Effect of positive psychology interventions on psychological well-being of midwives: A randomized clinical trial

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Abstract:
BACKGROUND: The psychological well-being of midwives is very important in the context of providing health services to two vulnerable groups of society, namely, mothers and infants. Therefore, the present study was conducted aiming to investigate the effect of positive psychological interventions on the psychological well-being of midwives.

MATERIALS AND METHODS: The present study was a randomized clinical trial with pretest-posttest design along with a control group. The statistical population of the study included all midwives working in community health centers of Mashhad City, Iran, which were first selected through cluster sampling method from five health centers of the city, i.e., centers 1 and 3. Then, all centers and subsidiary bases of these centers were listed, and the centers and bases were divided into two groups of intervention and control by simple random allocation method. Sixty respondents were randomly assigned to two equal intervention and control groups and responded to the Ryff’s Psychological Well-being questionnaire in two stages of pretest and posttest. Educational interventions based on interventions, including Seligman’s PERMA model, in which psychological well-being is defined in terms of five domains namely positive emotions (P), engagement (E), relationships (R), meaning (M), and accomplishment (A), were conducted in eight sessions of 2 h (two sessions per week). Data were analyzed using independent t-test, paired t-test, Mann–Whitney test, and Wilcoxon test.

RESULTS: There was a significant difference between the posttest scores of the two intervention and control groups in the total psychological well-being variable (P < 0.001).

CONCLUSION: Given the findings of the study, it is suggested to use the Seligman’s PERMA model to improve the psychological well-being of midwives in health centers.

Keywords:
Midwife, positive psychological interventions, psychological well-being

Introduction
Occupational burnout is a well-known psychological reaction with a high prevalence in the midwifery profession, which is created in response to chronic psychological stress and involves three elements of fatigue or emotional analysis, depersonalization, and lack of personal success. In addition, this problem is one of the most important factors decreasing the productivity of midwives in the workplace and depleting their ability to effectively carry out their duties and responsibilities. Midwives provide care services in areas where threatening or stressful events may occur. They may consider their work as harmful. This has important implications for the well-being of midwives. Several studies...
Job burnout is the second most frequent occupational injury and the inevitable result of the midwifery profession; in addition, this profession is considered a significant occupation in the area of community health care to ensure health for the mother and the newborn. Thus, promoting the well-being of people working in this profession has a great impact on maintaining this workforce and on the quantity and quality of their services. Therefore, the present study was conducted with the aim to investigate the effect of positive psychological interventions on the psychological well-being of midwives.

Materials and Methods

The present study was a randomized clinical trial with pretest-posttest design with control group that lasted from September 23, 2015 to March 20, 2016. The statistical population of the study included all midwives working in community health centers of Mashhad City, Iran, which were first selected through cluster sampling method from five health centers of the city, i.e. centers 1 and 3. Then, all centers and subsidiary bases of these centers were listed, and the centers and subsidiary bases were divided into two groups of intervention and control by simple random allocation method. All individuals eligible to enter the study in each center were placed in the same group. In this way, information dissemination between the two groups was prevented. The sample size was obtained using the formula for comparing the means, and based on the results of the pilot study with 95% confidence and 80% power, a total of 17 respondents were obtained in each group, and taking into account the probability of drop of samples, sampling continued until the completion of each group as thirty respondents (a total of sixty respondents). During the study, 13 midwives were excluded from the study in the intervention group due to irregular participation in the sessions. There was no drop of midwives in the control group [Figure 1].

The most important criteria for selection of the respondents were at least a midwifery associate degree and at least 1 year of work experience in community health centers,
marriage, nonpregnancy, lack of referring to a psychiatrist during the past 6 months, or admission to a hospital due to mental illness, a history of the use of mentally affecting drugs, the lack of a medical condition leading to a disability in performing occupational duties, and not receiving a severity score from the Anxiety, Stress, and Depression Scale (DASS 21). In addition, the most important exclusion criteria were the absence of more than one session in the training course, the occurrence of major stressful incidents during the study, and failure to do homework for three consecutive sessions.

The data collection tool consisted of:

Demographic information form of respondents (including three parts of the individual characteristics, occupational characteristics, and midwives’ lifestyle).

- Ryff’s Psychological Well-Being questionnaire (84 items): This scale was created by Carrol Ryff in 1980. The questionnaire was designed in a 6-point Likert scale (completely agree to completely disagree) to measures six dimensions of autonomy, environmental mastery, personal growth, positive relationships with others, purposefulness in life, and self-acceptance. The minimum and maximum scores of the respondents in the psychological well-being scale were 84 and 504, respectively. Moreover, the total of these six factors were calculated as the total score of psychological well-being. Due to the positive correlation of this scale with the Positive Psychotherapeutic Checklist, developed by Rashid and Seligman (2013) to measure the full life (well-being) of individuals using five subscales of positive emotions, engagement, meaning, relationships, and achievement, it can be claimed that this scale is an appropriate tool for examining well-being, with the validity and reliability determined in various studies. In this study, its content validity with an overall reliability of alpha = 0.90 in the environmental mastery (0.68), self-acceptance (0.82), positive relationship with others (0.91), autonomy (0.72), purposeful life (0.76), and personal growth (0.88) was confirmed.

Demographic information form and Ryff’s Psychological Well-Being questionnaire were provided to the respondents to be completed by them. Then, two of the researchers with a PhD degree in clinical psychology (teacher of positive psychology workshops) and a master midwifery student who had received the certificate of the Positive Psychology Workshop conducted eight sessions of 2 h (two sessions per week) for the intervention group [Table 1]. The intervention group was divided into two groups of 15, and sessions were held at the Sib Consultation Center. After
Table 1: Summary of the content of training sessions and Seligman well-being interventions

| Session | Content |
|---------|---------|
| 1st session | Briefing: Participants’ familiarity with the research team; the introduction of steps and details of the course; the definitive registration for participation in the course; design of issues raised in relation to the shortage or lack of positive resources such as positive emotions, commitment, positive communication, meaning; and the characteristic capabilities in the emergence of depression, anxiety, and absurdity.  
Homework: Writing objective stories of one’s own positive characteristic capabilities. |
| 2nd session | Purpose: Defining happiness, obstacles to lasting happiness, kinds of happy life, satisfaction with the past, the logic of paying attention to appreciation exercises, training appreciation, the logic of learning forgiveness, teaching forgiveness.  
Homework: Preparing a booklet and writing three positive life events - Writing a letter of gratitude and appreciation and presenting it to the desired person.  
2. Writing a letter of forgiveness. |
| 3rd session | Review of homework of the last week, the logic for addressing the pleasures of life, the introduction of all kinds of pleasures in the present, ways to enhance pleasures, ways to avoid the normalization of pleasures.  
Homework: During the next week, performing at least one of the exercises of each of the two strategies pleasure enhancement techniques: 1 - avoiding habits; 2 - enhancing the quality of pleasure; and 3 - attention and presence, or planning a pleasant day. |
| 4th session | Presentation of the logic of addressing optimism and defining optimism about the future.  
Homework: During the next week, whenever you experience a lot of negative emotions in terms of severity, try to discover your negative beliefs, and then question them and discredit them. Then, record ABCDE and complete the ABCDE table for 3 to 5 negative events during the next week.  
2. Recall three times you have lost in your life, your plan failed or rejected, and then identify the doors opened as a result of these seemingly negative events. |
| 5th session | Presentation of the logic of addressing your own special abilities and virtues, revitalizing capabilities and virtues, implementing the Capabilities and Virtues Questionnaire, practicing discovering five capabilities and virtues of yourself.  
Homework: To practice discovering five unique strengths and virtues of yourselves. |
| 6th session | Presentation of the logic of using the capabilities in life; encouraging respondents to use their abilities and virtues in the core areas of life, work, and personal satisfaction; redefining occupation, occupation and professions versus mission, capabilities, and virtues in marital life.  
Homework: Using one’s abilities in a new way, especially in the work environment. |
| 7th session | Objective: Finding meaning through the use of outstanding capabilities when serving others, especially your clients in the workplace.  
Homework: Designing new ways to apply outstanding capabilities to serve others, especially your clients. |
| 8th session | Providing education to people about active-constructive response to the good news they receive from others and training constructive and active response as an approach to enhance positive communication.  
Homework: Providing a worksheet for four styles of responding to good events in the lives of others and a “Magic 5 h” for Relationship Enhancement (Gottman and Silver, 1999). |

ABCDEF=Adversity, Belief, Consequences, Disputation, Evidence

Results

According to the results, the mean ± standard deviation (SD) of age of the midwives in the intervention and control groups was 36.89 ± 9.73 and 31.76 ± 5.12 years, respectively, which were significantly different based on the independent t-test (P = 0.010). Mean ± SD of work experience in the two groups was, respectively, 165.96 ± 86.86 and 66.97 ± 43.79, which had a significant difference based on the results of the Mann–Whitney test (P < 0.001).

Midwives were not homogeneous in the two groups in terms of age (P = 0.010), employment status (P < 0.001), and work experience (P < 0.001). However, they were homogeneous regarding variables of depression (P = 0.053), stress (P = 0.160), anxiety (P = 0.620), and other variables [Table 2].

Moreover, at the beginning of the study, midwives in the intervention and control groups were compatible in terms of variables of lifestyle such as daily exercising (P = 0.750), having enough sleep
Table 3: Covariance analysis to examine confounding variables on the midwives’ psychological well-being score

| Parameter          | Intervention group | Control group | Statistical results | P*    |
|--------------------|--------------------|---------------|---------------------|-------|
| Intervention group | 64.47              | 17.19         | 3.750               | 0.001 |
| Control group      |                    |               |                     |       |
| Employment (%)     |                    |               |                     |       |
| Permanent          | -3.39              | -20.28        | -0.160              | 0.868 |
| Contractual        | 19.33              | 17.06         | 0.133               | 0.265 |
| Others             | 0.00               | 1            |                     |       |
| Age (years)        | -1.14              | 1.22          | -0.929              | 0.359 |
| Experience (months)| 0.23               | 0.14          | 1.658               | 0.107 |

SE=Standard deviation

According to the results, the analysis of covariance of none of the variables that were heterogeneous at the beginning of the study was not significant on the psychological well-being of midwives (P > 0.050), and only the effect of intervention was significant [Table 3].

Further, based on the paired t-test, the mean total score difference between the psychological well-being of midwives before and after intervention was statistically significant (P < 0.001) [Table 4].

Comparison of the mean score of the dimensions of “positive relationship with others, purposeful life, and individual growth” before and after interventions in the control group did not have a significant difference; however, the mean score of “self-acceptance, autonomy, and environmental mastery” in the control group showed a significant decrease after interventions [Table 4].

Discussion

Findings of this study showed that positive psychological interventions can be effective in the psychological well-being of midwives. However, the comparison of the mean changes in the scores of each well-being dimension before and after the intervention in the
The effectiveness of positive psychological interventions on the psychological well-being of midwives can be easily explained through the theory of the creation and spread of Friedrichsen and the five related hypotheses. In this theory, it is stated that positive emotions lead to the expansion of the treasury of thought and action of individuals. Gradually, many personal resources are created in the individual (physical, social, mental, and psychological resources) that can be used by him/her in difficult conditions. Besides, another hypothesis of this theory is neutralization through which the existence of positive emotions causes neutralization of negative emotions. The next hypothesis is associated with the belief that those who experience more positive emotions can better cope with the difficult and unfavorable conditions of life and are more resilient. The last hypothesis of this theory is also the hypothesis of flourishing, which, in fact, includes the ratio of experience of positive emotions to negative ones. If a person experiences three positive emotions for any negative emotion, he/she flourishes. In this way, it seems that positivism, through increasing the treasury of thought and behavior, can lead to well-being. Furthermore, positivist-oriented psychological interventions can also affect well-being through creating meaningfulness and the ability to use personal capabilities and talents. In terms of the method of work, which is an experimental and controlled study, the present study is capable of examining the effects of positive psychological interventions on the psychological well-being of midwives instead of merely addressing the correlational relations. Moreover, one of the weaknesses of the study was the lack of follow-up of the effectiveness of positive psychological interventions.

Table 4: Comparing the mean item score for each subscale of the midwives’ psychological well-being in two phases of the study between experiment and control groups

| Phases                      | Variables                        | Experimental group | Control group | Statistical results | P* |
|-----------------------------|----------------------------------|--------------------|---------------|---------------------|-----|
| Before intervention, mean±SD| Overall mean of midwives’ well-being | 293.26±93.30       | 310.5±76.86   | Z=0.63              | 0.52* |
|                             | Autonomy                         | 49.07±7.60         | 49.10±7.09    | t=0.01              | 0.98** |
|                             | Environmental mastery            | 53.53±11.69        | 54.96±10.59   | t=0.48              | 0.63** |
|                             | Personal growth                  | 50.10±15.24        | 51.02±12.39   | t=0.25              | 0.8**  |
|                             | Positive relation with others    | 52.62±7.23         | 53.86±8.57    | t=0.57              | 0.56** |
|                             | Purpose in life                  | 54.85±10.14        | 57.51±11.54   | t=0.92              | 0.36** |
|                             | Self-acceptance                  | 50.42±11.14        | 53±11.22      | Z=0.79              | 0.42*  |
| Immediately after intervention, mean±SD | Overall mean of midwives’ well-being | 383.88±42.82       | 297.03±3.75   | Z=5.65              | <0.001* |
|                             | Changes                          | −13.46±14.11       | +86.76±30.70  | Z=3.68              | <0.001* |
|                             | Autonomy                         | 56.35±6.72         | 43.90±1.32    | Z=5.54              | <0.001* |
|                             | Changes                          | 4.13±9.78          | −5.24±7.36    | t=3.57              | 0.001** |
|                             | Environmental mastery            | 70.11±10.62        | 46.93±1.04    | Z=5.71              | <0.001* |
|                             | Changes                          | 11.53±12.47        | −8.0 (10.88)  | Z=4.57              | 0.001** |
|                             | Personal growth                  | 64.58±7.72         | 51.56±1.50    | t=6.87              | <0.001** |
|                             | Changes                          | 12.23±19.50        | −0.56±12.11   | Z=2.73              | <0.006* |
|                             | Positive relation with others    | 62.11±6.17         | 52.06±2.09    | Z=4.78              | <0.001* |
|                             | Changes                          | 8.46±10.69         | −1.82±8.98    | Z=3.68              | 0.002*  |
|                             | Purpose in life                  | 66.23±7.66         | 56.26±2.14    | Z=4.13              | <0.001* |
|                             | Changes                          | 8.06±13.15         | −1.27±11.47   | Z=2.16              | 0.03*   |
|                             | Self-acceptance                  | 64.47±9.77         | 46.30±2.27    | Z=7.93              | <0.001* |
|                             | Changes                          | 9.60±14.90         | −6.75±10.87   | Z=3.71              | <0.001* |

*Mann-Whitney, **Independent H. SD=Standard deviation

Table 5: Psychological well-being score and its dimensions before and after intervention

| Variables                        | Intervention group | Control group | t   | P*   | t   | P*   |
|----------------------------------|--------------------|---------------|-----|------|-----|------|
| Overall mean of psychological well-being | Z=3.14            | Z=2.16        | 0.002** | 0.003** |
| Autonomy                         | 1.63               | 3.83          | 0.12*  | 0.001* |
| Environmental mastery            | Z=3.4              | 3.95          | 0.001** | <0.001* |
| Personal growth                  | Z=2.79             | 0.25          | 0.05** | 0.8  |
| Positive relation with others    | Z=2.67             | 1.09          | <0.008* | 0.28* |
| Purpose in life                  | Z=1.97             | 0.59          | 0.04** | 0.55** |
| Self-acceptance                  | Z=2.33             | 3.34          | 0.02** | 0.03** |

*Paired t-test, **Wilcoxon test
on the happiness and well-being of midwives. The researchers encountered some restrictions in this study, including the need for timely and regular presence of the respondents in the sessions, and remaining in the group until the final result was obtained, and 13 respondents were merely excluded for this reason. The individual differences of the midwives in the motivation, the level of learning, and the proper conduct of homework of the sessions affected the study results and could not be controlled by the researchers, therefore, they attempted to partially control them by random allocation.

Conclusion

According to the study findings, positive psychological interventions were effective in increasing the psychological well-being of midwives. In practical terms, the present study suggests holding a course of positive psychology workshops to relevant authorities to improve the well-being of employees and reduce occupational burnout because individuals with a high standard of well-being can demonstrate flexibility in the face of difficult challenges and demands of the workplace as well as the emotional and psychological needs of the job and adapt to the conditions.

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Conflicts of interest

There are no conflicts of interest.

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