001$ ). Therefore, it can be mentioned that spiritual intelligence is significantly higher in mothers of normal children than in mothers with deaf children. Thus, the first main hypothesis is confirmed.

*H1. There seems to be a significant difference between the spiritual intelligence of mothers of deaf children and mothers of normal children*

To examine the difference between the spiritual intelligence of mothers of deaf children and mothers of normal children, a t-test was used. The results of this test indicated that based

on the value ( $t = -20.73$  and  $\text{sig} = 0.0001$ ), the spiritual intelligence of mothers with deaf and normal children showed a significant difference at the level of 0.01, and the null hypothesis is rejected. The researcher's hypothesis is confirmed, as well. Considering that the significance level is less than 1% or the same amount of error, the effect significance of this hypothesis is confirmed.

*H2. There is a difference between the general health of mothers with deaf and with normal children*

To test the main hypothesis 2, a t-test was utilized to study the differences between the

means. The results of these calculations are reported in Table 10.

**Table 10.** Results of student t-test analysis on general health in research groups

Variable Group	Mothers with deaf children		Mothers with normal children		t	P
	Mean	SD	Mean	SD		
General Health	37.94	7.41	16.74	13.93	13.43	0.0001

According to Table 10, the difference in general health in the study groups with ( $t = 13,43$  and  $\text{sig} \leq 0.0001$ ) is significant. Therefore, it can be stated that there is a significant difference between the two groups in terms of general health; hence, the second main hypothesis is confirmed.

*H2. There seems to be a significant difference between the mental health of mothers of deaf children and mothers of normal children*

T-test was used to evaluate the difference between the mental health of mothers of deaf children and mothers of normal children. This test revealed that based on the value ( $t = -13.43$

and  $\text{sig} = 0.0001$ ) of mental health, there was a significant difference between mothers of deaf and normal children at the level of, 0.01 and the null hypothesis is rejected. However, the researcher's hypothesis is confirmed. Given the significance level as less than 1% or the same amount of error, the hypothesis' effect significance is also confirmed.

*H3. There is a difference between the loneliness of mothers with deaf and normal children*

To test the main hypothesis 3, a t-test was used to examine the differences between the means, and thus, its results are reported in Table 11.

**Table 11.** The results of student t-test analysis on loneliness in research groups

Variable Group	Mothers with deaf children		Mothers with normal children		t	P
	Mean	SD	Mean	SD		
Loneliness	61.07	6.38	33.29	10.61	22.42	0.0001

Based on Table 11, the difference between loneliness in the research groups with ( $t = 22.42$  and  $\text{sig} \leq 0.0001$ ) is significant. Therefore, it can be mentioned that loneliness is significantly more in mothers of the deaf than in those with normal children. Thus, the third main hypothesis is confirmed.

*H3. There seems to be a significant difference between the loneliness of mothers of deaf children and mothers of normal children.*

In the third hypothesis, a t-test was applied to evaluate the difference between the loneliness of mothers with deafness and those with normal children. The results of this test revealed that the value ( $t = 42.22$  and  $\text{sig} = 0.0001$ ) between the loneliness of mothers having deaf and those with normal kids indicated a significant difference at

the level of 0.01, and the null hypothesis is rejected, yet the researcher's hypothesis is confirmed. Regarding the significance level of less than 1% or the same error, the hypothesis's effect significance is confirmed.

**Sub-Hypothesis 1:** There is a difference between the components of spiritual intelligence in mothers with deafness and those with normal children.

To test sub-hypothesis 1, since the components of spiritual intelligence are correlated, multivariate analysis of variance (MANOVA) was utilized to examine the mean differences. Before analysis, the hypotheses of normal distribution and homogeneity of variances were examined, illustrating that the hypothesis of a normal distribution is confirmed to be related to the components of spiritual intelligence. Besides,

the significant levels obtained from the Levin test related to the homogeneity of variances showed that the variances of the components of

spiritual intelligence in the study groups are homogeneous.

**Table 12.** The results of multivariate analysis of variance of MANOVA on the components of spiritual intelligence in the research groups

Test	Value	F	Hypothesis df	Error df	Sig. Level	Eta Coefficient
Pilay effect	0.732	133.2	4	195	0.0001	0.73
Lambda Wilkes	0.268	133.2	4	195	0.0001	0.73
Hotling effect	2.73	133.2	4	195	0.0001	0.73
Roy's largest root	2.73	133.2	4	195	0.0001	0.73

Based on Table 12, it can be visible that there is a significant difference between the groups in terms of components of spiritual intelligence ( $p \leq 0.01$ ). Hence, based on at least one of the variables (i.e., the components of spiritual intelligence), there is a significant difference

between mothers with deafness and those with normal children. To determine which of variable is different, a one-way analysis of variance was used in MANOVA, of which its relevant results are provided in Table 13.

**Table 13.** Results from one-way analysis of variance in MANOVA on the components of spiritual intelligence in research groups

Spiritual Intelligence	Total squares	Degree of freedom	Mean squares	F	Sig. Level	Eta Coefficient
CET	4665.78	1	4665.78	288.72	0.0001	0.593
PMP	4041.01	1	4041.01	448.09	0.0001	0.694
TA	2429.04	1	2429.04	160.11	0.0001	0.447
CSE	2701.12	1	2701.12	257.52	0.0001	0.565

With the results for CET ( $F = 288.72$ ,  $P = 0.0001$ ), PMP ( $F = 448.09$ ,  $P = 0.0001$ ), TA ( $F = 160.11$ ,  $P = 0.0001$ ), and CSE ( $F = 257.52$ ,  $P = 0.0001$ ) was obtained, it can be mentioned that the average of spiritual intelligence components of in mothers with normal children is higher than those with of deaf children. Therefore, the first sub-hypothesis is confirmed.

*Sub-Hypothesis 1. There seems to be a significant difference between the components of spiritual intelligence of mothers of deaf children and mothers of normal children*

In the first sub-hypothesis, multivariate analysis of variance (MANOVA) was used to examine the differences between the components of spiritual intelligence of mothers with deaf and mothers of normal children. It indicated that based on the values of CET, ( $F = 288.72$ ,  $P = 0.0001$ ), for PMP ( $F = 448.09$ ,  $P =$

$0.0001$ ), for TA ( $F = 160.11$ ,  $P = 0.0001$ ), and for CSE ( $F = 257.52$ ,  $P = 0.0001$ ), there was a significant difference between the components of spiritual intelligence of mothers with deaf. Those with normal kids at the level of 0.01 and the null hypothesis is rejected, while the researcher's hypothesis is confirmed. With a significance level of less than 1% or the same amount of error, this hypothesis's effect significance is also confirmed.

*Sub-Hypothesis 2. There is a difference between the components of general health in mothers with deaf children and mothers of normal children*

To test sub-hypothesis 2, because spiritual health components are correlated, multivariate analysis of variance (MANOVA) was applied to examine the differences between the means. Before the analysis, the hypotheses of normal distribution and homogeneity of variances were

examined, which indicated that the hypothesis of normal distribution related to the components of spiritual intelligence was confirmed. Furthermore, the significant levels obtained from the Levin test related to the homogeneity of variances showed that the

variances of the components of spiritual intelligence in the research groups are homogeneous. The results of the multivariate analysis of variance of MANOVA are depicted in Table 14.

**Table 14.** The results of multivariate analysis of variance of MANOVA on general health components in the research groups

Test	Value	F	Hypothesis df	Error df	Sig. Level	Eta Coefficient
Pilay effect	0.507	50.16	4	195	0.0001	0.50
Lambda Wilkes	0.493	50.16	4	195	0.0001	0.50
Hotling effect	1.02	50.16	4	195	0.0001	0.50
Roy's largest root	1.02	50.16	4	195	0.0001	0.50

Based on Table 14, it can be evident that there is a significant difference between the groups in terms of general health components ( $p \leq 0.01$ ). Thus, there is a significant difference between mothers with deafness and those with normal

kids in at least one of the variables (general health components). To determine which variable is different, the one-way analysis of variance was used in the MANOVA, the results of which are provided in Table 15.

**Table 15.** Results from one-way analysis of variance in MANOVA on the components of spiritual intelligence in research groups

General Health	Total squares	Degree of freedom	Mean squares	F	Sig. Level	Eta Coefficient
Physical symptoms	920.20	1	920.20	71.02	0.0001	0.264
Anxiety and insomnia	1818.04	1	1818.04	137.39	0.0001	0.410
Inadequate social action	1147.20	1	1147.20	103.72	0.0001	0.344
Depression	1854.40	1	1854.40	172.96	0.0001	0.466

With the results for physical symptoms ( $F = 71.02, P = 0.0001$ ), anxiety and insomnia ( $F = 137.39, P = 0.0001$ ), inadequate social action ( $F = 103.72, P = 0.0001$ ), and depression ( $F = 172.96, P = 0.0001$ ), it can be notable that there is a significant difference between the components of general health in both groups, hence the third sub-hypothesis is confirmed.

In the first sub-hypothesis, multivariate analysis of variance (MANOVA) was used to examine the differences between spiritual intelligence components of mothers with deafness and those with normal children for physical symptoms ( $F = 71.02, P = 0.0001$ ), for anxiety and insomnia ( $F = 137.39, P = 0.0001$ ), for inadequate social action ( $F = 103.72, P = 0.0001$ ), and for depression ( $F = 172.96, P = 0.0001$ ). There was a significant difference between the general health components of mothers with deafness and those with normal children at the level of 0.01. Therefore, the null

*Sub-Hypothesis 2. There seems to be a significant difference between the general health components of mothers of deaf children and mothers of normal children.*

hypothesis is rejected, but researcher's hypothesis is confirmed. Concerning the significance level of less than 1% or the same amount of error, this hypothesis' effect significance is also confirmed.

### Discussion and Conclusion

Nowadays, the issue of diseases and disabilities is the most acute in human communities. Many families carry such a heavy emotional burden for having such kids. High medical, education, training, aggravating marital disputes, fear of having children again, guilt feelings, and loneliness are among the issues parents face. The members of these families need assistance and advice to solve their problems and decline the burden of emotional stress. Since these kids are different from normal children, their interaction with their families is further different from that of a normal child with the family. Therefore, in any society, it is not enough to have support, education, and rehabilitation centers for children; their families also need help and education. According to the results, it can be concluded that mothers of deaf children feel extreme loneliness. There are more mothers of normal children, and in justifying the causes, it is notable that the presence of a deaf kid in the family is harmful, and the parents responsible for raising children with the presence of a deaf child each suffer from some kind of pressure. They become psychological, but the mother is under more pressure in the meantime.

Due to the researcher's 21 years of work experience in the workplace, the exceptional deaf pupils and hearing the words of different mothers of these children were more likely to say that they have no desire to do housework and feel guilty about giving birth to a disabled child and accompanying. The school gives them little opportunity to do housework, and friends and family visits to fill in the loneliness often lead to scenes of their child fighting with other children because of ridicule and difficulty connecting with them. It becomes a problem for others, so mothers of deaf children prefer to be alone at home and isolate themselves due to their child's particular circumstances.

Furthermore, the proposed study indicated that mental health and spiritual intelligence in mothers of deaf children is less than those of normal kids. It is about life; the better and more facilities a person has, and the more he feels satisfied and secure in relationships with family members, the more and better his mental health will be.

Due to the presence of the deaf child, the feeling of the dominance of parents and especially mothers over life and affairs is impaired, and the quality of mental space, interpersonal relationships with family, friends, and relatives, as well as having enough time for desired and extracurricular activities and family economic conditions. They have a negative impact and threaten mental health. This means that stress, anxiety, insomnia, or lack of sleep cause social dysfunction and, as a result, physical problems, leading to depression, hopelessness, and negative thoughts. Thus, the mothers of these children have lower mental health. These issues and parameters cause the mind to become too involved and take enough time from the person to think about other things and have a way of thinking; having flaws and shortcomings in the family allows them to tolerate criticism and opposition on various issues. This can express the low components of spiritual intelligence (i.e., CET, PMP, TA, and CSE) in mothers of deaf compared to those of normal children.

### Limitations of Study

1. Since the statistical population of this study is only mothers of deaf and normal children in Ilam, the results cannot be generalized to other communities with certainty.
2. The data collection instrument in this study was a questionnaire which sometimes its length and lack of patience to answer the included items can affect the research results.
3. The effect of disturbing variables (i.e., economic status, literacy level, and severity of disability) on the study' results is notable.
3. The limitations of the Likert method, including the tendency to respond in a certain way, led to the inappropriate response of some samples.

4. Since we have a state educational complex for the deaf in Ilam and we do not have similar centers in Chavar, Kaboud, Kolm, and Pakal in the first and second grades of primary school and Saleh Abad in the first grade of high school, these pupils study in the city. They are included in the statistical population, and further presenting questionnaires to their mothers was significantly difficult.

5. The illiteracy and illiteracy of some mothers and the lack of perceiving some of the items in the King's Standard Spiritual Intelligence Questionnaire likely clarified the questions posed by the researcher, which is not without its drawbacks.

### Suggestions

1. The proposed study compares the spiritual intelligence, loneliness, and mental health of mothers of deaf and normal children in Ilam. It is suggested that the research results in other regions and cities be examined in the subsequent studies.

2. In this study, only the spiritual intelligence, loneliness, and mental health of mothers of deaf and normal children were studied, suggesting that the fathers should be focused on in future studies.

3. In this examination, spiritual intelligence, loneliness, and mental health of mothers of deaf and normal children were compared, which is suggested in future research of other exceptional groups (i.e., autism, blindness, physical mobility, multiple disabilities, and mental retardation) should further be investigated.

4. It is suggested that feedback on the results be provided to those present in the sample and those in exceptional education and schools for effective planning and action.

5. Training workshops should be held continuously by competent institutions to strengthen mental health, reduce the feeling of loneliness, and increase the spiritual intelligence of parents, especially mothers of deaf children.

6. It is recommended that to strengthen mental health and reduce the feeling of loneliness and

increase the spiritual intelligence of parents, especially mothers of deaf children, training workshops be held continuously by competent institutions.

It is suggested that counseling, psychological, and rehabilitation services be provided to parents of deaf children based on gender at home and school.

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