Research Paper

The Effectiveness of a Balint Group on Burnout Prevention, Reduction of Stress Perception, and Improvement of Caring Behaviors in Nurses in the COVID-19 Ward at Amir-Alam Hospital

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ABSTRACT

Nurses have stressful jobs. Considering the frequency of burnout and its consequences in nurses and subsequently the direct impact it has on patients' health, devising interventions is necessary to prevent or reduce burnout. The aim of this study was to evaluate the effectiveness of Balint groups on burnout, perceived stress, and caring behaviors in nurses at the COVID-19 ward, Amir-Alam Hospital. This was a quasi-experimental study with pre-test, post-test and a control group. 20 nurses were selected at the COVID-19 ward, Amir-Alam hospital, using a random sampling method. Twelve online Balint sessions were held. Maslach Burnout Inventory (MBI), Caring Behaviors Inventory (CBI), and Perceived Stress Scale (PSS) were used at the beginning and the end of the intervention to collect data. Results showed no significance difference between the experimental and control groups in pre-test and post-test in terms of sum of dependent variables, including Perceived Stress, frequency and intensity of Emotional Exhaustion, Personal Accomplishment, Depersonalization, and Occupation, Respectful Deference to Others, Human Presence, Positive Connectedness, Knowledge and Skills, and Experiences of Others. Balint group with a limited number of once-weekly sessions (12 online sessions) had no significant effect on burnout, perceived stress, and caring behaviors in nurses at Amir-Alam Hospital. More sessions of Balint group-work in online situation is recommended as opposed to face-to-face Balint sessions.

Keywords: Balint Group, Burnout, COVID-19, Stress

Healthcare professionals face various unpredictable work-related issues on a daily basis (1). Nurses, as key members of this group, have stressful jobs due to their constant exposure to distinctive problems, the suffering of people, incurable diseases, death, etc. Job stress can have irreversible consequences both at the individual and social levels (2).

One of the most important consequences of job stress is burnout, a term coined by Freudenberger (1974) to indicate a feeling of becoming exhausted by making excessive

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demands on energy, strength, or resources in the workplace (3). The syndrome is characterized by three dimensions: feelings of energy depletion or exhaustion, increased mental distance from one's job, feelings of negativism or cynicism related to one's job, and reduced professional efficacy (4).

In many countries nowadays, the phenomenon of burnout is being acknowledged as a serious problem for the nursing community and the healthcare system in general (5). Nurses should pay close attention to their emotional health and monitor it constantly, as it has a serious impact on patients under their care (6).

Care is a moral necessity (7) and is defined as conscious actions that convey physical and emotional care, and enhance patients' sense of security (8). Caring behaviors consist of the actions and attitudes of nurses to relieve patients' pain and agony and meet their pre-predicted needs, which communicate concern regarding patients' wellbeing, and indicate nurses' professional competence (9).

During a devastating pandemic such as COVID-19, the role of the medical staff, including nurses, is quite significant. In the face of such a risk and a stressful work environment, a good nurse-patient relationship is an important factor that not only reduces conflicts between nurses and patients but also reinforces nurses' sense of efficacy, promotes mental health, and reduces burnout (10-12).

One intervention for reducing stress and burnout in clinicians and those in direct contact with patients is the Balint group (13).

The Balint group (named after Dr. Michael Balint (1970-1896), a psychoanalyst in London who worked with general practitioners caring for patients with World War II trauma) is an experiential discussion group that deals with various aspects of the clinician-patient relationship. Michael and Enid Balint, his wife, and a welfare worker used group work to help physicians integrate psychiatry into their medical practice by focusing on the doctor-patient relationship and using it to their benefit (14).

In Balint groups, the medical staff is taught to better understand their patients, to distinguish their own feelings, to increase their level of efficacy, and to decrease the levels of burnout they might experience (15). Balint groups tend to increase the clinicians' ability to improve empathic observation and listening skills and to gain self-awareness by introspection and therefore better understanding the psychological dimensions of patients' problems, as well as their own emotional reactions towards patients that can interfere with their professional roles (14).

The present study investigates the effectiveness of online Balint groups in improving the caring behaviors and efficacy of nurses in the COVID-19 Ward at Amir-Alam Hospital during the pandemic.

METHODOLOGY

Study Design and Setting

This research was a quasi-experimental study with a pre-test, post-test, and a control group to measure the effect of a Balint group on the levels of burnout, perceived stress, and caring behaviors in nurses.

Participants
Participants were selected from nurses in the COVID-19 ward, Amir-Alam hospital, using a random sampling method.

Procedure
After receiving the code of ethics, invitation messages were sent to the nurses working at Amir-Alam Hospital. Individuals entered the project after initial interviews. The purpose of the research was explained to the participants and, after obtaining their written consent, they were asked to fill out the research questionnaires as well as the demographic information questionnaire including their age, gender, and marital status. After that, they were divided into two experimental and control groups using the random assignment coding method. Even and odd codes were assigned to the experimental and control groups, respectively. At the end of the intervention period, which consisted of 12 once-weekly Balint sessions of 90 minute, individuals in both experimental and control groups filled out the questionnaires again, and the results were analyzed by relevant statistical tests. Each group consisted of ten nurses, a group leader, and a co-leader.

There are several steps in every Balint group:
1. Narrating the story of a case (patient or client) by the presenter (a group member)
2. Asking neutral and general questions by the group
3. Starting the push-back phase, with the presenter pushing their chair away from the group (in face-to-face groups) or muting the microphone (in online groups)
4. Starting the free association by group members
5. Returning of the narrator, i.e., when the presenter can talk to the group if they want
6. Continuing the group-work
7. Expressing the experience of being in the group by the narrator (15).

Data collected before and after the group work were analyzed with SPSS-26.

Measures
The Maslach Burnout Inventory (MBI)
Designed by Maslach (1996), the MBI is a psychological assessment instrument comprising 22 symptom items measuring the three dimensions of burnout. The inventory has three component scales of Emotional Exhaustion (9 items), Depersonalization (5 items), and Personal Achievement (8 items). In the first scale, scores of ≥ 27 and < 16 show high and low levels of Emotional Exhaustion, respectively. Scores of 17-26 indicate an average amount of Emotional Exhaustion. In the second scale, scores above 13 show higher levels of Depersonalization, and in the third scale, scores lower than 31 indicate lower levels of Personal Achievement. The internal reliability of this instrument was achieved using Cronbach's alpha of 0.80. Bayrami et al. reported an alpha coefficient of 0.79 for this tool (16).

The Caring Behaviors Inventory (CBI)
The CBI is an empirical instrument that has 42 items and five subscales (Respectful Deference to Others, Human Presence, Positive Connectedness, Knowledge and Skill, and Other's Experience) and is filled out by a 6-point Likert scale (Never = 1 to Always = 6). The minimum and maximum scores for the CBI are 42 and 252, respectively. Items are written in the first person for nurses and in the third person for patients. The questionnaire is not exclusive to patients or nurses and is used for both groups. In a study conducted by Hajinezhad et al., the alpha coefficient was found to be 0.98 for patients and 0.93 for nurses (17).

The Perceived Stress Scale (PSS)
Designed by Cohen et al. (1983) in three 14-, 10-, and 4-item forms, the PSS is used to measure the general perceived stress during the past month, as well as thoughts and feelings in regard to stressful events, control, and coping.

This scale is applicable to a population of people with at least a high-school diploma. Cronbach's alpha for the 10-item form was measured at 0.72 in Iran (18).

RESULTS

Of the 20 participants in the present study, 10 were assigned to the experimental group and 10 to the control group. Two of the members in the experimental group were single (20%), seven were married (70%), and one was divorced (10%). The control group included one single (10%), eight married (80%), and one divorced (10%) members. In terms of age, the experimental group consisted of one member at 26-30 years of age (10%), one member at 36-40 years (10%), two at the ages of 41-45 (20%), and six others at 46-50 years (60%). In the control group, one member was in the age range of 26-30 (10%), three in the range of 31-35 (30%), three aged 36-40 years (30%), two were 41-45 years old (20%), and one was at 46-50 years of age (10%). In terms of education, seven of the experimental group members had a bachelor's degree (70%) and the other three had a master's degree or higher (30%). In the control group, eight members had a bachelor's degree (80%) and two had a master's degree or higher (20%). As a result, there were no significant differences in the demographic variables between the two groups, and they were thus homogeneous.

Table 1. Frequencies of variables

Variable	Pre-test			Post-test		
	Low	Moderate	High	Low	Moderate	High
Perceived Stress	0	20	0	1	19	0
	0	100%	0	5%	95%	0
Emotional Exhaustion Frequency	11	8	1	14	6	0
	55%	40%	5%	70%	30%	0%
Emotional Exhaustion Intensity	11	8	1	12	7	1
	55%	40%	5%	60%	35%	5%
Personal Accomplishment Frequency	1	7	12	1	3	16
	5%	35%	60%	5%	15%	80%
Personal Accomplishment Intensity	1	7	12	0	4	16
	5%	35%	60%	0	20%	80%
Depersonalization Frequency	20	0	0	19	1	0
	100%	0	0	95%	5%	0
Depersonalization Intensity	18	2	0	19	1	0
	90%	10%	0	95%	5%	0
Occupation Frequency	15	5	0	12	8	0
	75%	25%	0	60%	40%	0
Occupation Intensity	10	10	0	11	8	1
	50%	50%	0	55%	40%	5%
Respectful Deference to Others	0	1	19	1	3	16
	0	5%	95%	5%	15%	80%
Human Presence	0	1	19	0	1	19
	0	5%	95%	0	5%	95%
Positive Connectedness	0	2	18	1	1	18
	0	10%	90%	5%	5%	90%
Knowledge and Skill	0	1	19	0	1	19
	0	5%	95%	0	5%	95%
Other᾿s Experience	0	0	20	0	1	19
	0	0	100%	0	5%	95%

Table 1 shows the frequency of pre-test and post-test variables of the study in three of low, medium, and high categories. Based on the findings illustrated in this table, participants perceived moderate levels of stress in general. Regarding Emotional Exhaustion, low numbers but high intensity were reported by the subjects. Perceived Accomplishment was generally high and was reported to be slightly higher in the post-test. Based on the scores, participants were highly occupied with their jobs.

In all subscales of caring, including Respectful Deference to Others, Human Presence, Positive Connectedness, Knowledge and Skill, and Others' Experience, scores were high in both pre- and post-tests.

Before the analysis, data were examined and managed in terms of missing data, outliers, etc. After that, the analysis' pre-assumptions and descriptive findings (mean and standard deviation) of the main variables were first evaluated to test the research hypotheses, followed by the study of the inferential findings (Multivariate Analysis of Covariance).

Table 2. Pre-assumptions

Variables	Skewness		Kurtosis		F Levene	
	Pre	Post	Pre	Post	Statistic	Sig
Perceived Stress	.756	.484	.449	.233	6.408	.021
Emotional Exhaustion Frequency	1.008	.370	.964	-.739	.127	.726
Emotional Exhaustion Intensity	.236	.529	-.613	-.636	.001	.976
Personal Accomplishment Frequency	-.843	-1.248	.019	1.094	.043	.837
Personal Accomplishment Intensity	-.958	-1.066	1.478	.081	2.471	.133
Depersonalization Frequency	1.518	2.754	2.184	9.383	1.016	.327
Depersonalization Intensity	1.662	1.630	2.413	2.922	.868	.364
Occupation Frequency	.488	.064	.381	-1.289	3.757	.068
Occupation Intensity	-.186	.538	-.491	.536	.000	1.000
Respectful Deference to Others	-1.123	-1.740	1.735	2.838	1.739	.204
Human Presence	-1.175	-2.930	1.823	10.338	.130	.722
Positive Connectedness	-.138	-1.900	-.147	5.176	.307	.586
Knowledge and Skill	-1.405	-3.320	1.280	12.573	.240	.630
Other's Experience	-.197	-.335	-1.605	.200	2.548	.128

The method of choice for investigating the normality of the variables obtained from the spectra is to examine the skewness and kurtosis of the variables to be in the range of -3-3 and -5-5, respectively. According to this principle, the Knowledge and Skill post-test is not distributed normally due to its skewness, and the Depersonalization frequency, Human Presence, Positive Connectedness, and Knowledge and Skill post-tests lack normal distribution due to their kurtosis. In examining the homogeneity of group variances, the Levene test should not be significant at levels of 0.05 and 0.01. According to Table 1, only Perceived Stress lacks the requirements for the homogeneity of variances between the experimental and control groups.

Table 3. MANCOVA Test

F Test	Sig	Partial Eta Square
Pillai's Trace = 0.711	.718	**.66**
Wilks' Lambda = 0.711	.718	**.66**
Hotelling's Trace = 0.711	.718	**.66**
Roy's Largest Root = 0.711	.718	**.66**

Due to the non-significance of Pillai's Trace as the strongest statistical test, the experimental and control groups were not significantly different in the pre-test and post-test in terms of the sum of dependent variables (including Perceived Stress, the frequency and intensity of Emotional Exhaustion, Personal Accomplishment, Depersonalization, and Occupation, Respectful Deference to Others, Human Presence, Positive Connectedness, Knowledge and Skills, and Others' Experiences). Therefore, the e-square values are not interpretable and the results of the univariate tests cannot be interpreted due to the non-significance of the MANCOVA test.

variables	Groups	Mean Pre-test	Std Pre-test	Mean Post-test	Std Post-test	Pre-Post	F test	Sig	Effect Size
Perceived Stress	exp	24.300	3.335	22.700	3.497	1.6	.077	.785	.004
	cont	25	4.570	23.900	3.984	1.1			
Emotional Exhaustion Frequency	exp	16.600	6.931	12.100	4.771	4.5	.634	.436	.034
	cont	17.600	11.644	15.500	9.834	2.1			
Emotional Exhaustion Intensity	exp	20.900	8.157	18.500	10.783	2.4	.836	.373	.044
	cont	20	13.148	21.100	14.332	-1			
Personal Accomplishment Frequency	exp	33.200	9.670	38	8.419	-4.8	2.105	.164	.105
	cont	37.400	12.894	37.700	10.089	-.3			
Personal Accomplishment Intensity	exp	41.700	8.138	44.800	7.099	-3.1	.414	.528	.022
	cont	40.200	13.538	41.300	10.883	-1.1			
Depersonalization Frequency	exp	2.500	1.269	2.100	1.7919	.4	.146	.707	.008
	Cont	3.200	3.705	3.200	4.516	0			
Depersonalization Intensity	Exp	3.900	2.282	3.300	2.496	.6	.769	.392	.041
	Cont	4.500	5.930	5.400	6.467	-.9			
Occupation Frequency	Exp	4.900	1.852	4.600	2.875	.3	.137	.715	.008
	Cont	5	3.055	5.200	2.616	-.2			
Occupation Intensity	Exp	6.950	2.629	6.900	4.121	.05	.103	.751	.006
	Cont	6.750	3.276	7.200	2.485	-.45			
Respectful Deference to Others	Exp	51	4.642	51.100	7.549	-.1	1.372	.257	.071
	Cont	51.200	7.099	47.800	12.172	3.4			

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variables	Groups	Mean Pre-test	Std Pre-test	Mean Post-test	Std Post-test	Pre-Post	F test	Sig	Effect Size
Human Presence	Exp	53.700	3.772	53.500	4.576	.2	.000	1.000	.000
	Cont	52.300	7.334	52.100	10.681	.2			
Positive Connectedness	Exp	36.200	4.3153	36.100	5.237	.1	.562	.463	.030
	Cont	36.800	4.565	35	7.542	1.8			
Knowledge and Skill	Exp	22.900	2.282	23.100	1.728	-.2	.242	.629	.013
	Cont	22.900	2.514	22.500	4.881	.4			
Other's Experience	Exp	17.700	1.567	18.400	1.349	-.7	5.841	.026	.245
	Cont	18.200	1.549	17.500	1.779	.7			

The results in Table 4 show the means and standard deviations of variables in both experimental and control groups in pre- and post-tests. It also demonstrates the significant differences between each variable in pre-test and post-tests in the experimental and control groups, as well as the eta square of each. Based on Table 3 and the non-significance of MANOVA, Table 4 findings are not interpretable and are merely reported here.

DISCUSSION

In this study, the levels of burnout, stress perception, and caring behaviors of 10 nurses, who worked in the COVID ward during the pandemic and received 12 Balint group sessions, were compared with the same parameters in 10 nurses who did not receive any specific intervention.

The results obtained from this study showed no significant differences between the two groups in the post-test. This is not in accordance with a study performed by Yang et al., who reported a significant improvement in nurse-patient communication after four sessions of intervention, which may indicate that more sessions will not necessarily lead to better outcomes (18). However, Yang et al. used a different questionnaire designed by their research team to assess the relationship between nurses and patients. Different results might also be due to different settings, i.e., our Balint sessions were held online once weekly as opposed to Yang et al. who held twice-weekly sessions. Although our group was held longer (12 sessions), twice-weekly sessions for both individual and group work, even in short term, have been found to be more effective in reducing psychological symptoms and improving functions (19-22).

In our study, most nurses had moderate Perceived Stress both at the beginning and after the intervention. The Depersonalization subscale had the smallest frequency of high scores. In terms of all subscales of care, including Respectful Deference to Others, Human Presence, Positive Connectedness, Knowledge and Skill, and Others' Experience scores, were high in both pre- and post-tests. The difference in results, thus, could be due to lower levels of stress and burnout in our sample group.

In a review of psychosocial interventions for job-related stress management, cognitive-behavioral interventions were found to be the most effective interventions that significantly

reduce job stress and burnout, and no evidence was found for the effectiveness of interventions such as the Balint groups (23-24).

In another study (25), participants under the age of 30 showed the most significant differences after Balint sessions. This may indicate that younger people benefit more from Balint sessions and show a greater increase in symptoms of anxiety and stress after the sessions due to their higher level of psychological flexibility. Because only one participant was in this age group in our study, no statistical analysis was carried out in this respect.

Moreover, due to participants' initial concerns about sharing their emotions, feelings, and resistance to participation, it is also probable that, despite the leaders' efforts to create a safe environment, participants might have not opened up about their emotions in the group.

Limitations and Recommendations
This study had a few limitations, including the small sample size that limited the accuracy and generalizability of the results. Moreover, our single-sex population did not allow us to statistically analyze gender differences. Another limitation is that online communication may not be as effective as face-to-face groups. Additionally, the findings of our study focus only on the results of three quantitative questionnaires, which may not provide complete information on the influence of Balint groups on attitudes, perceptions, and experiences. It is also worth mentioning that all tools used in this study were self-report questionnaires.

CONCLUSION
The Balint group with a limited number of once-weekly sessions (12 online sessions) had no significant effect on burnout, perceived stress, and caring behaviors in nurses at Amir-Alam Hospital. More sessions of Balint group work in online situations are recommended as opposed to face-to-face Balint sessions.

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