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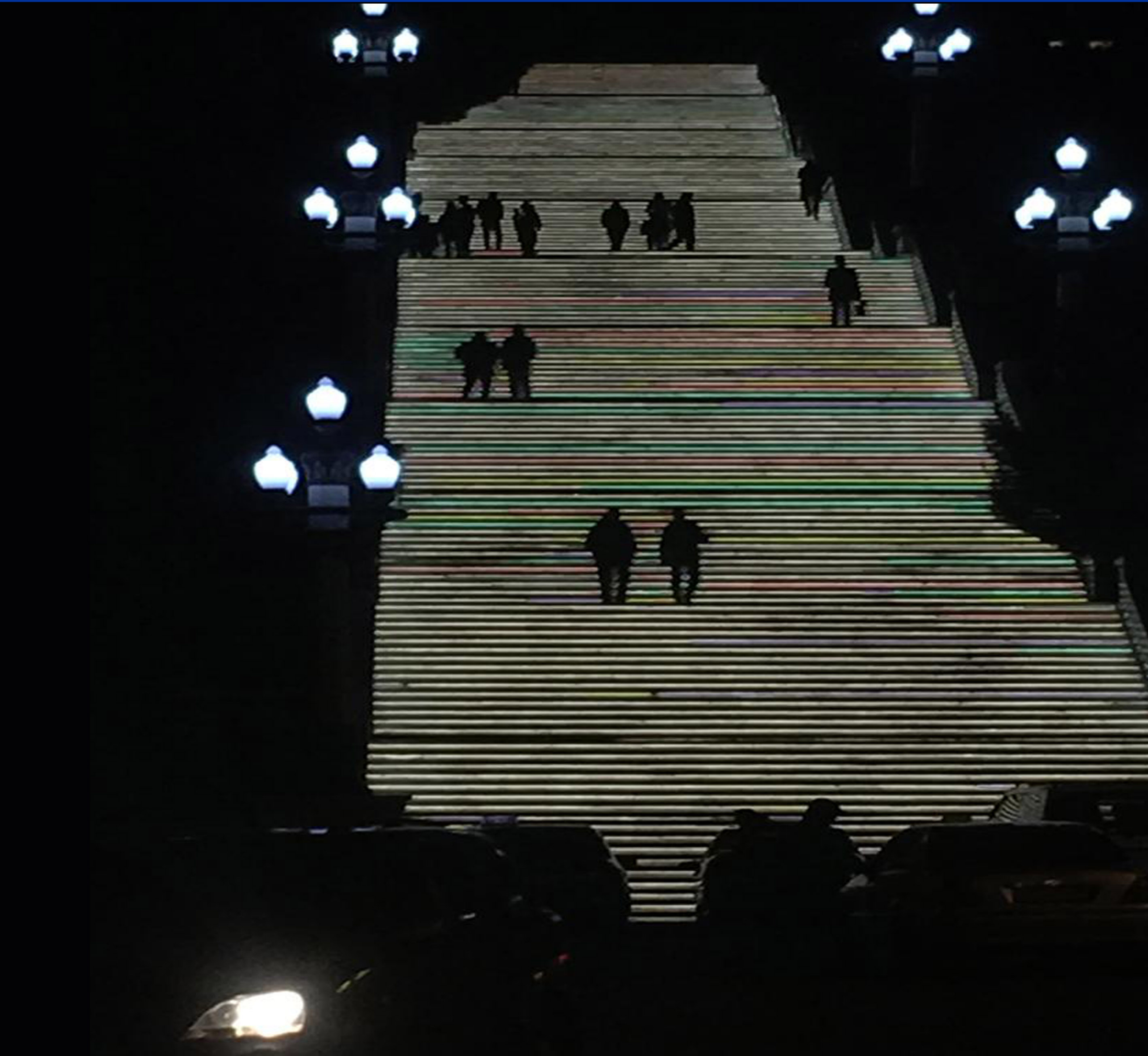

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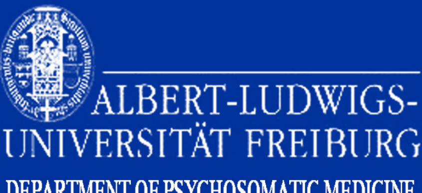

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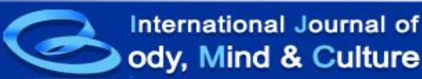

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Psychosomatics; from Darwinian War to Peircian Love

Farzad Goli[1]

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Editorial

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Our latest findings Space Especially in the field of neuro science genetics, drive us to rethink evolution. It seems that we need a more complex of a lotion every model. The hegemony of Darwinian paradigm, blind mutations and natural selection, Has encountered some anomalies. Now days we hear about cell cognition and adaptive mutation which implicate that even mutation can be mentioned as a selective behavior and is not exclusively a matter of chance (See: Foster1993,2000). Furthermore, environmental epigenetic and epigenetic transgenerational inheritance, evidently explore the Lamarckian procedures which can directly alter phenotype in a heritable manner. Now we know that lived experiences can determine gen experience and be translated to the molecular or and genetic procedures (Skinner 2015). Powerful experiences and habits can form attractors from gene expressions to brain function and structure. Thus, the sequence of DNA is not responsible for all the attributes and capabilities of an organism. And orchestration of DNA methylation, histone modification and so on, shape molecular signatures which conducts possible forms and functionalities of a certain nucleotide sequence. Molecular signals can be transmitted vertically (transgenerational) and horizontally (intracellular) and as a result change the cell's cognition and behavior (see Bonasio,Tu,Reinberg 2010)

The epigenetics pathway of attributes and habits acquisition is more analogue rather than the digital mutation model of Darwin. It seems that the chance force is not the unique invitation of evolution. What about the second main concept of Darwinism; struggle for existence? Is there anything beyond the war of selfish organisms, genes and communities?

You can see the war metaphors everywhere; between brain and heart, mind and body, self and other and medicine and disease. Life as a lifelong war, is quite paranoid and exhausting. Absurd literature of twentieth century and pessimistic attitudes toward human nature can be considered more as a new self technology than an exploration of self. Not surprisingly, believing war as the motor of life has given rise to the two tremendous world wars. Many therapists still prescribe fighting against problems, diseases or even thoughts as a solution, because life is a war. Although, these prescriptions are not useless, with this way of thinking there will be no way out of this egoistic and paranoid world of war. There's no doubt that Darwin had a profound understanding of life, but mostly

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within the boundaries organism's skin. When we study life in and between membranes, what we see is the cooperation within the boundaries of the self and struggle against the others beyond the boundaries. Countless factors support this image of life. But one question remains, is this the only window to see life through it? About more than three decades after publishing "The origin of species" another Charles, called Charles Sanders Pierce suggested another theory of evolution. Pierce pierced its way through the skin of life . He analyzed life as a sign system. The unit of life in this theory is not cells or organisms but the meaning-making procedures which connect atoms, molecules and cells in certain forms of life. Meaning is function in its pragmatic sense. If external and internal signs are misinterpreted, the outcome will be disorders or even death. When cell interprets a poisonous particle as food or contrarily interprets a metaplastic cell as normal, life instability will appear. These instabilities can interrupt the meaning-making chain lead to decomposition of the complex structure of the none living particles. From biosemiotic point of view, life exists because of correlation of interpretations inside and outside the membranous. Now what do you think about evolutionary forces which are shaping this world of signs? Pierce's answer is not a simple one. He demonstrates three levels of evolutionary flows; Tychism, Anavisn, Agapism. Tychism is evolution by fortuitous variation, anacism is evolution by mechanical necessity agapism is evolution by creative love (Peirce, 1893, 1998, 1955; Houser , Kloesel, 1992). Chance (tychism) and determinism (anacism) had been mentioned by Darwin but what made Pierce's theory original and Influential-ofcourse many decades later-agapism. He explained that beyond the liberty of chaos and order of habits (nature laws) life, or biosphere, as a whole manage its parts and leads them to integrity. Everybody can trace this evolutionary force amongst the trend of evolution towards complexity, from bacteries to internet. The war of selfish genes, drives, organisms and communities are much more sensible in the big picture of evolutionary love. From bottom-up gaze we see boundaries and struggle, from upward-down gaze the ever-rising correlation of meaning system becomes visible. The Piercism model of evolution is compatible with system theory and illustrates both the bottom-up and upward-down gaze regulations. In addition, Piercism love, reconciles scientific and spiritual aspects of life. This marriage of sense and soul seems profoundly crucial for establishing an integrative model of care. Love, not only as a romantic motif but also as an ontology and methodology, can integrate mind and body, and self and other. We need to remodel the war-based science and medicine to a love-oriented one. You imagine that love will provide a more coherent knowledge, integrative care and sustainable development.

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Iranian Physicians' Experience with Participation in a Balint Group Trial: A Qualitative Study

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Qualitative Study

Abstract

Balint Work is getting introduced and Balint Group Trials are being held in Iran in recent years. This is the first study of a Balint–group–trial participated by Iranian General Practitioners (GPs). This was a qualitative study to explore the themes which feature the GP's described experience of their participation. A phenomenological approach was applied to examine the GPs'experience of participation in a seven-session Balint-group-trial. The participants were eight Iranian GPs working in the primary health-care network of Natanz-Iran. A focus group and in-depth semi-structured interviews were applied and the transcribed Verbatim were analyzed through a phenomenological explorative and descriptive process by a three-membered research team. Three ground themes and four main-themes emerged as the main features through which the participant-GPs had explained their experience. The main themes were1– Improving the Skills and Wisdom of Doctor-Patient-Relationship 2- Exceptional Training Method/Learning Experience 3- Emotional healing for doctors 4-Job Morality Inspirations. Iranian physicians described their participation in a Balint group trial as a missing, needed and valuable experience of different sort of a peer-discussion-group, an insight-inducing and skill-improving one and an emotionally-supportive one. Minor particularities and major similarities were found between the participation experience as portrayed by Iranian physicians and by physicians of other countries. The study also adds a demonstration of the trans-cultural nature of the Balint group experience.

Keywords: Qualitative, Balint group, Experience, General physician, Iran

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Introduction

Goerge Engel proposed biopsychosocial model in 1977 as a way out of the limitations of biomedical model. The latter was mainly a pathophysiological and biological explanatory model of health and disease. Engel's model was founded on systems theory according to which the human being is viewed as a unique

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and complex organism whose health or disease states are interactively affected by complex biological, psychological, social, and cultural factors (Engel, 1977; International Balint Federation, 2017). The central concept of the biopsychosocial model has continued ever since under the names of different theories and models including systemic theory, a psychosomatic model of care, the patient-centered approach in medicine and humanistic medicine. The core idea in all of the above concepts is to put stress on a higher level of human health care in which rather than to approach the disease as independent entities, the patient gets approached as whole human-beings who live as part of complex and interacting biological, psychological, cultural, social, and spiritual systems which interactions play role in health and disease states (Bell, et al, 2002).

Doctor-patient relationship is the cornerstone of psychosomatic medicine as a model of patient-centered approach to health care (Clark, Lipkin, Graman & Shorey, 1999; Dorr & Lipkin, 1999). For a patient-centered approach in this model, the therapist need to be trained for adequate communication and relationship skills. To establish therapeutic relationships with the patient, doctors need to approach to the patient's individual health needs and resources, to acquire broader sense of the patient's health condition within their lives contexts, to gain their trust and to empower them to actively participate in the process of their own health care and healing. Although so far it has not been within the focus of medical education, an effective therapeutic relationship has been shown to increase the patients' satisfaction and compliance (Epstein & Street, 2011).

Balint group is a guided peer group of therapists to discuss examples of difficult doctor-patient relationship in their daily practice encounters in a reflective, insight-oriented and practical way (Van Roy & Vanheule, 2013, Salinsky, 2002). Established in 1972, the international Balint Federation is now membered by 22 countries. Balint work is well-stablished in Germany, a country with 850 members in the federation. So far, 20 International Balint-group congresses have been held by the federation (International Balint Federation, 2017).

Incredible progress of technology in modern medicine has pushed the doctor-patient relationship into the margins of attention in medical practice. The mechanistic view of modern bio-medicine reduces the physician to the provider, the patient to the customer, and the medicine to the product. The implicated mind-body dichotomy of this model de-emphasizes the humanistic values like empathetic responses to human-suffering in practice. Balint groups aim to restructure the human relationships as a therapeutic agent in practice. In Balint work, components of a healing relationship can be learnt by doctors through mutual reflections of their experienced emotions, ideas, images and fantasies as evoked in response to real stories of doctor-patient relationship difficulties shared in the group (International Balint Federation, 2017; Matalon, 2013).

Another area of neglect in bio-medicine is the physician's health (Malekian, 2018). Doctors are vulnerable to job burnout which may be physical and psychological hazardous to them. Job burn out also may adversely affect the doctor's efficacy in practice and their relationship with patients (Delbrouck, Frenette & Consoli, 2003). Studies show that long term participation in Balint groups helps the doctor to slow down the process of job burn-out and to gain higher satisfactions with their job (Kjeldmand & Holmstrom, 2008; Novack, Epstein & Paulsen, 1999; Rabinowitz, Kushnir & Ribak, 1996; Roberts, 2012; Zalidis, 2019). Among other tutorial programs, Iranian physicians are getting trained in psychosomatic medicine and in Balint work through the academic exchange program with Germany in recent years (Isfahan Psychosomatic Research Center, 2017; Cooperation Germany/ Iran, 2017). The meaning of "psychosomatic medicine" here is intended

as the basic model of patient care established in Germany and some other countries, and it is not intended to mean the overlapping "psychosomatic disorders sub-specialty field" as a subordinate area of psychiatry (Fritzsche, McDaniel & Wirsching, 2014).

Established in 2008, Psychosomatic Research Center (PSRC) affiliated to Medical University of Isfahan (MUI) – Isfahan, Iran – was approved and further developed to offer Post-doctorate courses on psychosomatic medicine and psychotherapy in cooperation with Albert Ludwigs University of Freiburg – Freiburg, Germany – and Danesh-e tandorosti Institute (DTI), – Isfahan, Iran – since 2013. Besides, a very unique opportunity of Balint work training and education has been provided by an academic exchange program between MUI and the Freiburg University Clinic of Psychosomatic Medicine (FUCPM) in Germany and is supported by the German Academic Exchange Service (DAAD). Ever since 2008, German academic experts of psychosomatic medicine have provided training for Iranian trainers of Balint work in MUI both in Isfahan and in Freiburg. Between the years 2008 to 2017, four international congresses on psychosomatic medicine got held in MUI by cooperation of PSRC, FUCPM, and DTI which Balint work workshops were arranged in all of them (Cooperation Germany/ Iran, 2017; Fritzsche, McDaniel & Wirsching, 2014; 14th International Congress on Psychosomatic Basic Care Isfahan, 2017). Moreover, monthly Balint group sessions are held in PSRC during and following to the Post-doctorate courses (Isfahan Psychosomatic Research Center, 2017; Cooperation Germany/ Iran, 2017; Fritzsche, McDaniel & Wirsching, 2014). The latter in-turn is currently directing and leading Balint-group-trials under distant online supervision of Freiburg University. In addition to these intense activities on Balint work in Isfahan, Balint groups are held by Medical Universities of Tehran, Mashhad, and other cities (Balint Workshop in Roozbeh Hospital in Tehran). Nevertheless, after one decade of such activities, Balint work is still unknown to Iranian physicians. Considering the prospective need of Iran's health system to holding Balint groups, conducting research in this field is at the heart of needs assessment and investigating Iranian physicians' experience with Balint group training trials. Moreover, considering the cultural particularities of the doctor-patient relationship (Malekian, 2015), there is a need to explore it trans-cultural differences in Balint work in different settings in Iran and in between Iran and other countries (Fritzsche, McDaniel & Wirsching, 2014; Rosenberg, Richard, Lussier, & Abdool, 2006).

In general we just roughly estimate that the word "Balint group" has been never heard by a majority of Iranian general physicians and non-psychiatrist medical specialists. However in the recent decade, the Balint work is getting increasingly introduced to psychiatrsists, psychosomatic medicine fellow professionals, nurses, educationists, health psychologists and to a lower extent also to GPs and other medical specialists. Regular Balint groups in Iran are not frequently held and so far Balint groups have rarely been ever studied. The only published qualitative studyon Balint work in Iran has been the one sampled by a group of nurses of the Isfahan medical university hospitals (Marofi & Manochehri, 2017).

This is a study of a Balint group trial implemented by the research team in Natanz health network affiliated to Isfahan University of Medical Sciences. This is an exploration of how Iranian General Practitioners (GPs) describe their own experience of a seven-session Balint group trial partcipation. And so far as to our knowledge this is the first study on a Bailnt group of Iranian physicians.

Methods

This research was proposed as one of the curriculum assignments required by the first author before graduation of psychosomatic

medicine post-doctoral training course. The course is being heldin Isfahan and is mutually directed by trainers from Freiburg University Clinic of Psychosomatic Medicine (FUCPM) and the Medical University of Isfahan (MUI) affiliated Psychosomatic Research Center (IPSRC). The proposal was submitted and presented to the Freiburg university research team during a DAAD-supported participation of the Iranian post doctoral students in the summer–school 2016 in Freiburg. The proposal was accordingly revised and approved by MUI.

Design

Qualitative phenomenological methodology was selected as the general researh strategy of our study to explore the GPs'descriptions of their experiences of participation in a Balint group trial and to give voice to the main features they express to get their experience understood and conveyed. The qualitative phenomenology assumed as a suitablemethod because Balint group in Iran is a new phenomenon and participation in a Balint group is a new experience to Iranian GPs which has not been studied so far.As the Balint group works through reflective and dynamic group processes, to understand how the Balint work goes on in a never-assessed setting, like in that of Iran, the participants' experience of participation in the Balint group is a main subject to be curious about. A Qualitative method, therefore, would provide us with a flexible-enough framework to look deep into how Iranian GPs perceive and how they would describe their own experience in order to give sense to this new event.

Sampling, recruitment, and participants

The sampling method was a purposive one. As no long-term Balint group has been already going on in Iran, there was no regularly held Balint group of GPs already available to be sampled by this study. Therefore, a seven-session Balint group trial was implemented and participated by all the eight GPs working in Natanz district of health care network.

Isfahan is the main hub of psychosomatic medicine and psychotherapy in Iran (Fritzsche, McDaniel & Wirsching, 2014). Natanz is a town with 17000 population located in Isfahan province in a distance of 110 km to Isfahan as the province central city. Natanz health network (Among Iran's...number of health network distributions, Natanz health network for example is the defined territory, district or catchment area of Natanz and a few small cities and villages around Natanz whose inhabitants' health care delivery is organized and supervised by the same central Natanz office) is one of the MUI affiliated health networks which has been selected as the locus of psychosomatic medicine studies as well as the pilot research locus to study current GPs' field trainings related to a national health system reformation program called "the national family physician project" (The family physician national project, Iran ministry of health care and medical education, 2005).

Participants were 8 physicians, five females and three males, aged from 27-50 whose past years of career as GPs ranged between 2 to 20 years. They were GPs working in Natanz health network territory and were purposefully selected as the study sample. The participant GPs were already informed about the provisional study and about the form and the timing options of BGT sessions through an informative session directed by the first author before the first session. Signing the informed consent forms, they confirmed their agreements to participate in a seven-session research-trial of Balint group, thereby declaring their agreement to participate regularly in at least six out of seven scheduled sessions of BGT as well as a focus group session. By signing, they also agreed to be afterward interviewed by the researchers and allowed their interviews to be recorded, and the transcribed data collected from their interviews to be anonymously evaluated, analyzed, published and/or archived for study purposes.

The leader and the co-leader of BGT sessions and the interviewers: Balint leader and co-leader were respectively a psychiatrist and a family physician, both post-doctorate trainees of psychosomatic medicine with a two-year experience of regular participation in Balint group sessions as Balint-group trainees and also as Balint-group trials co-leaders. The participant interviews were directed and the focus group facilitated by the same leader and co-leader of the Balint sessions and supervised by the research advisor. Interviewer declared the anonymity and confidentiality issues again at the beginning of each interview and asked permission for recording the interview to be transcribed and used anonymously.

The timing of the BGT sessions, interviews, and the focus group: There were seven sessions of BGT-one session every three other weeks-which were held from September 2016 to January 2017. Interviews with the participants started after the last session, completed within three weeks and was followed up by member checking in the next four months. The focus group was held three weeks after the last interview, and one week after the team had gathered together after everybody had gained familiarity with the content of interviews through reading the transcribed verbatims of all interviews over and over. BGT sessions, interviews and the focus groups took place in Natanz Health Center office.

The research questions: wad "How do GPs describe their experience of participation in BGT sessions?" and "What impressions feature the GPs' description of their participation experience?"

Data collection

Interviews: Private in-depth lengthy interviews were made with each participant. An interview guideline was developed by one of the authors and the research advisor as a list of available open-ended questions together with advices on facilitation maneuvers to ensure a non-suggestive approach to interview while covering the participants' expressions on their experience with participation in BGT as broadly as possible and to let them go toward expressing their perceptions and views on their experience as well. Both interviewer and interviewees spoke in their native Farsi Language. The transcribed verbatims were translated into English by a professional English language translator and was compared to the original by corresponding author.

The focus group got participated by the same BGT participants (but one of the participants–already interviewed but was absent in the focus group). It took one and a half hour. The facilitators were the same leader and co-leader of BGT sessions. They tried to further explore the participant's experience according to the research team comments on ambiguities during a gathering session held a week before. The focus group aimed to further clarify the meanings the interviewees had intended to mean with no direct approach to the contents of their interviews. They were appreciated for their cooperation so far and then they were asked to once again recount their experience of participating in the Balint group trial. For keeping a smooth stream of discussions, the facilitator was in charge of leading the group and the co-facilitator had in hand the check list of the uncertain points as defined in the gathering session a week before and was monitoring the discussions vigilant to notice the emergence of proper hints to find the proper time to explore the points of uncertainty further and to get clarified. The focus group discussions were also recorded and transcribed after asking permission.

Bracketing: As the leader and the co-leader of the Balint group trial would also be part of the analyzing team later in the process, they were already interviewed by the research advisor, before getting the interviews started with Balint group participants of the study. This way, the themes featuring the leaders' description of the Balint group trial sessions were identified. The Transcribed Verbatim of the

two primary interviews with leader and co-leader of the Balint group trial were analyzed and thematized prior to collecting participants' interviews data by two other research team members. The emerged themes of bracketing (namely: burn-out prevention and Doctor-Patient Communication improvement) were revalidated by the leader and the co-leader and awareness toward their pre-assumptions were enhanced through a discussion session held by the team before the first interview with participants. Our intended logic behind this was not to undo the likelihood of biases- as the internal fact is integrated to any fact and is not separable but the bracketing was used in order to empower the interviewer and the analyzing researchers through enabling them of a conscious recognition toward any presuppositions -as an existing script of the fact. This would let them consciously acknowledge the version of the fact they already hold, and pay intentional attention toward it when facing other facts– and to be able to stand out as differentiated.

Ethical considerations

The research approved by the research review board of MUI affiliate PSRC- in Spring 2016 (proposal approval No: 295255) and then by the Ethical Review Board Committee of Research Vice Chancellery-MUI- for Human Subjects (approval No: IR.MUI.REC.1395.2.255). By filling and signing the informed consent forms, participants consented to take part in the Balint group and research study, agreed to be interviewed about their experiences afterwards and allowed their interviews to be analyzed and published anonymously by the researchers. Commitment to confidentiality was declared by the interviewer at the beginning of each interview as well as by all the members of the research team through the informed consent forms. The research team members tried their best to keep committed toward the collected data and to the analysis methodology, as well as to avoid as much as possible to be directed by their own presumptions through detailed clarification of the process and other measures.

Trustworthiness/validity

The detailed-elaboration of methods and the study process: is used as the main validity confirmation-as applicable in qualitative research studies

Bracketing: As already emerged the emerged themes of bracketing (namely: burn-out prevention and Doctor-Patient Communication improvement) were discussed by the analysing team in a discussion session before the first interview with participants. This way we tried to help the interviewer's analyser and other analyser to increase an awareness toward their own pre-assumptions. We don't believe this way we would overcome the likelihood of biases- but the bracketing was used in order to make available to the interviewer and the analyzing researchers a conscious recognition of their presuppositions -the existing predictions. This would let them consciously acknowledge the version of the fact they already hold, and keep welcoming toward other facts– and to be able to stand out as differentiated.

Triangulation: To affirm trustworthiness, triangulation was applied in the data source as well as in analysis through the following considerations according to Guba and Lincoln criteria: (Morrow, 2005).

Triangulation of the source of data: There were used different sources for data collection: i.e from Balint group participants (through individual interviews as well as focus group discussions) and through differentiating key informant observations (through interviews with leader and co-leader). The field notes of the leaders' observation were not analysed separately but were openly discussed and take into account in the stage of the naming sub-sub-themes and themes, i.e. when the analysing group had agreed upon grouping the the smaller meaning-units to make a more inclusive concept and needed to make a concensus over selecting a label by which the sub-sub-

themes and sub-themes would be defined.

Triangulation of analysis: 1–To analyze data, all transcribed verbatim got coded by two independent researchers as well as by the leader, so that the whole data analysis was done by three researchers who reviewed the codes first independently and then in shared sessions. Other than the leader, the analyzing team was membered by a Ph.D. research expert, who did not have a psychosomatic medicine educational background, neither he was familiar with Balint Group, nor he was an insider in this study implementation, but he was an expert in qualitative research method. The third analyzer was both familiar with Balint group and with qualitative research, but she was not an observant of the group sessions, nor the conductor of the focus group. The sub-sub-themes, sub-themes and themes were also derived by rearranging and grouping codes, deciding on the broader meaning units and then naming them as sub-sub-themes, sub-themes and themes first independently and then in sessions of open discussion by all three analyserss.

Limitations

Some of the limitations of the current study include:

1. The sameness of the interviewer and the Balint group leader could be potentially regarded as a limitation by increasing the probability of self-inhibition and self-censorship in interviewees. Also it could be a potential bias factor to direct both the data collection process and the analysis process toward the interviewer's preferences. Generally, of course, in qualitative studies the observers' presumptions are never denied or ruled-out, rather they are tried to be identified and admitted as part of the reality version. Bracketing method was applied not only to admit the contribution of such a factor in the described version of reality of this study, but also to increase the leader's awareness toward and their mind-availability of their preexisting assumption in order to enhance their intentionality to keep open toward the different ideas.

2. No ongoing Balint group was found as already established, held on a regular basis and membered by Iranian GPs. Therefore the study was sampled by a group of GPs who were purposefully assigned as the participants of the Balint training group of this study. Participants participated in a few sessions of Balint group trial before their participation experience was studied. As a result, both the researchers and the Balint group participants could have been viewing the Balint group sessions as a perquisite for an anticipated study. This fact could potentially impair the neutrality of participants' experiences and those of the leader's observations, the interview direction and the analysis presumptions (as the leader was also the interviewer and a member of the analyzing team).

3. Moreover, if available, a larger sample size of participants of different longer-duration Balint groups of GPs could have resulted in a more generalizable data. However, qualitative studies are not generally generalizable. Moreover, no ongoing Balint group had been already established for Iranian GPs. Therefor we believe that this is the very first preliminary study on Iranian GPs participation in Balint group and is therefore a valuable first step to get further Balint groups held for Iranian GPs and further related studies developed in Iran.

Analysis

Both the bracketing data and the data collected by participants' interviews- were read over and over by each analyser first independently and then interactively by respectively two and three analyzers.

The analysing team consisted of three members. There were two other members in the analysing team other than the interviewer, one of whom was well familiar both with Balint work as well as with qualitative research. The third analyser was an expert in qualitative research but had no familiarity with Balint group. A process of interactive comparative analysis continued

all the time during the data collection and afterward. The data analysis started by independent and line-by-line coding of the transcined verbatim of each recorded interview by each one of analyzers. The analysers then sent their script of codes into the other two analyzers via email. The analyses were progressed interactively by active communications between the three analysers as well as between the analysers and the interviewees. This way, re-reading, re-arranging, combining, merging, adding or deleting the codes were continued to get more inclusive meaning patterns derived stepwisely. Open discussion sessions were held before proceeding into any further step in the analysis process. Thereby sub-sub-themes, sub-themes and themes were progressively defined, discussed and got revalidated through several member-checkings.

The analysis process can be described as the following steps:

1. Getting familiar with the data by reading the transcribed verbatim over and over until becoming thoroughly familiarwith data content.

2. Generating meaning units or codes by finding out and naming sets of data.

3. Sharing the sets of codes with co-analysers by email

4. Holding an open discussion session to share and discuss upon the codes and finalising them.

5. Identification of potentialsub-sub-themes, sub-themes and themes by trying to discover inclusive meaning patterns in different combinations of codes, independently done by each analyser. Codes were first combined in several ways to get different recombination of bigger data sets, then each potential sub-sub-theme, sub-theme and theme was re-examined to understand whether or not it could be made up by-or could be represented by the combination of- its associated codes, sub-sub-themes and sub-themes.

6. In the open-discussion session the previous stage was reviewed and then each theme and sub-theme was examined if they could be realized in the opposite way. It means that each candidate theme was tested if it can get re-validated in a downward reappraisal or review to be indicated by the sub-themes, sub-sub-themes and codes out of which it was derived. This way each lower meaning unit was checked as if it really contributed in making the broader concepts in whoch they were concluded.

7. In the same shared session the group also crossed the candidate themes against any of the sub-ordinated meaning units i.e. sub-themes, sub-sub-themes, codes and then original quotes (transcribed quotes) to check if each broader unit is named properlyas a title for the chapter as the title inclusive of the the smaller units it embraced. This review of data helped us to figure out either how to modify the theme phrase or how to re-arrange the data sets to get sets of data fitted well to their place-holders.

8. Before the final agreement, each analyzer then had to finalize the labelings independently again and to decide on the ultimate definition of each theme through defining as clear-cut borders as possible to which extent each theme can be specified or generalized before the final gathering session.

9. A document was then provided by each analyzer to describe the analyses process, extractions, labeling and to their track the story in pre-existing literature. Any point of uncertainty or disagreement was also declared in the same document. Then each analyser sent the produced draft to all participants to ask their comments via email. The non-respondents were followed-up by phone calls in two weeks.

10. After validating themes by means of such a member-checking, the members of analyzing team sent their refined themesand sub-categories to each other via email.

11. Then analysers then gathered in their final meeting to discuss the final agreements of the themes, sub-themes and sub-sub-themes and to get them written-up.

The analyzers then gave themselves a two-

week pause (no meeting break) before gathering in a final meeting to share and to make consensus over the final writing-ups (The University of Auckland, 2017; Moustakas, 1994).

Results

Participants were 8 physicians, five females and three males, aged from 27-50 whose past years of career as GPs ranged between 2 to 20 years. They were GPs working in Natanz health network territory and were purposefully selected as the study sample. The bracketing (through the idea of differentiation) was experienced as to be a powerful tool for the researchers to keep conscious, curious and welcoming both to the similar and different views.

Three ground theme and four main themes were identified as the main features through which the participant-GPs had explained their experience. They their participation experience was feature under the ground-themes of needed, new and insight fulexperience. The Balint group was believed by the participant GPs as to be a missing needed part of medical education.

The following four main themes emerged out of the data analyses as the main themes through which the GPs had featured their experience of participating in Balint group trial sessions.

1. Wisdom and Skills of Doctor-Patient Relationship
2. Exceptional Training Method/Learning Experience
3. Emotional Healing for Doctors
4. Job Morality Inspirations

The main themes and sub-themes emerged out of the participants' description of their participation experience are presented in table 1.

To provide a more clear understanding, each theme is presented in a separate table. Each of the tables 2 to 5, therefore, contains the main theme along with the related sub-themes and codes followed by sample indicating quotes.

Theme 1. Wisdom and Skills of Doctor-Patient Relationship

In the following table, the first theme and its linked sub-themes, codes and sample quotes are presented. Different quotes in front of each code and different quotes which are gathered subtheme are different here are from different to belongs to one participant

Physician participants reported the Balint group participation as an experience enhancing one's knowledge and skills of patient-relationship through increasing one's awareness of their own emotions as well as those of their patients. They also featured their Balint group participation as a practicum to exercise communicative skills including the skills of active listening and empathy. They have perceived their participation in Balint group as one which induces more awareness toward the centrality of good patient relationship as a factor affecting the patients' compliance and adherence to treatment which also in many other ways contribute to the patients' health improvement and thereby to their job outcome. Most participants talked about examples of Persian popular proverbs and poems commonly talked in the public and/or by their own patients as an associated reflection of this concept. *Table 2) Theme1. Wisdom and Skills of Doctor-Patient Relationship (sub-themes and quote instances)*

The patient's common phrases to describe a doctor whom they have perceived as a good one as a doctor who owns "healing hands" or "a doctor with curing breath" are among concrete examples participants mentioned to reflect the impacts of doctors' relationship and patient-communication skills on their patient's health. The relationship skills were perceived as put to center in Balint group discussions. Balint group was also featured as a place to make efficient approaches to managing difficult patient encounters by making the proper skills more accessible and within the reach in participants' minds. All sub-themes of the theme-1 and instances of related quotes are presented in (Table 2).

Table1. Themes and Sub-Themes Emerged from Qualitative Data of How Iranian General Practitioners Described Their Experience of Participation in A Balint Group Trial

Themes	Sub-Themes and Sub-Sub-Themes
Theme 1. Wisdom And Skills Of Doctor-Patient Relationship	1–A) Emotional Awareness in Practice:
	1-A-1) Awareness Toward One's Own Emotions
	1-A-2) Awareness Toward the Patient 's Emotions
	1-A-3) Alertness Toward the Emotional Dealings in Daily Patient–Encounters
	1-B) Recognizing Emotional-Care As An Essence of Human-Care:
	1-B-1) "Human Emotion s" Apperceived As A Relevant Entity In Medicine:
	1-B-2) Insight Toward Therapeutic Implications of Emotions
	1-B-3) Understanding the Healing Power of Good Patient-Relationships
	1-C) Abilified To Employ The Patient Relationship-Skills to Promote Ones' Practice
	1-C-1) Competence- Gaining in Empathy and Listening Skills
	1-C-2) Achieved A Third Ear to Listen To The Untold In the Patient Stories
	1-C-3) Enhanced Comfort/Capability to Deal With Troublesome Patients/Patient-Encounters
	1-C-4) Enhanced Conflict Resolution Skills In Practice
	1-C-5) Enhanced Confidence To Let The Patients Open-Up Dissatisfactions/Mistrusts
Theme 2. Exceptional Training Method/Learning Experience	2–A) An Exceptional Learning Experience Mediated By Feelings And Imaginations
	2-A-1) Emotions, Fantasies and Bodily Sensations Employed As Powerful Means Of Training
	2-A-2) Exceptional Classroom Wherein Emotions and Fantasies Are Welcomed and Validated to Contribute
	2-B) An Insight–Inducing Experience Influential To One's Professional Attitude
	2-B-1) Subject–Appropriated, Effective & Otherwise-Impossible Training-Approach
	2-B-2) Patient-Relationship-Skills Learned, Practiced and Coached Together
	2-B-3) Far More Empowering And Reliable Method Than Lecturing For Morality Training
	2–C) A Main Neglected Course In Medical Training
	2-C-1) The Whole Human–Being Realised As Out-Of-Focus In Medical Educations
Theme 3. Emotional Healing For Doctors	3-A) Talking Through The Common Difficulties Of Medical Job
	3-A-1) Ventilating Out Job Burdens Including Those Of The General Physician Vs. The Medical Specialist
	3-A-2) A Needed Recovery From Daily Contacts With Death, Dying, Somatization, And Extreme Human Sufferings
	3-A-3) Bewaring Of The Health Hazards of One's Job Stressors And Purposefulness In Modifying Them
	3-B) A Self-Help Guided Group
Theme 4. Job Morality Inspirations	4-A) Reviving And Revising The Dream Of The Wise–Nice –Doctor
	4–A-1) The „Doctor–Perfect" Vulnerable Self –Image Replaced By The Realistic „Human Nice –Doctor" One
	4–B) The Specific Job Morality Challenges Of Iranian Doctors
	4-B-1) Re-Thinking Self-Ideals And Public-Demands Rooted In The Old Iranian Medical Heritage
	4-B-2) Together A Way Out Of The Public Mistrust Against Doctors

Physician participants reported the Balint group participation as an experience enhancing one's knowledge and skills of patient-relationship through increasing one's awareness of their own emotions as well as those of their patients. They also featured their Balint group participation as a practicum to exercise communicative skills including the skills of active listening and empathy. They have perceived their participation in Balint group as one which induces more awareness toward the centrality of good patient relationship as a factor affecting the patients' compliance and adherence to treatment which also in many other ways contribute to the patients' health improvement and thereby to their job outcome. Most participants talked about examples of Persian popular proverbs and poems commonly talked in the public and/or by their own patients as an associated reflection of this concept.

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Table 2. Subthemes, codes and sample quotes linked to theme 1: Wisdom and Skills of Doctor-Patient Relationship

Theme	Sub-Theme	Sub-Sub-Themes	Sample Quotes
Theme 1. Wisdom And Skills Of Doctor-Patient Relationship	1–A) Emotional Awareness in Practice	1-A-1) Awareness Toward One's Own Emotions	"In Balint group sessions, I practiced applying more words about my feelings. Putting your emotions into words helps to get them more clarified, not only to others but also to yourself." "Balint group participation made me more alert toward how my physical sensations go changing before I feel differently in different occasions,.. like being sort of notified of impending anger when getting beyond the baseline anxiety I often carry in my practice."
		1-A-2) Awareness Toward the Patient's Emotions	"... I found myself and others expressing many emotions on behalf of one's own or one's colleague's patients.....This means everybody was trying to see the story through the patients' eyes,.. realize what the patient had experienced emotionally..."
		1-A-3) Alertness Toward the Emotional Dealings in Daily Patient–Encounters	" I used to be never this aware of the presence of a family member who's accompanied the patient to the hospital,. I can no more miss to see them standing there,..looking worried, overwhelmed, perplexed or helpless."
	1-B) Recognizing Emotional-Care As An Essence of Human-Care	1-B-1) "Human Emotions" Apperceived As A Relevant Entity In Medicine	"..Medicine is not all about diagnosing and prescription. Balint group participation helps us to regard our feelings and those of the patients as professional issues...rather than to ignore them as non-relevant ..or interfering.. see them as something to learn from, and to care about, in order to get our patients better"
		1-B-2) Insight Toward Therapeutic Implications of Emotions	"If there was anything to learn and to take-away, it was certainly to consider the contribution of patient's feelings in their health condition...I mean, sometimes this even is the core issue, and guides us toward the needed intervention, most compatible care according to the patient's need ..just to be conscious when caring for emotional needs is the only solution or the main one...the Balint group discussions put this into the center" "The sessions allowed us to reconsider that...the better the patient feel toward us, the more effectively our prescribed pills work"
		1-B-3) Noticing the Healing Power of Good Patient-Relationships	"In our Balint group talking...to see I was listened, gave me the feeling of being important, being worthy to listen,...this was relieving by itself, putting aside all you've learned from the contents of sessions...being listened so carefully and understood felt so remedial and improving to me. Then I can realise it can be the same good for my patients." "..Balint group puts the subject of good behaving in front of eyes, and it should be right there as it impacts the outcome of practice, you see, people and patients talk in their everyday talks,..(Iranian) proverbs...to reflect their trust toward doctor A or doctor B for example by saying: "the cure is in doctor A's (examining) hands" or "the cure comes out inside doctor B's breath (when talking to the patient)"...just we need to take these public ideas seriously into account in our practice, indeed, the secret behind their hero doctor's hands or breath are good communication skills or kind and empathetic responding...after all, like it or not, healing effects are healing effects..whether they come from your drug or from your breath...so your breath should be regarded no less important in medicine!
	1-C) Abilify To Employ The Patient Relationship-Skills Promote Ones' Practice	1-C-1) Gaining Competence in Listening Skills and Empathy	"When visiting a patient with flu symptoms, for example, I used to see their throat and examine their lungs before prescribing drugs and saying good-bye. Now I feel sort of prepared to listen to them carefully..let them talk..try to understand their concerns...and many times I realize the patient get better just after I talk a few empathetic words, before any prescription.'

Table 2. Subthemes, codes and sample quotes linked to theme 1: Wisdom and Skills of Doctor-Patient Relationship (continue)

Theme	Sub-Theme	Sub-Sub-Themes	Sample Quotes
		1–C–2) Achieved A Third Ear to Listen To The Untold In the Patient Stories	"As revealed in the sessions... sometimes the main reason the patient had come to us is something else...untold. In Balint group sessions you get increasingly conscious. You tend to listen more carefully looking for major concerns beyond the patients' spoken complaints..."
		1-C-3) Enhanced comfort/ability to Deal with Troublesome Patients/Patient-Encounters	"I assume I'd been doing so-far overly formal when dealing with my patients, especially those I could not deal-so straight-forwardly. I feel Balint group helps to feel prepared to get closer to such patients ...as an instance, I used to ask a mom to hold her child tightly before examining a non-cooperative child-I now prefer to challenge my skills to talk to the children themselves, to get their fears erased, their mother soothed and..."
			"I feel more comfortable next time I will see the patient.. who comes too often...I feel more certain how to set my professional limits, to keep professional..and to keep caring as well"
		1–C–4) Enhanced Conflict Resolution Skills In Practice	"I gained more confidence through the group brainstormings...the leader was a good model...of keeping the peacefulness of conversations..trying to leave no trace of annoyance by re-framing the points in comments...then when the patient is irritated and criticizing,., I try the same...keep neutral, reveal misunderstandings...let the patient ventilate out and talk...to show empathy and to affirmate myself when needed..to win the patient's trust..avoiding any word against others..avoiding any more irritations."
		1–C–5) Confidence To Let the patients Open-up their mistrusts/negative emotions	"After Balint group participation, less critical I feel toward myself..than I was before for example about why I've got that upset in this occasion..or appeared as sad in that one..whatever. No blame even if there appeared tears in my eyes when listening to a tragedy...This makes me more open toward their feelings whatever they be ..I enable them to talk about their feelings..even if extremely painful. or even if they seem not content with my efforts and go complaining ..whatever"

Table 3. Theme2. Exceptional training Method/Learning Experience (With Sub-Themes, Sub-Sub-Themes and Sample Quotes)

Theme	Sub-Theme	Sub-Sub-Theme	Sample Quotes
Theme 2. exceptional training Method/Learning Experience	2–A) An Exceptional Learning Experience Mediated By Feelings And Imaginations	2-A–1) Emotions, Fantasies and Bodily Sensations Employed As Powerful Means Of Training	"..though they were not explicitly discouraged in training sessions or educational sessions, but for sure feelings were not invited or regarded as the feeling has never been regarded as educative element in any other training sessions" ".this had a training method flavour which I had never tasted before. I not only mean that nobody ever teached us any lesson about our feelings and the patients' feelings, of cours this is true too but something more intersting about the Balint group was that I learned by means of my emotions about the emotions of others. This was even more new, had never was needed which never was the subject of which about practical riding the emotions, it was the first time the emotions were regarded as to worth attention, it is something related to training methodology."
		2-–A–2) Exceptional Classroom Where Emotions and Fantasies Are Welcomed and Validated–to Contribute Learning	"This was a very new experience...to be asked to notice your own physical sensations as doctors...to pay attention to doctor's body too...doctor's fantasies too, this was very effective to be asked to consider your body and feelings and images..this is the best way to learn to care about others as real humans.." "The Balint group let us experience ourselves in both places...the one who is getting listened...and then the one who listens...this lets me experience how I feel toward others' responses to what I shared ....I could simply see how good it feels when someone listens to me and encourages me as if my story has been found as worthy listening rather than non-significant; also how better my colleague seemed to feel by a better feedback than mine, when I did according to a temptative impulse and made a superficial advice..Indeed I learned in both aspects through my own experience in the group. This is a special point about Balint group" "..We were encouraged to be more open to emotions..affecting others' emotions and getting affected by them...is sort of a real-world exercise to learn better relationship skills..even though this is done in the absence of real patients "
		2–A–3) Insight–Inducing Experience Influential To One's Professional Attitude	"As emotions were focused and paid attention in detail. I guess the lessons of Balint group will last forever,..., and I see they have changed my sight-view toward my practice..." " Caring is deeply learned in the Balint group, as well as relationship-skills, because it provides the participant with a parallel experience of caring and listening and also being listened and cared emotionally"
	2–B) Perceived As A Subject–Appropriated, Effective & Otherwise–Impossible Training–Approach	2–B–1) Patient–Relationship–Skills Practiced, Learned and Coached Together	" In Balint group, there is emotion-storming and brain-storming in respect of problematic aspects of doctor-patient encounter experiences...one learns from the others past experiences..new to themselves,...and get impressed by the feelings and attitudes which are working better, which could have helped the doctor to get along some better. I experienced that in Balint group, solutions are not taught, but are perceived inside..we were coached by our colleagues, by one-another ..also we knew the leader was there to keep the right way"
		2–B–2) Perceived As Far More–Empowering Than Lecturing	"Balint group was a moral way to teach morality...experiencing instead of advising and lecturing..much more effective and influential." "..it has been of no use..the way we were used to being taught morality, by trainers whom you had observed being careless about their own immorally behaving toward the patient..a few hours of fruitless lecture..talking no heart-felt words...advising non-truthfully." "..When you receive care about your emotions while you tell about your missed points of care or your faults...you feel faithful toward morality again, gain skills of that at the same time"
	2–C) AMain Neglected Course In Medical Training	2–C–1) The Whole Human–Being Realized As Out –Of–Focus In Medical Educations	"In Balint group, we focused on emotions as contributing in health. The human being is a whole, yet the bodily aspects have been so far the only focus on medical education. Never before we had even had two hours training pertaining to emotion management skills..this has made medicine depleted of its soul, or lifeless." "Medicine disregards human, doctors are viewed as if their body is not vulnerable...then what I noticed after this useful participation, is that our medical education had hardly ever paid attention to the real human-being,..the whole one, neither the patient one, nor the doctor one"

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Theme 2. Exceptional Training Method/Learning Experience

The Balint group participation has been perceived by the participant GPs as providing a unique opportunity for insight gaining and an effective experiential learning tool. They perceived the Balint group as a very different learning school, applying different elements to exert powerful training and to induce insight. To acknowledge the presence of emotions and bodily sensations, inviting them to the center of the trainee's awareness and to give credit to them has been perceived as the unique aspects of training and teaching in a Balint group. Reflecting emotions experienced in different roles of narrator and the listener provide an exercise of communication skills resembling one of a real world.

Such experiential learning has been viewed as an important resource for learning doctor-patient relationship skills in the Balint group. Such a practice has been featured by the participants as a different learning experience, implemented differently, mediated by one's own emotions and perceived as to be more a deep form of learning, influential in one's attitudes toward one's practice. The explanations pertinent to this theme are presented in Table 3.

Theme 3. Emotional Healing for Doctors

General physicians experienced their participation in the Balint group as an opportunity to talk out the common job pressures in a peer group. The commonly discussed pressures in the interviews can be classified to the specific GP's job pressures like being ignored by the therapeutic system, lack of public reputation and being stigmatized as non-expert professionals and identity confusion. Some other job pressures asserted commonly in their interviews were those job pressure generally experienced by both specialist and general medical doctors. Exposure to emergency and heart-breaking conditions, dealing with death, dying, pain and extreme human sufferings as an inherent part of the profession were among the commonly described job pressures. The Balint group was perceived as an experience which increased their awareness of the effect of stress on their body and mind and a reducer of the alarming threshold of stress, which has enhanced they're realizing ahead so that they get more able to figure out a way out of or away from possible crises. Being heard empathetically and gaining support in a peer group was appreciated by the GPs as a soothing and teaching Balint group experience which they perceived as soothing and unburdening job pressures.

Theme 4. Job Morality Inspirations

Participants had shared many moral issues and discussions in their interviews. They experienced their participation in the Balint group as an occasion to get their moral concerns and compliance revisited, their once-dream morality affiliation re-inspired and their disappointments and helplessness feelings in this respect melting out by the peer group support and cohesion. They reflected a feeling of being helped to reclaim for their own moral doctor dreams, affirmative their morality intentions, gain hope, feeling re-inspired and redirected toward morality. Most Balint group participants mentioned Avicenna (980-1037 AD) as a non-escapable role model. Avicenna is the famous Iranian physician of the ancient history of Iranian medicine. He was associated by almost everybody when talking about the doctor-patient relationship for the famous stories of his "healing breath" and "healing hand" which is deep lessons of psychosomatic medicine model of care. He was known by the physicians as a frontier of psychosomatic medicine and bio-psycho-social approach. The doctors also felt the pressure of high standards on their shoulders for the "Hakim" archetype in the public minds. There are many stories of Avicenna and other ancient Iranian doctors in public minds. The model of idealistic doctor human was talked out with all the pride as well as the insufficiency feelings emerged in the minds of the doctors, as well as public demands and high standards of expertise and self-devotedness this Iranian historical doctor character has brought in the Iranians attitude.

Table 4. Theme. 3Emotional Healing for Doctors (Subthemes and quote instances)

Theme	Sub-Theme	Sub-Sub-Theme	Example Quotes
Theme 3. Emotional Healing ForDoctors	3-A) Talking Through The Common Burning-Out Difficulties Of Medical Job	3-A-1) Ventilating Out Job Burdens Including Those of The General Physician Vs. The Medical Specialist	"As a doctor,...you are ever condemned...feel like have been ever the bad,.....we feel under pressure of judgment..up to now; Everybody condemns you for your small and big faults,.Once your teachers in medical school tended to induce a burden of guilt on you…to get every mistake you've done highlighted, then your senior managers do the same in your job...you forget you have also rights, the right to talk...as you ever feel afraid of talking out your rights...avoiding to get your past and future faults bolded and highlighted in return...You feel like being ever-guilty..being the essentially bad.." "...it is an extra-burden, more intolerable, to remain non-seen. Many times I experience lacking identity as general practitioner...to be uncertain about my roles..and to get less appreciated for my expertise....The Balint group was the first room to get ventilated and feel supported for this.."
		3-A-2) A Needed Recovery from Daily Contacts with Death, Dying, Somatization, And Human Extreme Sufferings	"Balint group responds to a real need..as it is inherent to medical job to get repeatedly in touch with pain and suffering of people,..it is burning out. The emotional support is the main need..and Balint group seems like a good way to provide it" "...Personally, I work with many cancer patients..and I was feeling gradually unwilling to their complaints...as my emotions would get painful. In Balint group, receiving emotional feedback and support I feel as get those pains soothed and removed ...I learn about others' feelings in similar situations...I feel it will hurt me less than before...I feel in control of my own emotions...and try to sooth the patients' emotion...needless to get my own painful"
		3-A-3) Bewaring Oneself and one-another aof Job Stress health effects	"… lack of stress management and this is perhaps the most physicians pay by their body and nowhere in the world is accounted … most of the times this is not felt like a burden, that is, we are not aware of or feel such a burden. The physician does his practices in shifts and he does not care about the stress but in 20 or 30 years, stress has its effects on him..." "(Balint group), is actually, sort of stress management exercise,... dampening the job stress, that is, it may bewaring not to let it continuously affect us...as emotions and feelings frequently arise and we do not have control over them and suddenly a sound announces that khajeh (the great man) died (alluding to a Persian proverb referring to the sudden death)" "(Having participated in Balint group), I feel when my heart beat increases I am some more aware...some more intended not to let them affect ..my body. I feel the effect and ....feel I've grown some better in control of it, some more alert and some more able, to manage feelings which arise in my encounters. You know, we have many contacts in our work context which have a negative effect on our bodies …"
	3-B) A Self-Help Guided Group	3-B) Focused peer-talk and peer-support in a leaded group	"Talking to peers you feel to be unburdened, as you are also right in some aspects which you received empathy and support by your colleagues, you feel supported..you are admitted as having been under pressure as well, or you see for the first time..maybe you've been right, not wrong, in the way you'd been dealing in your practice,..and you feel reassured to see you are not the only one under such a huge pressure,.., neither the only one who has had mistakes, this is true about everybody" "The Balint group..helped me, as a less experienced younger physician, to get benefited from the ideas and the expertise of the experienced colleagues.....through sharing ideas and reflecting emotions...it is possible to learn from each other, and to learn skills in a peer support group, to recognize the best strategies...and to feel better..while being somehow supervised" "The Balint group was sort of a vacuous experience of a peer group for doctors, to talk less professionally, more personally, to learn from the commonalities and the differences of feelings on a common experience, and to learn of them, it is a safe shelter to get healed as a doctor...your own need is paid an exceptional attention"

Table 5. Theme 4. Job Morality Inspirations (With sub-themes, sub-sub-themes and sample quotes)

Theme	Sub-Theme	Sub-Sub- Theme	Sample Quotes
Theme 4. Job Morality Inspirations	4-A) Reviving And Revising The Dream Of The Wise–Nice –Doctor	4–A–1) The „Doctor–Perfect" Vulnerable Self–Image Replaced By The Realistic „Human Nice–Doctor" One	""As a doctor,...you are ever condemned...feel like have been ever the bad,.....we feel under pressure of judgement..up to now; Everybody condemns you for your small and big faults,.Once your teachers in medical school tended to induce a burden of guilt on you,..,to get every mistake you've done highlighted, then your senior managers do the same in your job...you forget you have also rights, the right to talk...as you ever feel afraid of talking out your rights...avoiding to get your past and future faults bolded and highlighted in return...You feel like being ever-guilty..being the essentially bad...Balint group sessions help us to see our unhappiness for this is not fair (to be ever condemned and prejudged as bad),..because when you lose your faith in yourself...you forget about the humanistic-hero-doctor you 'd once wished to become..as a doctor...Balint group helped to get morality defined again..this time considering our own needs and limitations too... " "...the idea of the existing hard moral and behavioral standards to get the physicians, nurses, and midwives measured upon,...helped me to show empathy toward... the other's experience of mistakes..also toward my own. I was feeling under the big pressures of my perfectionistic conscience...It helped. me to get it revised...also to unbury the hope to pursue morality ...I could see everybody has had faults and failures, that this is not only about me...yet still I can respect my wish to become a human doctor..a possible one..this is refreshing and hope-inducing...it is a fruit of the Balint group sessions."
	4–B) The Specific Job Morality Challenges Of Iranian Doctors	4-B–1)) Re-Thinking Self-Ideals And Public-Demands Rooted In The Old Iranian Medical Heritage	"...We talked together to conclude...that people's hard expectations of doctors, ethically and scientifically, which are rooted in that they wish you were looking like the doctors in our old legends and ancient medical history... literally to say look like Hakim" "Iranian medical ethics is rooted in ancient times, people tend to view physicians as super-moral human-beings… and it seems that medical practice is only a part of that. The physician is expected to know Hekmat (wisdom) as well and this ...irreversible belief governs to people's minds...as well as to our owns...this imposes a very clear high demand on doctors, and needs our careful attention in doctor-patient relationship,..however, the insight is helpful itself to let me moderate my own hard standards in my mind " "In Iran you are viewed either as all or nothing,..your best efforts would fail as..being compared to the legends of the old age...a doctor who needs no sleep, no money,...,who just cares ,...and knows everything...who never makes a mistake-a Hakim, so godly. ok , so I'd better give up dreaming to be viewed as a good doctor...somehow I should assess my quality from inside me...because you can't impose it to me forever to pretend I am a pasted copy of Avicenna, Razi, ...; talking honestly, ok good information about them and their superior charachter,...yet, leave me to be this ordinary creature, because unless you are a doctor, you'll never ask yourself that if Hakims didn't really need food or sleep...or didn't have any family? like everybody else has; anyway; if they used to eat science and felt well-fed, ok then you may keep calm ...let you know I am no Hakim, I do get hungry, I need food,... and rest ...unfortunately but honestly to say.. "
		4–B–2) Together AWay Out Of The Public Mistrust Against Doctors	"...and I think Balint group participation could be a starting point...to get this public attitude of mistrust to doctors decreased, it could help tthe interactions grow more ethical among medical doctors or in between them and other staff like nurses, midviweres and so on. to decrease the frequency of those conflicts which you see among for example if Balint group..were more commonly held..at least I feel like it could..be helpful in changing the atmosphere of prejudice and hostility against doctors, I mean, at least within the medical settings, it could create a more ethical atmosphere toward physicians...atmosphereconflicts which you see happens there from time to time....to prevent many frictions.." "… I face many prejudices caused by the immoral doings of a few colleagues of my own..when they make the water muddy (Farsi proverb to reflect the mistrust toward all produced by a minor party) in the medical society, it would bring about mistrust flames which burn both the wet and the dry (Farsi proverb to reflect getting both the guilty and the innocent punished)..." "...I see this can be an advantage of Balint group that, …if the faith has been lost or the energy to keep the faith in morality is lost gradually....this can be a start to feel morally strong again to get back to job morality issues...when I talked of a job conflict in Balint group, and was not insulted, condemned …rather was treated a way as perhaps understood ...it made me more re-attracted to the real ethics than when Dr ...to say Dr. Moral comes and shouts at me in front of my patient to claim I've been doing wrong in respect of my patient's rights...in Balint group nobody can lecture empty lessons of morality while they are themselves standing on the safe shore,...otherwise they might be interrupted or may be confronted some late in the same group..Then the message of Balint is"what you do not like for yourself (to be treated like), do not like for others either [An Iranian Proverb]."

Hakim was mentioned by several interviewees as the idealistic figure which shapes so perfectionistic ideals. Hakim is defined as a wise person; polymath scholar figure who is also knowledgeable in medicine, the sciences, and philosophy (28). Hakim is the name of Iranian ancient medical doctors the criteria made by whose public picture would be less possibly within the reach of medical doctors. Participants perceived they have helped each other to realize the burden of perfectionism resulted by their own mind's adaptation to the Hakim ideal picture. Also, they felt a positive restructuring of such historical symbols by not erasing them, but getting their own mental image of such historical figures changed for the really good doctor, indeed changed for the better.

In different ways, everybody mentioned the recent decade public mistrust in Iran against doctors. The underlying factors were discussed spontaneously in the sessions and in interviews as well as reflections of the sadness and shame, of the criticisms toward the carelessly-speaking authorities which irritate people and a cause and effect general discussion featured the participants' experience of ventilating out their sorrows and concerns of the public mistrust. They tend to discuss how to change this for a public trust as a description of their experience of mutual sharing and working through the social problem's doctors are facing with. They believed that this distrust has harmed all physicians, therapeutic system, and patients. They emphasized they believed that the emotion-ridden mutual empathy and synergistic power of understanding in Balint group as to be potentially a unique opportunity to make a common consensus to solve such social conflicts. Table 5, shows the Theme four along with its subthemes, and quote instances.

Discussion

At the beginning of the study, the proposed important questions were "what does Balint group mean for Iranian physicians?" or "Is Balint group just an unsuitable costly processor is it, conversely, something that can satisfy the needs and resolve the problems in Iran's health system?" Having conducted the research study, the experiences of the participants indicated that Balint group is helpful and needed for Iranian physicians.

Hesitancy, annoyance, reluctance, and discontent were repored by three of the participants in the first three sessions of the Balint group and to be gradually replaced by trust and feeling safe. After the last Balint group session and in the focus group session, the group expressed hope the regular sessions of Balint group could be held. As well as an emergent need, specific considerations might be relevant to the Balint group establishment in Iran (Malekian, 2015).

In respect to the contents of the participants' experiences, the results were very similar to those of other studies so far published. Minor particularities and major similarities were found between the participation experience as portrayed by Iranian physicians and by physicians of other countries.

Physician participants reported their increased affiliation to, interests in, and skills in building a good doctor-patient relationship – the same experience that were observed in other researches (Clark, Lipkin, Graman, & Shorey, 1999; Matalon, 2013, Van Roy Vanheule, & Inslegers, 2015, Kjeldmand, & Holmstrom, 2008; Johnson, Nease, Milberg, & Addison, 2004, Samuel, 1989). Moreover, they explained that the burden caused by their job pressures decreased in the course of attending the Balint group; It is suggested that it would lead to decreased job burnout which was reported in other studies (Kjeldmand, & Holmstrom, 2008; Rabinowitz, Kushnir, & Ribak, 1996; Zalidis, 2019; Isfahan Psychosomatic Research Center, 2017).

On the other hand, participants reported the increase in their attending to the importance of ethics in medicine and that this attentiveness is likely to improve both doctor-patient relationship and public

attitude of the society toward physicians which consequently decreases the psychological load on physicians.

Left from the ancient Iran of Avicenna time, there is an idealistic picture of Hakim physicians in the minds-picture of an omnipotent human, a master of math and ethics as well. Such perfectionistic ideal had extended their root to today's beliefs of Iranian patients and somehow those of physicians (Davidian, 1995). This view implicates a relatively high social status on one hand and implies psychological pressures, excessive demands and hard standards on the other. Furthermore, in recent years, physicians are being increasingly criticized in the mass media (TV, news broadcast, social networks, etc.) This has led physicians and health delivery system to face challenges. Considering participants' experiences in the Balint group, Balint group may increase physicians' attention to medical ethics with respect to doctor-patient relationship on one hand and creates a supportive shelter and a room to figure out solutions as well as to replace the failing idealistic self-image of "the good doctor" with a realistic one. This may be a step toward patients' trust to physicians as well as physicians' satisfaction and ability to approximate their own ambitions and dreams of eing a moral human-being and a good doctor.

It may be implied from the findings that the theme "Job morality inspirations" through taking part in the Balint group is more notable than what was reported by other studies in other countries. Probably this reflects some particularities of Iranian social, cultural, and economic contextsof medical profession in Iran.

Another noteworthy and important feature which was obtained from participants' experiences was uniqueness and newness of what they had experienced and learned in the Balint group. They explicitly exclaimed that never-before they have had such experiences of direct attention toward their own emotions and those of their patients. They found the Balint group as the unique opportunity to express and share them with their peer colleagues in a safe and non-judgmental environment unlike any other experience throughout their seven years of general practitioner education (in theoretical, practical, and clinical training) and also during their professional career so far as a physician. They also mentioned that it was an exceptional occasion of gaining doctor-patient communication skills, and an isolated experience of breathing in the different atmosphere ofthe integrative medicine and humanistic approach to the patient.

It appears that through Balint group participation physicians perceive to gain more insight into the value of human relationships in practice and acknowledging emotions and feelings in the doctor-patient relationship. It might be an insight which basically affects one's view of being a therapist. The experience of Balint group participation can induce an attention shift from a pure biomedical model of care to a more integrative and humanistic model of care.

It seems that Balint group in Iran can be valuable and effective as well as of particularities in Iran unique economical, social and cultural context. Regarding the observed inclination of participants to talk about the health system problems in the held Balint group, further researchers might be needed to design Balint groups with particular aspects to offer the participants the opportunity to think and talk more elaborately about the social problems affecting physicians and patients in the health system.

Seeing a more widespread view, developing Balint groups is a basic need in Iran's health system since the pure biomedicine is the prevailing approach to medical education and to patient approach Iran. The lack of a referral system, the patient's direct approach to specialist doctors for minor health condition, excessive use of paraclinical measures and drugs in Iran, the

widespread discontent and confusion among patients (and the job dissatisfaction and the role incertainty among general physicians seem to be directly relevant issues to Balint group development in Iran. The output of this condition, most of the time is an insufficient improvement of the patient, increased confusion of the patient, emergence of a vicious circle, and increased imposing of a pointless financial burden on the patient and health system. Lack of a sufficient and right system for referral, non-mediated availability of specialists, bypassing the general practitioners, disbelieving family medicine in village areas and small cities, and its non-availability in big cities aggravate this problem.

Limitations: We admit there are certain limitations in this study. The sameness of the interviewer and the Balint group leader which could have increased the probability of self-inhibition and self-censorship in interviewees. Also, it could have been a potential bias factor to direct both the data collection process and the analysis process toward the interviewer's preferences. Generally, of course, in qualitative studies, the observers' presumptions are never denied or ruled-out, rather they are tried to be identified and admitted as part of the reality version. Bracketing method was applied not only to admit the contribution of such a factor in the described version of reality of this study but also to increase the leader's awareness toward and their mind-availability of their preexisting assumption in order to enhance their intentionality to keep open toward the different ideas. No ongoing Balint group was found as already established, held on a regular basis and membered by Iranian GPs. Therefore the study was sampled by a group of GPs who were purposefully assigned as the participants of the Balint training group of this study. Participants participated in a few sessions of Balint group trial before their participation experience was studied. As a result, both the researchers and the Balint group participants could have been viewing the Balint group sessions as a prerequisite for an anticipated study. This fact could potentially impair the neutrality of participants' experiences and those of the leader's observations, the interview direction and the analysis presumptions (as the leader was also the interviewer and a member of the analyzing team). Moreover, if available, a larger sample size of participants of different longer-duration Balint groups of GPs could have resulted in a more generalizable data. However, qualitative studies are not generally generalizable. Moreover, no ongoing Balint group had been already established for Iranian GPs. Therefore, we believe that this is the very first preliminary study on Iranian GPs participation in Balint group and is, therefore, a valuable first step to get further Balint groups held for Iranian GPs and further related studies developed in Iran.

Conclusion

Balint group has a specific place in psychosomatic medicine as a patient-centered care approach (Matalon, 2013; Blazekovic, 2003) It can be at least art of a remedy to the public mistrust crisis toward Iran's health system (Malekian, 2018).

At the end, it is worth mentioning that although a decade has passed from first presenting of the Balint group to the Iranian physicians in the first psychosomatic congress in 2007 in Isfahan, Iran (Isfahan Psychosomatic Research Center, 2017; Cooperation Germany/ Iran, 2017), Balint group is unknown to most physicians and even to psychiatrists. Developing training programs on Balint groups to train proficient leaders and doing more research studies is clearly encouraged by the findings of the current study.

Conflict of Interests

Authors have no conflict of interests.

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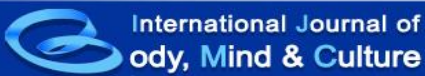

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Using Hypnosis to Explore Subconscious Childhood and Early Adulthood Emotional Traumas and Situations Predisposing Towards Adult Refractory Obesity

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Qualitative Study

Abstract

Background: It has been suggested that many participants in weight management programmes are unable to achieve the permanent emotional and psychological changes necessary for long-term weight loss maintenance because of their having unrecognised, unresolved childhood food, eating, or weight associated traumas that continue to influence their adult eating habits and body self-image, and impair their weight reduction efforts. Hypnosis is now accepted as a valuable tool in the management of many chronic clinical conditions because of its efficacy in producing remedial behavioural change in individuals with seemingly intractable health problems. Hypnosis would therefore seem to be an ideal tool for identifying and resolving possible childhood obesogenic subconscious agendas, and in helping individuals with refractory obesity to minimise any recidivistic weight regain.
Methods: Seven participants with refractory obesity agreed to undertake a series of regression hypnosis sessions designed to allow them to search for childhood and teenage experiences that might be contributing to their current inability to lose weight.
Results: During their hypnosis sessions, each of these participants was able to recall childhood or early adulthood memories of emotional traumas or parental disharmony, which resulted in their making aberrant decisions at that time about their food preferences, eating habits, or their chosen body image. These episodes had subsequently become subconsciously internalised, but had gone on to have a significant and lasting, detrimental effect into their adult years, leading to their subsequent adult obesity.
Conclusion: This study has shown how covert, long-forgotten childhood emotional experiences can play an aetiological role in refractory adult obesity. It has also demonstrated the cathartic role of regressive, exploratory hypnosis in bringing to light such unresolved traumas in order for them to be discharged, and thereby, in facilitating future efficacious weight loss management.
Keywords: Hypnosis, Obesity, Childhood emotional trauma, Case studies

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Introduction

Obesity – the nature of the problem: The World Health Organisation (WHO), in their lengthy report of 2000 (WHO Technical Report Series No. 894), highlighted their fears of a global epidemic of obesity and how this might be prevented. The subsequent wealth of publications and of national and world statistics all attesting to the scale of the growth rate in obesity has reaffirmed the percipience of this report. Obesity has indeed become an increasing problem throughout the western hemisphere (Flegal, Kruszon-Moran, Carroll, Fryar, & Ogden, 2016), such that the Organisation for Economic Co-operation and Development (OECD) recently cited USA, Mexico, and England as the countries currently with the highest rate of adult obesity, with projected levels of obesity for 2030 of 48%, 38%, and 35%, respectively (OECD, 2017).

Despite the best efforts of governments, public health and primary care agencies, and commercial weight management clinics, current approaches towards managing acute obesity and chronic refractory overweight have only had limited success for many individuals and groups of people (Lean & Hankey, 2018; Cleo, Glasziou, Beller, Isenring, & Thomas, 2019; Varkevisser, van Stralen, Kroeze, Ket, Steenhuis, 2019). It would seem that standard weight management algorithms with their pedagogic focus on diet, exercise, and lifestyle advice, for many individuals, do not have the power to modulate food and eating habits and customs. Psychological therapies such as cognitive behavioural therapy (CBT), counselling, meditation, and lifestyle coaching are frequently recommended as adjuncts to standard weight and exercise protocols. However, the efficacy of such approaches in promoting the permanent emotional and psychological change necessary for long-term weight loss maintenance, and in reducing recidivistic return of weight previously lost remains unclear (Gurgevich & Nicolai, 2014; Volery, Bonnemain, Latino, Ourrad, & Perroud, 2015; Entwistle, 2016; Bo et al., 2017; Milling, Gover, & Moriarty, 2018). It would seem, therefore, that the time has come to look again at ways of maximising the potential of hypnosis in tackling this major health reducing and life-threatening problem.

A brief history of the use of hypnosis in weight management: A review of publications between 1950 and 2000 on obesity management using hypnosis concluded that most reported trials showed little or no benefit from the use of hypnosis as a weight-reducing tool. These studies generally involved small numbers of participants or individual cases and were rarely randomised, placebo-controlled studies with any long-term follow-up (Entwistle, Webb, Abayomi, Johnson, Sparkes, & Davies, 2014). Most published studies employed motivational approaches, predominantly of a socio-cognitive or authoritarian nature, employing combinations of suggestion, aversion therapy, anxiety reduction, and pedagogically delivered imagery designed to change habits and societal attitudes. It is not surprising therefore that, in the face of such poor results, hypnosis fell out of favour after 2000 and there was a subsequent dearth of academic papers on hypnosis in obesity management, despite the growing need for solutions to this major health problem (Entwistle et al., 2014).

It has been suggested that the poor performance of hypnosis in many of these early studies, as well as the recidivistic weight regain regularly reported in current weight management programmes might both be the result of the same phenomenon. That is, some individuals, who experience long-term, seemingly intractable obesity and regularly regain any weight they do lose, do so because of their having subconscious unresolved childhood emotional situations or traumas associated with their early food, eating, and body weight awareness (Entwistle et al., 2014). Such experiences have

left them with embedded obesogenic agendas that continue to echo throughout their adult life rendering these as aetiological factors for their adult overweight and obesity. These unrecognised subconscious imperatives are responsible for both their becoming overweight and obese, and for the difficulties they then have in losing this weight and successfully maintaining their weight loss after participation in weight management programmes (Entwistle, 2014).

In this situation, hypnosis when undertaken from a sociocognitive standpoint would very likely have only a limited efficacy and be little better than conventional non-hypnotic instructions for change. Until any such childhood obesogenic issues are identified and resolved, the obesity problems of many such individuals will continue to have only a limited response to simple pedagogic algorithms, as their deleterious subconscious agendas will continue to oppose such change and any resolution of their obesity. This paper describes the author's novel, case study use of an exploratory hypnotherapy approach, which was able to elicit and identify early life events, and emotional associations that appear to have been instrumental, in part at least, in engendering adult refractory overweight in a selected group of individuals. Only when the participants in this study were able to see and understand the impact that their childhood experiences had had on the development of their eating and weight problems, could they begin to deal with this effectively.

Methods

Study design: This was a multiple case, single system research study utilising a self-selected cohort of individuals with long-term overweight or obesity problems that had proved refractory in previous, commercial, National Health Service (NHS), or self-devised weight programmes. Participants with recurrent recidivist weight regain were particularly welcomed in this study. Participants needed to understand the premise of the study, that it was not just another short-term weight reduction program, but was an investigation into whether their obesity problems could be the result of their having unsuspected and unresolved childhood food and eating related experiences with which they needed to deal. The study would also determine whether hypnosis could be an effective way of exploring this possibility and, in doing so, helps them in their future weight losing efforts.

Participant recruitment and preparation: Participant recruitment for this project was through an email circulation across the university campus and by opportunistic word of mouth. The email poster gave brief details about the project and the inclusion criteria for participating. These were principally that participants be over 18 years of age, have a history of being unable to achieve a sustained reduction in their weight after having participated in more than one weight management scheme, and have exhibited a BMI greater than 25 over the past five years. Current active treatment for severe physical or mental health conditions was regarded as an excluding factor for this project. Ethical advice and approval for this study was obtained from Liverpool John Moores University Research Degrees Committee (Reference SIS no. 514041).

After being first approached by the researchers, all volunteers were given the opportunity to discuss the project either in person or on the telephone and were then given a copy of the participant information leaflet, an extensive six-page document describing the project. The information leaflet also described the various stages of the project with approximate timescales for these stages and the need for an audio-tape record to be made of all of the interviews and conversations that the researcher and the participants would have together. Those volunteers who wished to continue further were invited to discuss the project in more detail in a more formal face-to-face interview

Table 1. Participant recruitment and outcome

Stage Attained	Reason for not Continuing Further	n
Initial enquiry only	Not appropriate	2
	Too busy	4
	None given	2
Completed forms	Too busy	2
Attended interview	Family illness	1
Left programme before commencing hypnosis	Personal health problems	2
	Family bereavement	1
	Work pressures	1
Left programme after commencing hypnosis	Personal health problems	1
Total number of enquirers	-	22
Participants included in this study	-	7

with the researcher, at which point they would have the opportunity to ask further questions about the project and in particular about hypnosis itself.

In total, 22 individuals (20 women and 2 men), with self-admitted overweight problems, made initial enquiries and obtained further oral and/or written information, but as table 1 illustrates, most of these chose to withdraw early in the process because of personal circumstances, despite their initial interest in pursuing this approach to managing their weight problem. This left seven female participants none of whom had had any previous personal experience of hypnosis, and who went on to sign their formal consent form and take part in the project.

Table 2 gives some brief demographic details of participants and the number of sessions each was able to undertake. Each of these participants had a long history of refractory obesity associated with recidivistic weight regain on more than one occasion.

Participants were given the choice of where they preferred their hypnosis sessions to take place, in their own homes or in a different setting, and most opted to be seen at home. Hypnosis sessions always began against a soothing background of relaxation music. Participants were not required to talk whilst in hypnosis, as it was felt that this might lighten the degree of the trance state experienced, but were instructed to allow each particular visualisation to progress uninterrupted. On occasions however, an ideomotor signal was used to monitor the progression of the visualisation. During their hypnosis sessions, participants were observed closely in order to detect any physical changes that might suggest that they were having an emotional reaction.

After each session, once they were fully awake, the participants were quizzed about their memory of and overall experience of the session. They were asked about how much of the particular visualisation they could remember and how vividly they had been able to picture their safe place. They were also asked whether there was anything about this session that was different from their earlier sessions, or that was not as they expected it to be.

Table 2. Participant demographics

Reference code	Age	Height in metres	Weight in kilograms	BMI	No. of sessions
01	47	1.60	106	41	3
02	57	1.57	102	41	12
03	50	1.60	104	42	16
04	40	1.60	92	36	20
05	27	1.65	84	31	15
06	41	1.73	89	30	10
07	44	1.57	68	28	10

BMI: Body mass index

The participants were asked if there had been any pictures or memories that had come into their head during their visualisation that had surprised them, and about any unexpected emotions or feelings that they experienced during the session. Both sides of this conversation were recorded verbatim using a BBC quality Olympus DM670 hand-held recorder for subsequent transcription and analysis.

Immediately before each subsequent session, participants were given the opportunity to reflect upon how they had felt since their previous session. This included discussion about any unexpected emotional ups and downs they had experienced in the interim, any surprising and spontaneous changes in their behaviour, any flashbacks, recurrent memories, and ruminations over events and people from their past. Participants were encouraged to talk about any changes they had noted in the extent and content of their dreaming and about how they would interpret such dreams. All such pre-hypnosis conversations were recorded and transcribed verbatim for comparison with participants' previous and subsequent hypnosis remembrances.

After each hypnosis session, the researcher had a brief final conversation with participants immediately prior to their leaving to confirm that they were completely out of hypnosis and fully re-associated. This was important in order to minimise the risk that they would remain in a state of so-called "alert or awake hypnosis" (Alarcón & Capafons, 2006; Wark, 2011; Crabtree, 2012), especially if they were driving themselves home.

Induction of hypnosis and choice of visualisation and regression scripts: Hypnosis induction always began with focused abdominal breathing and progressive muscle relaxation followed by the participant descending ten steps down into their self-chosen "safe place". After being talked through the particular visualisation session, the session would be concluded by the participant returning up their ten steps back to full awareness, noticing as they did whether their steps had in any way changed as a result of their visualisation.

For the present study, the specific hypnosis scripts employed for exploratory and analytical hypnosis sessions were the author's personal adaptations of some well-established approaches as suggested by Wolberg (1948), Hartland (1966), Erickson (1980), Gibson & Heap (1991), Hammond (1990), Heap and Aravind (2002), and Brann, Owens, and Williamson (2011), and the author's professional training association, the British Society of Clinical and Academic Hypnosis (BSCAH). Although it is possible to derive highly specific hypnosis scripts using a "Delphi" approach (Arnon, Brodsky, Matter, Attias, Ben-Arye, & Schiff, 2017), it was felt preferable to employ familiar scripts that the author had modified, honed, and personally tested over 30 years of hypnosis practice, and which had been specifically re-phrased to suit the needs of this particular study. In total, they comprised two generic problem searching and solving scripts, four regression scripts (the "Corridor", the "Diagnostic Scan", the "Magic Carpet" timeline, and the use of the word "BACK" as a trigger-word), six individualised ego-enhancement and lifestyle modifying scripts, an ideomotor establishment script, and a habit modifying/reframing script. These are all described in detail elsewhere (Entwistle, 2016).

Each hypnosis session was followed by a discussion, which was tape-recorded. A further appointment was then agreed upon with the participant and they were reminded of the need for them to keep a record of any unexpected emotional or behavioural change or of any seemingly significant dreams or dreaming occurring in the interim.

Results

General observations about regression hypnosis in this study: The number of hypnosis sessions undergone by participants in this project varied from three sessions to twenty sessions according to the availability

of the participant and their personal and family commitments. There was also a wide variation in the length of the pre-hypnosis and post-hypnosis conversations ranging from only one or two minutes to 30 minutes. On occasions, there were significant telephone conversations and text messages were exchanged with participants between their planned hypnosis sessions. Recording and transcription of all such conversations and other communications between participants and the researcher were undertaken as carefully and as comprehensively as possible in order to record and retain all the nuances of the conversations and interactions. In this way, it was hoped to portray an accurate narrative record of each participant's personal hypnosis journey of discovery, and of their response to the overall hypnotic invitation to "go back to times and events, people and places, feelings and emotions which are in some way linked to your present problem".

Irrespective of the number of sessions for which they were able to attend, all participants in this study made significant discoveries and connections relating their childhood experiences to their current adult obesity. Regression hypnosis proved to be a powerful means of illuminating the long-term impact that specific traumatic childhood experiences can have on subsequent adult eating patterns and on the choice of body size and shape. All seven of the participants spontaneously recalled long forgotten childhood episodes, events, relationship problems, and emotional traumas, which they remembered had at the time become powerful influences on their childhood attitudes towards food, eating, or their childhood body shape and size.

These recollected past memories, as they came flooding back, felt very painful, and were frequently accompanied by strongly emotional reactions as the individual participants' realised how much they had been holding on to these feelings from their past. They recalled very powerfully the anger, fear, and sadness at the decisions that they had felt forced to make during their childhood and teenage years about their food and eating. Only during their hypnosis sessions did they realise with surprise that they had internalised these feelings to the extent that they subsequently had become subconscious raisons d'être for their adult obesity.

From the many hours of recorded discussion with participants, there is only room in this paper for a brief overview of the childhood family and domestic experiences, traumas, and events that participants' realised during their hypnosis sessions were still influencing their current eating habits and body image. A more comprehensive and verbatim account of participants' childhood experiences as recalled and recounted during the course of their hypnosis sessions is being prepared for publication elsewhere. However, the following extracts will give an indication of the range of childhood experiences that can adversely affect the subsequent development of a healthy adult body weight and shape. This will indicate the great potential of regression hypnosis in elucidating the aetiology of refractory obesity.

The Impact of Childhood Experiences on Adult Obesity: With the use of "state" regression hypnosis, it was possible to identify three distinctly separate decision-making processes that participants had employed as children in response to their specific aberrant childhood emotional and social environments. Because of their pervasive nature, these initially pragmatic decisions had become internalised and gone on to become a part of their adult subconscious agenda, their "storied bodies and storied selves" (Sparkes, 1999) that came to determine their future eating habits and/or their adult body size and shape.

Type One Effects: For three of the participants, parental attitudes and habits surrounding food and dietary choices had had a direct impact on participants' own understanding of food and eating, leading them as children to adopt poor or

inappropriate food choices and eating habits, which they maintained into their adult life.

Participant 02's hypnosis session immediately took her back to her father who was an inveterate meat eater. In regression, this participant relived childhood episodes when she was forced to eat offal, pig's heads and feet, and the like. "I used to stand there crying, thinking of the poor animal, and began to hate eating any of the food". She became very distressed at the killing of animals for food, and instead chose to live on a diet of junk food and chocolate, which then became the norm into her teens and adult life.

Participant 04 was a teenage mother with little knowledge of what constituted a healthy, nutritious diet for herself, her partner, and her baby, and no mother to guide her. All she knew was that babies needed to put on weight, and that husbands needed "feeding up". As a result she was "panicked into choosing cheap, sugary, easy foods, for my baby, myself, and him", and developing a very complicated, confused, and guilty attitude towards food and food choices. Participant 06 recalled being always hungry as a child as her parents did not provide suitable meals, "I was constantly hungry, and constantly looking in cupboards for food…searching around the house for anything to eat". Starting in her childhood, therefore, and continuing into her teens and as an adult, she hoarded food and binged on comfort food, especially biscuits and chocolate, whenever she could.

Type Two Effects: Three of the participants became aware of how their childhood and early adult experiences had resulted in their making conscious decisions at that time to allow themselves to develop an overweight or obese body weight, size, or shape. These decisions had then become internalised and were never reviewed or updated, and hence, continued to influence and determine their choice of body weight, shape, and size into their adulthood.

Participant 07 was surprised at how distressed she became during her early hypnosis sessions when she recalled being 11 years old and the boys teasing her constantly in her school because she had developed a large bust, which contrasted sharply with her otherwise very slim body. "I absolutely hated anybody looking at my figure, 'cause I felt like they were being vulgar". She remembered frantically over-eating to put on weight to disguise her bust. She later recalled being physically abused by her father and then later by her first boyfriend, and how this reinforced the need and her efforts to become, and to stay, big and heavy to withstand this abuse. Two other participants, 06 and 04, powerfully recalled during their hypnosis regressions, how they had chosen as very young teenagers to become obese as a means of avoiding unwanted sexual approaches. It was cathartic for both of them to realise that this decision had continued to influence their adult life, as it explained the self-blame, the reluctance, and even fear that they had both always felt as adults at the thought of losing weight.

Type Three Effects: Four of the participants realised for the first time during their regression hypnosis sessions, how their past adverse emotional environment had led them, unawares, into their becoming overweight, in order to use this obesity as a self-defence, self-punishment, or substitute for a perceived lack of love. Effectively, their excessive body weight had become a protective psychological carapace (Type Three Effects).

Participant 01 had become overweight soon after she was adopted into a difficult family environment. She recalled powerfully in hypnosis, how she felt unloved and unwanted by her adopting parents as well as by her birth mother, and that as a child she could not understand why no one could love her. Although not initially overweight at the time of her adoption, in hypnosis she remembered deciding as a child that if she became a "fat child" this would be a more emotionally acceptable reason for her being unlovable rather than her simply being a "not

nice person". Participant 02 realised during her hypnosis sessions that she "needed" to hold on to her weight as she was still in mourning for lost family members. If she lost weight now, "how would they recognise me".

During her "magic carpet" fly-by of her life, participant 03 was able to see clearly how her weight had fluctuated since developing self-esteem problems at six years old, increasing at times of school stresses and bullying, and professional problems, then normalising at good times in her life. For this participant, her weight and large body had become containment for her poor self-esteem, and most recently, a subconscious device for distracting other's attention away from the "inadequate" person she felt herself to be inside.

Participant 05 had put on a great deal of weight in her early teens for which she had been made to feel culpable and guilty, especially by her GP practice. Only after many years of increasing obesity, was her weight problem discovered to be the result of an undiagnosed hormonal condition. This was duly treated and her weight became more easily controllable, until that is, she needed to lose weight in order to try for a much-wanted baby, when her weight once more became a problem. During her hypnosis sessions, she became aware of how much guilt she retained from her teenage years of being overweight, and how she was punishing herself now by letting her weight become a barrier to her becoming pregnant. She realised that "I do constantly blame myself … that it's my fault that I put weight on … I realise now that is what I am doing, blaming myself yet again."

Discussion

Using hypnosis as an exploratory tool in refractory obesity: This project was not in itself directly aimed at engendering weight loss in the participants involved. Rather it was designed to help these participants explore their past childhood and early adulthood to ascertain whether they could identify any long forgotten unpleasant events and traumas which might have become adversely associated with their food or eating habits or with their body weight or shape. The premise of this study was that decisions made during such turbulent times could be continuing to play a part in these participants' adult lives, and have an aetiological role in their overweight situation by actively impairing their ability to achieve effective and sustained weight loss as adults. In discovering, understanding, and resolving such subconscious agendas, participants could be empowered into developing effective mechanisms that could help them change this situation for the future.

All seven of the participants in this study found that they were able to go into a hypnotic trance very readily right from their very first session which surprised them greatly. It would appear that for this highly self-selected cohort, the decision to volunteer into this project was intuitive, and that it was prompted as much by their *unconscious* as by their *conscious* mind. The researcher's experience of working for many years with patients and clients seeking hypnosis or counselling has seemed to indicate that there is a time and tide for subconscious decision-making and processing in hypnosis, counselling, and similar therapies. This it is that triggers the sudden desire and the drive to seek help, rather than other, more obvious conscious and pragmatic motivations.

Veracity and internal validity of hypnotic regression data: Questions naturally arise about the validity of participants' revealed and recounted narratives, especially in the light of the limitations widely expressed by many regarding the credibility of hypnotically revealed memories (see: Brown, Croft Caderao, Fields, & Marsh, 2015; Mazzoni, Laurence, & Heap, 2014; Patihis, Ho, Tingen, Lilienfeld, & Loftus, 2014; Scheflin, 2013; Entwistle, 2016; Entwistle, 2017). No formal attempts were made to corroborate the revealed "facts" about participants' earlier life or childhood that appeared as part of these evoked narratives.

Such corroboration would be hard to obtain, partly because of the length of time since these recalled episodes had occurred, and partly because they would not at the time have been seen as singularly dramatic or historically significant enough events to have been noticed or commented upon by other family members or friends.

Nonetheless, throughout the generation of these participants' ethnographies there was sufficient innate evidence pointing to the validity and veracity of the events and emotional connections being evoked in hypnotic regression. Such evidence came from several directions. First, there was an internal coherence about these narratives, once the whole story was revealed in its entirety. This was so even if the route to these revelations was circuitous and of a surreal "Alice in Wonderland" nature. It is true, as Smith and Sparkes (2002) have discussed, that the seeking for coherence is a common feature of all personal and therapeutic narratives and can often merely reflect the needs of the storyteller rather than constituting absolute proof of veracity. Nevertheless, there was an iterative nature in the way that sessions repeatedly and spontaneously returned to the same chronological age or geographical place or emotion until a given traumatic episode had been resolved – and not until.

The emotions expressed and released during sessions appeared subjectively and objectively very genuine, and were often accompanied by that "eureka" feeling, that what had now been disclosed by the participant's *unconscious* mind should have been clear to the participant's *conscious* awareness all along, and over all of the intervening years. Frequently, the visualisation as planned by the researcher was "hijacked" by the participant's unconscious mind that had other plans for that session. Often what was visualised in a given session made no sense on its first play, but only became clear on subsequent replays, a process difficult to reproduce or fabricate consciously and deliberately. Between their sessions, participants frequently experienced emotional "ups and downs", often accompanied by flashbacks, vague memories and significant-feeling dreams, all of which could only be best explained as the signalling of subconscious processing and change (Fillion, Clements, Averill, & Vigil, 2002; Pennebaker, 1997; Brann et al., 2011).

The majority of the events surfacing during participants' hypnosis sessions were ones that the participants could have consciously remembered if prompted. However, what was discovered through hypnotic regression was the connection between these childhood experiences and the consequent decisions made at the time, and the participant's current adult weight and eating problems. These connections constituted part of these participants' inner narrative, and as such, their obesity had become part of the structural interrelationship between mind and body, between the subconscious and the conscious, their "storied bodies and storied selves" (Sparkes, 1999).

Conclusion

What has been highlighted by this study is the value of hypnotic regression in identifying the degree to which parental and other adult carers' dysfunctional relationships and behaviours with their children can influence, albeit unwittingly, these children's future relationship with food, eating, and body self-image. In addition, hypnosis was able to reveal the impact of aberrant child rearing practices on children's ultimate adult resilience, motivation, and self-confidence.

The guilt that most of these participants discovered within their self-examined past, and which they realised they had held onto from their childhood or teenage years, would seem to have been placated by the compensatory comfort of food, so that their eating was being triggered more by emotional than physiological signals. Clearly,

closely associated with this guilt in these participants' narratives was the development of adult poor self-worth, and low resilience and ego strength (Karasu, 2012; Moore & Cunningham, 2012; Wang, Wu, Yang, & Song, 2015), all of which would have made them more vulnerable and susceptible to stressors (Kradin, 2012).

Hypnosis has a dual value in ameliorating this situation, first, by its facility to allow the exploration, discovery, and resolution of these past, but still on-going, deleterious processes, which is in itself therapeutic and healing. Second, hypnotic visualisations can expedite a rebuilding of self-worth, resilience, and ego strength by allowing individuals to seek out lost and misplaced core skills and qualities in order to reclaim them and be able to generalise them for use in their present and future lives. This self-empowerment and the letting go of guilt by making peace with their childhood traumatic past are vital steps to becoming a stronger and more resilient person, who is then able to understand and change the nature of his/her eating behaviour.

The unravelling of such childhood emotional and psychological connections and attributions can be difficult, time-consuming, and painful. This is a role for which a "state" dissociative hypnosis approach, rather than the more usually employed motivational "non-state" socio-cognitive option, would appear to be more appropriate. Hypnosis undertaken in this manner can facilitate the externalisation and objectification of our past and troubled histories in a way that enables a clearer understanding of the otherwise fruitless internal and internecine battles that we all have in our heads and in our minds.

Conflict of Interests

Authors have no conflict of interests.

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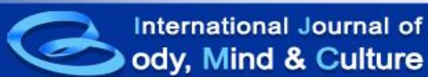

Cross-Cultural, Interdisciplinary Health Studies

The Effect of Cognitive-Behavioral Stress Management Training on Psychological Health and Stress among Parents of Mentally Disabled Children

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Quantitative Study

Abstract

Background: This study aimed to investigate the effect of cognitive-behavioral stress management training on the rate of psychological health and stress. It explored the effect of different methods of coping with stress. It also examined the effect of the stress management training program on stress reduction in parents with mentally disabled children.

Methods: The parents of mentally disabled children in Rafsanjan city, Iran, (2 health centers) filled out Harry's stress inventory (HSI) and the General Health Questionnaire (GHQ). Sixty couples with the highest score were selected and randomly divided into 2 groups. The experimental group passed the stress management course in 6 sessions for 3 weeks in the rehabilitation center. The control group received no treatment. After the last session and 1 month after the last session, the two groups completed the two questionnaires again. Data were analyzed using analysis of covariance (ANCOVA) in SPSS software.

Results: There was a significant difference between the pretest and posttest mean scores of stress in the experimental group ($P < 0.001$); however, this difference was not significant in the follow-up test ($P > 0.659$). The mean score of psychological health differed significantly between the pretest and posttest in the experimental group ($P < 0.001$); however, this difference was not significant in the follow-up test ($P > 0.646$).

Conclusion: Training helps the mothers of mentally disabled children better understand themselves, identify their strengths and weaknesses, find themselves, and commit themselves to improving their weaknesses and developing their strengths. Consequently, they can better accept realities and reduce their psychological stress.

Keywords: Mental retardation, Stress, Psychological Health, Training, Cognitive-behavioral therapy

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Introduction

The birth and presence of a mentally disabled child in a family is an undesirable and challenging event resulting in depression. The parents of mentally disabled children may face economic and social problems, the majority of which are destructive (Smith & Yang, 2017). This condition is harmful to

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families owing to a decrease in psychological health and an increase in challenges and problems. The results of the study by Verdugo, Navas, Gomez, and Schalock (2012) indicated that the parents of these children use inappropriate methods that are harmful to mental health. Studies have reported a higher prevalence of depression and anxiety among parents of mentally disabled children compared to mothers of healthy children (Bourke-Taylor, Pallant, Law, & Howie, 2012; Moyson & Roeyers, 2012). The harmful effect of the presence of a mentally disabled child on a family and a mother depends on different factors including the type and intensity of retardation and disability, gender, the rate of support present in the family, and the engaged individuals’ traits (Townsend-White, Pham, & Vassos, 2012). In this regard, some findings revealed that the fathers of mentally disabled children feel less proud since they think that it is the result of their sin, and thus, they do not participate in bringing up their children. Children with severe disabilities need more attention and service; therefore, some studies have gone beyond psychological problems (Brown, Hatton, & Emerson, 2013).

Moreover, parents have other responsibilities respecting their other children and should answer their family’s needs. All the stated problems can lead to stress in families and mothers, and weaken the relationship between a mother and her child (Dahan-Oliel, Shikako-Thomas, & Majnemer, 2012). These families should be familiar with behavior-action management and be able to solve the abnormal and behavioral problems of their children since the challenging behaviors of children with particular needs are more intense than that of healthy children (Hu, Wang, & Fei, 2012). These parents experience depression, grief, and psychological bafflement. Gender studies emphasize training and informing as the first step to helping these parents. Cognitive-behavioral training methods and the development of a support system for families with such children can prevent part of parents' grief (Havercamp & Scott, 2015) and increase the indices of psychological health promotion, family health distance, family stress promotion, social acceptance, and the adaptation of mothers' community.

Training the use of modern methods instead of previous inefficient methods can ensure the psychological health of these parents (Jones et al., 2012). The cognitive-behavioral approach challenges inappropriate attitudes and perspectives. Thus, strategies can be defined to change the parents’ attitudes and beliefs towards their endangered children through training them inner dialogue and problem-solving methods in order to improve their social behaviors and increase their positive correlations. It is supposed that this issue informs people about their inner behaviors so that they can substitute them with healthier ones. The behavioral stages have been designed to help parents and children improve their improper behaviors and preclude any sense of rejection or harm in the children. Thus, this strategy is employed to change the parents' nursing method, manage the child's behavior, and provide suitable answers to the child's questions (Vohra, Madhavan, Sambamoorthi, & St Peter, 2014).

A study conducted on the effect of anger management on the relationship between mothers and their mentally disabled children shows that utilizing anger management techniques leads to the controlling of anger by mothers and improves their relationship with their children (Anclair & Hiltunen, 2014). The results of some studies have revealed that general health therapy in mothers with mentally disabled children and mothers of children with non-genetic psychological problems increases the general health of mothers in both groups (Izadi-Mazidi, Riahi, & Khajeddin, 2015; Goodman & Garber, 2017). It decreases physical symptoms and depression and improves sleep and social feedback (Azad, Blacher, & Marcoulides, 2013). Thus, the present study

was conducted with the aim to identify the effect of stress management training with a cognitive-behavioral approach on the scope of stress and psychological health of parents with mentally disabled children.

Methods

This study was a quasi-experimental research with a control group, pretest-posttest design, and follow-up. The statistical population included all parents with mentally disabled children in exceptional elementary schools in Rafsanjan city, Iran; it consisted of 500 individuals with α = 0.05 and a test power of b = 0.88. A model size of 25 pairs was determined for each group, and 30 couples were considered for each group; 60 couples were selected and randomly divided into 2 groups (experimental and control). At the onset, these parents filled out the General Health Questionnaire (GHQ) and Harry's Stress Inventory (HSI). Those with severe disorders were not selected to enter the group, among others, with the highest scores. The stress management training with cognitive-behavioral approach was applied in 7 sessions, each lasting 45 minutes. The meetings were held twice a week for 3 weeks. A text was presented to all participants in the group during 6 sessions in the rehabilitation center consisting of training pathology, symptomatology, psychological health of parents, 4 face-to-face strategies of coping and alleviating, separation, self-control, and social support, problem-solving, and personal practical skills. The next possible step was using the skills in reality, presenting a report, and memorizing skill problems.

The individuals were interviewed regarding demographic characteristics such as the age and gender of their children, parents' age, their career, residence condition, and income to acquire statistical information.

Harry's Stress Inventory: Chandran Harry presented this questionnaire in 2005 for the evaluation of tension in different circumstances. This scale includes 66 items scored based on a Likert scale (Noel, 2018). It has been argued that this questionnaire is justifiable in 0.74–0.79.

General Health Questionnaire: Goldberg presented the GHQ in 1991. Its original format comprised 60 questions; however, it was later changed to 28 questions with the aim of deviation. This scale is the most popular scale for evaluating psychological health (Hofmann, Asnaani, Vonk, Sawyer, & Fang, 2012). The GHQ includes 4 subscales physical, grief, and depression symptoms, and social performance. The subscale of physical symptoms consists of 7 statements and evaluates the feeling of faint, need to take a drug for assurance, and feeling of warmth or coldness in the body. The grief symptom subscale includes 7 statements, which evaluate insomnia disorders, stress, anger, and anxiety. The depression symptom subscale also includes 7 statements evaluating feelings of worthlessness, hopelessness, an inclination to die, and inability to perform jobs. The social performance subscale consists of the ability to do daily activities, good feelings toward performing beneficial duties, the ability to learn, and enjoyment in performing daily responsibilities. Mir Kheshti (Holstead, & Dalton, 2013) obtained α = 0.93 for the long GHQ. Both long and integrity indices were less than 0.84 for the entire questionnaire.

To analyze the data, descriptive statistics were employed; that is; the central tendency and dispersion indicators were used to describe the distribution of the variables and multivariate analysis of covariance (MANCOVA) was used to test the statistical hypotheses. Furthermore, to analyze the data, SPSS software (version 22, IBM Corporation, Armonk, NY, USA) was used.

Results

Owing to the research type, the couples were investigated separately in this study. The numbers of the model size and mean scores of every couple were determined as indicators, and the total score of the test was recorded in the statistical analysis.

Table 1. Summary of the Stress Management Training Sessions

Sessions	*The Topic of the Session (Purposes)*
The first session (introduction and familiarization with the lesson)	Executing the pretest: Group members become familiar with each other, make appropriate relationships based on cooperation, and are familiarized with the working manner Task: Noting a stressful situation with signs and symptoms
The second session (stress control and lifestyle approach)	Strengthening the relationship based on cooperation, training the interactive nature of stress, examining the role of thoughts in stress emergence, practicing the technique of intellectual imagining, presenting tasks in appendix forms Task: Practicing relaxation
The third session (principles versus techniques)	Discussing and investigating the problems and consequences related to stress, training and collaborative practicing of recession, tasks presentation Task: Noting the thoughts and emotions of a stressful condition
The fourth session (awareness of responsive systems to stress and the importance of physical activity)	Evaluating the efficacy of the recession technique, explaining the role of thoughts and recognitions in stress emergence, introductory training of Back's approach, presenting the task Task: Completing the negative spontaneous thoughts
The fifth session (the presentation of solutions)	Identifying problems, presenting solutions for the issues Task: Encouraging statements and positive self-talk
The sixth session (self-reinforcement in a stressful environment)	Reviewing tasks, training the problem, problem-solving method Task: Employing problem-solving and distraction techniques
The seventh session (review and conclusion)	Training thought-stopping technique, concluding the previously trained techniques, executing the pretest

The mean score of stress differed significantly between the pretest and the posttest (P = 0.001); however, it was not significantly different between the posttest and the follow-up test (P = 0.67) (Table 1). There was a significant difference in the mean psychological health score between the pretest and posttest in the experimental group (P = 0.001); however, there was no significant difference in this score between the posttest and follow-up test (P = 0.65). The mean scores of the physical and depression symptoms subscales of the GHQ differed significantly between the pretest and posttest (P = 0.036 out of P < 0.001), but did not significantly differ between the posttest and follow-up test (P = 16 out of P < 0.419). Moreover, the mean score of the grief symptoms subscale did not significantly differ among the pretest, posttest, and follow-up test (P = 0.57 out of P < 0.13). The difference in the mean score of the social performance subscale between the pretest and posttest was not significant (P = 0.07); however, this difference was significant between the posttest and follow-up test (P = 0.029) (Table 2).

Before analyzing the data, the required assumptions were first examined using analysis of covariance (ANCOVA). The investigation of the statistical assumptions revealed that both assumptions of the equality of variances (Levene's test) and normality (Shapiro-Wilk test) were established. The results of Box's M test confirmed the homogeneity assumption of the variance-covariance matrix (P = 0.18, F = 1.23).

Table 2. The mean (standard deviation) of the scores of the research variables in the experimental and control groups in pretest and posttest stages

Group		Pretest	Posttest	Follow-up	P
		Mean (SD)	Mean (SD)	Mean (SD)	
Stress	Experimental	185.56 (28.12)	162.80 (16.07)	162.73 (16.91)	0.001
	Control	183.86 (22.23)	183.53 (18.54)	183.66 (18.47)	0.61
General Health	Experimental	41.76 (9.19)	31.8 (13.74)	32.1 (13.45)	0.001
	Control	42.53 (4.70)	42.61 (4.79)	42.8 (4.78)	0.62

Table 3. The analysis of covariance of stress management training on stress and general health

Research Variable	Indicator Variable	Df	Mean Squares	F Coefficient	P-Value	Effect Size	Statistical Power
Stress	Pretest	1	67.46	40.19	0.03	0.26	0.30
	Group Membership	1	84.19	21.39	0.002	0.63	0.65
General Health	Pretest	1	98.20	33.54	0.03	0.50	0.25
	Group Membership	1	130.49	19.37	0.001	0.59	0.62

Furthermore, the investigation of the homogeneity of the regression slope supported the insignificance of the conditions and pretest (P = 0.13, F = 1.76). Hence, the use of MANCOVA was permissible.

The results of ANCOVA indicated that the observed difference in the mean scores of stress and general health was significant in the posttest (P < 0.05) according to group membership (experimental and control groups). Hence, it enhanced stress and general health up to 0.63% and 0.59%, respectively, in the participants of the experimental group. Thus, the stress management training intervention significantly affected the scores of the research variables in the posttest in the experimental group (P < 0.05). It can be concluded that the stress management training intervention affected general health and reduced stress in the couples (Table 3).

Discussion

In this study, the stress level and psychological health of parents with mentally disabled and healthy children was studied. The results showed a significant difference between the pretest and posttest in the score of stress; however, no significant difference was observed in this score between the posttest and follow-up test. The above results revealed that training parents with mentally disabled children affected their stress rate. The comparison of the posttest and follow-up test showed that the training had preserved its effect after one month. This finding was regarded as excellent support for the study (Carbone, Plegue, Barnes, & Shellhaas, 2014). Another study reported a difference in the stress score between mothers with mentally disabled children and mothers with healthy children (Orly, Rivka, Rivka, & Dorit, 2012). As can be observed in table 2, the mean score of the general health test, its subscales, and subscales of psychological health, with an exception of grief symptoms and social performance, decreased in the posttest compared to the pretest. These findings implied the significant effect of cognitive-behavioral training on the parents' health. The results of the study on parents were comparable with previous studies. For example, the training reduced parents' grief, increased family health levels, and improved general health, family stress, and social acceptance. In addition, it affected the psychological health of parents in terms of anger management, decreased mothers' anger, and improved their relationships with their children (Villani, Grassi, Cognetta, Toniolo, Cipresso, & Riva, 2013).

These results were in line with the findings of Rose et al. (2013), Stagl et al. (2015a), Garland, Gaylord, and Fredrickson (2011), Urizar and Munoz (2011), and Stagl et al. (2015b). To explain the results, it can be stated that the therapeutic approaches for stress (medical and psychoanalysis therapies) were extensively comprehensive. If the physiological and cognitive-behavioral dimensions of stress could affect its two other aspects, the beginner dimension and the way it continued to reach its highest intensity would always be disputed. Some believe that the improvement of cognitive-behavioral skills can prevent cognitive deviances that emerge as a result of physiologic symptoms, and consequently, a futile cycle and stress.

In managing stress via cognitive-behavioral methods, the different recession methods play a paramount role in stress reduction. Furthermore, the decline in

physical symptoms, which themselves cause stress, was not fruitless in this improvement. Overall, the recession practice results in physiological changes that are part of the integral hypothalamic performance properties. These physiological changes decrease the sympathetic nervous system's activity, which, in turn, reduces the generation of epinephrine hormones of stress and its physical symptoms. Moreover, helping individuals identify the weaknesses of the social network and eliminate them, being aware of the relationships among feelings and thoughts, and recognizing automatic thoughts are of the other effective factors in reducing stress.

The therapeutic method of stress management via the cognitive-behavioral approach and synthesizing the techniques of stress reduction, cognitive restructuring, training effective coping strategies, expressiveness, and anger management can affect stress and depression in physical, chronic, and severe patients. The specific and useful property of the therapeutic stress management method is its two-way approach in stress management and recession training that highly benefits the participants. It helps them reduce the effect of stress and promote their quality of life (QOL) by learning stress management skills and increasing their stress awareness and their capability to cope with it (Abdesslem, Hamrouni, Shephard, & Chelly, 2019). There is the belief in the cognitive-behavioral method that if the therapist cannot change the life condition of patients, s/he can at least reinforce their self-efficacy by changing their attitudes towards life events and their resultant stress, creating a pain controlling ability attitude, and stress management skills training, effective pain-coping skills, and efficient strategies for facing problematic situations. These measures decrease their sense of inability and improve their negative attitude (Antoni et al., 2012; Hofmann, Wu, & Boettcher, 2014). The anger management training as a technique related to stress management results in awareness about the anger creating a situation, how the person experiences anger, the desirable method of anger emergence, and the application of corrective actions by the person. Consequently, the person can become more adaptable in social interactions and perceive his/her interpersonal relationships more optimistically. This factor can enhance his/her QOL.

The results of this study illustrated that the rate of stress and psychological health of parents with mentally disabled children can be altered via a short period of training. Therefore, if more prolonged and more precise programs could be designed, better results would be achieved. Of the intentional or unintentional limitations of the study, the lack of control over the intellectual rehabilitation level, lack of control over parents' training, and inability to control the children can be stated. These limitations should be managed in later studies.

Conclusion

Training helps the mothers of mentally disabled children better understand themselves, identify their strengths and weaknesses, find themselves, and commit themselves to improving their weaknesses and developing their strengths. Consequently, they can better accept realities and reduce their psychological stress.

Conflict of Interests

Authors have no conflict of interests.

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Cross-Cultural, Interdisciplinary Health Studies

The Effectiveness of Mindfulness Training on Self-Compassion, Sexual Satisfaction, and Resilience in Pregnant Women

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Quantitative Study

Abstract

Background: Pregnancy is considered as a period of vulnerability in women, which presents new problems and difficulties to mothers that may impair their mental health. The purpose of this study was to determine the effectiveness of mindfulness training on self-compassion, sexual satisfaction, and resilience in pregnant women.

Methods: This quasi-experimental study was performed as a pretest-posttest design with control and experimental groups. The sample of this study consisted of 30 people who were selected using convenience sampling method and were randomly divided into experimental (30 subjects) and control groups (30 subjects). The measurement tools used included the Self-Compassion Scale (SCS), Index of Sexual Satisfaction (ISS), and Connor-Davidson Resilience Scale (CD-RISC). First, pretest was performed in both groups. Then, the training was performed in the experimental group in 8 sessions (90 minutes). Subsequently, the posttest was conducted in both groups, and a month later, the follow-up was implemented. Data were analyzed using multivariate analysis of covariance (MANCOVA) and one-way analysis of covariance (ANCOVA).

Results: The results showed that mindfulness training was effective on self-compassion, sexual satisfaction, and resilience in pregnant women.

Conclusion: The results of this study showed that mindfulness training is effective in promoting self-compassion, sexual satisfaction, and resilience in pregnant women.

Keywords: Mindfulness training, Self-compassion, Sexual satisfaction, Resilience, psychological, Pregnant women

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Introduction

Pregnancy is an important stage of human evolution during which many psychological and physical changes occur in women, resulting in increased mental and physical vulnerability (Parvez et al., 2018) and physical and psychological challenges. In the last two decades, numerous researches have been conducted on women's mental health in most countries. The same findings have shown that in reproductive years, women's use of mental health services is twice as men's (Oduyebo et al., 2017). In Iran, as in

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many countries around the world, the prevalence of psychological disorders in women is twice that of men, with 25.9 versus 14.9 for men (Sharifirad, Fathi, Tirani, & Mehaki, 2007).

Moreover, recent research studies have focused on self-compassion and its role in shaping mental health and preventing mental disorders (Trompetter, de Kleine, & Bohlmeijer, 2017). Self-compassion is a replacement for critical and high self-esteem, as a three-component construct of self-compassion versus self-judgment, human companionship versus isolation, and mindfulness versus increased imitation (Neff & Germer, 2013). Self-compassion can be defined as a positive attitude towards oneself when things go wrong. Self-compassion is considered as an effective trait and protective factor for nurturing emotional resilience; recently developed therapeutic approaches are aimed at improving self-compassion (Williams, Dalgleish, Karl, & Kuyken, 2014). In this regard, Krieger, Berger, and Holtforth (2016), in a study examining the relationship between self-compassion and depression, showed that lack of self-compassion can act as a vulnerability factor for depression. Krieger, Altenstein, Baettig, Doerig, and Holtforth (2013) showed that depressed individuals had lower levels of compassion than non-depressed individuals. Since the concept of self-compassion has been introduced into psychology literature over the past decade, not much evidence has been found for the impact of self-compassion on mental health and psychological problems, but research in this field is expanding (Marshall & Brockman, 2016).

One of the issues that mostly affect one's personal and social life is sexuality. Sexual satisfaction is the individual’s judgment of the sexual behavior that they find enjoyable. Prenatal sexual relations and sexual response in pregnancy were first studied by Masters and Johnson in the 1960s. The two first discussed the physiology of human-specific responses, including pregnancy, in 1996 (McNulty, Wenner, & Fisher, 2016); during the first 3 months of pregnancy, due to fatigue, pain and tenderness of the breasts, and nausea, there is a decrease in libido. Occasionally, a decrease in female attractiveness causes reluctance in men. In the second trimester, sexual desire increases due to better general feeling and congestion of the pelvic vessels. Orgasm may occur for the first time during this period. In the third trimester, with the larger uterus that places pressure on the perineum, increased vaginal discharge, and shortened breathing for many women, intercourse is difficult and uncomfortable (Schoenfeld, Loving, Pope, Huston, & Stulhofer, 2017). Sexual intercourse during pregnancy is influenced by factors such as social situations, wanted or unwanted pregnancy, relationship with spouse and psychological involvement, and personal skills in sexual intercourse. Of course, there are many differences between people's sexual relationships, and the amount of sexual intercourse can vary even during different pregnancies. During pregnancy, uterine growth and pressure on the inferior vena cava prevent abnormal conditions that interfere with uterine and placental bleeding, and other positions such as side-by-side should be used. Sexual intercourse is not prohibited in a normal pregnancy (Blais-Lecours, Vaillancourt-Morel, Sabourin, & Godbout, 2016).

Therefore, the factors that make a person more adaptable to life's needs and threats are the most fundamental constructs of the approaches to improving self-compassion. Resilience, meanwhile, has a special place in psychology, especially in the areas of evolutionary psychology, family psychology, and mental health (Cullen, Baiocchi, Eggleston, Loftus, & Fuchs, 2016). Resilience to stress is the positive psychological capacity of individuals to cope with stress and disaster. Researchers point out that stress resilience may mean the ability to fear or the tendency to extinguish fear quickly and efficiently after a traumatic event has been

reported (Lam et al., 2017). Resilience is defined as a process, ability, or consequence of successful adaptation despite threatening conditions. Resilience does not mean the absence of risk factors in life, but the presence of psychological supportive factors; psychological supportive factors in individuals can be applied to processes and practices that lead to desirable outcomes in human life. For example, when people are faced with life's dangers and challenges, they can reduce the negative and destructive effects of life pressures due to supportive factors such as positive thinking, self-esteem, and negative emotion control. Stress-resistant people, generally, have a source of internal control, that is, they can take responsibility for their own circumstances and issues, have a positive self-esteem, and are optimistic about life (Luthar & Eisenberg, 2017).

Various therapeutic approaches have been used to promote self-compassion, sexual satisfaction, and resilience in pregnant women. One of these therapeutic models is mindfulness training. Mindfulness is non-judgmental, indescribable, and present-based conscious awareness of an experience that is at the center of a person's attention at a particular moment. In addition, this concept includes acknowledging and accepting the experience. Mindfulness can also be defined as technical consciousness, which by combining meditation and specific mental orientations towards an experience, encourages non-judgmental present-day awareness by minimizing conflict in thoughts and feelings (Frank, Reibel, Broderick, Cantrell, & Metz, 2015). Mindfulness is derived from cognitive-behavioral therapies and is an important component of the third wave of psychological therapeutic models. All mindfulness exercises are designed to increase the body's attention. The important role of the body in new interdisciplinary areas such as mind-body medicine has also been proven. Studies using mindfulness emphasize the interaction between physical, cognitive, and emotional processes (Lever, Cavanagh, & Strauss, 2016). However, the main purpose of mindfulness is not to relax, but the non-judgmental observation of negative internal events or the physiological arousal of these conditions. Mindfulness meditation activates an area of the brain that produces positive emotions and has beneficial effects on the body's immune function (van der Riet, Levett-Jones, & Aquino-Russell, 2018).

Given the large number of pregnant women and their major problems in self-compassion, sexual satisfaction, and resilience, it seems that many pregnant women do not have the sufficient knowledge and skills to manage these problems. Such problems in pregnant women can be alleviated by mindfulness training. Therefore, the purpose of this study was to determine the effectiveness of mindfulness training on self-compassion, sexual satisfaction, and resilience in pregnant women.

Methods

This quasi-experimental study was performed as a pretest-posttest design with control and experimental groups. The study population consisted of 284 pregnant women undergoing medical care in Shariati Hospital in Tehran, Iran, in autumn 2018. The study participants consisted of 60 subjects (30 experimental and 30 control group participants) who were selected using convenience sampling and were randomly assigned to 2 groups (case and control). The sample size was determined as 30 individuals in each group based on statistical power of 0.95 and effect size of 0.25, and using G-power software. Research participants were assessed in two stages (pretest and posttest) using the Self-Compassion Scale (SCS), Index of Sexual Satisfaction (ISS), and Connor-Davidson Resilience Scale (CD-RISC). The experimental group received 9 sessions of mindfulness training (1 session per week; each lasting 90 minutes), and the control group received no intervention. The inclusion criteria included pregnant women

referring to Shariati Hospital in Tehran in autumn 2018, pregnancy for first child, and age range of 25-40 years. The exclusion criteria included pregnancy for second child, age of less than 25 years and over 40 years, and providing incomplete information. All individuals received written information about the research and participated in the study voluntarily. They were assured that all information would remain confidential and would be used for research purposes only. In order to respect privacy, the participants' names and surnames were not recorded.

Self-Compassion Scale: The SCS contains 26 questions and was developed by Neff in 2003 to measure self-compassion in the 6 subscales of self-compassion (5 questions), self-judgment (5 questions), human subscriptions (4 questions), isolation (4 questions), mindfulness (4 questions), and extreme replication (4 questions) that measure the quality of a person's relationship with their experiences. The questions are scored on a 5-point Likert scale ranging 0 to 4 (almost never to almost always). The subscales of judgment about self-esteem, isolation, and extreme replication are reverse scored (Neff, 2003). Cronbach's alpha reliability coefficient for the whole scale was 0.92 and for the subscales ranged from 0.75 to 0.81, and the retest reliability coefficient (2 weeks interval) was reported as 0.93 (Neff, Pisitsungkagarn, & Hsieh, 2008). In this study, the Cronbach's alpha reliability coefficient of the whole scale and that of the subscales of self-compassion, self-judgment, human subscriptions, isolation, mindfulness, and extreme replication was 0.83, 0.79, 0.78, 0.76, 0.77, 0.78, and 0.80, respectively.

Connor-Davidson Resilience Scale (CD-RISC): This questionnaire was developed by Davidson and Connor in 2003 and has 25 questions aimed at measuring resilience in different individuals (Connor & Davidson, 2003). The questions are scored on a Likert scale, and to obtain the overall score of the questionnaire, the sum of the scores of all questions is calculated, which ranges from 0 to 100. The reliability of the questionnaire was determined using Cronbach's alpha coefficient, and an alpha of 0.84 and validity of 0.79 were obtained for this questionnaire (Green et al., 2014). In the present study, the reliability of the CD-RISC was calculated as 0.78 using Cronbach's alpha.

Index of Sexual Satisfaction: The ISS was developed by Hudson in 1992 to assess couples' satisfaction levels. The questionnaire consists of 25 questions, which are scored on a 7-point scale ranging from never to always (1-7). The total score of the scale ranges from 0 to 100, and higher scores indicate the respondent's sexual satisfaction with her spouse, and vice versa. The validity of the scale was calculated as 0.93 using a one-week retest method. The validity of the scale was calculated through discriminant validity, which indicated that the scale was able to identify couples with and without sexual problems (Liu, Fairweather-Schmidt, Burns, & Roberts, 2015). The validity of this scale was calculated through its correlation with the sexual satisfaction subscale of the ENRICH questionnaire which was 0.74. For a more detailed examination of validity, the validity coefficient (0.88) and the Guttman Split-half coefficient were calculated (0.88) (Azizi, Mohammadkhani, Foroughi, Lotfi, & Bahramkhani, 2013). The validity and reliability of this questionnaire were 0.78 and 0.81, respectively.

The collected data were analyzed using descriptive (mean and standard deviation) and inferential statistical methods. Descriptive statistics were used to calculate frequencies and determine central indices and dispersion. Analysis of variance and covariance were performed in SPSS software (version 22, IBM Corporation, Armonk, NY, USA).

Results

The mean (standard deviation) age of the experimental and control groups was 35.23 (4.22) years and 36.32 (5.14) years. Table 1 presents the mean (standard deviation) of the research variables by group and test.

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Table 1. Mean (standard deviation) by group and test

Variables	Experimental		Control	
	Pretest	Posttest	Pretest	Posttest
	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)
Resilience	42.13 (2.4)	47.60 (5.1)	42.40 (1.5)	42.73 (2.0)
Self-compassion	36.73 (4.3)	32.53 (4.5)	37.40 (4.1)	36.40 (4.1)
Sexual satisfaction	44.8 (8.5)	54.46 (8.9)	45.53 (5.5)	46.33 (3.9)

Univariate analysis of covariance was used to evaluate the effectiveness of the intervention due to the univariability of the dependent variable. Therefore, the homogeneity of the error variance assumption was tested using Levene's test, and the results showed that this assumption is valid ($P > 0.05$; $F_{1, 58} = 3.56$).

By controlling for pretest, significant levels of all tests indicated that there is a significant difference between the experimental and control groups in at least one of the dependent variables (self-compassion, sexual satisfaction, and resilience) ($P < 0.0001$; $F = 34.36$). The effect or difference is equal to 0.57, that is, 57% of the individual differences in posttest scores on self-compassion, sexual satisfaction, and resilience were related to the effect of mindfulness training (group membership) (Table 2).

As shown in table 3, with pretest control between the experimental and control groups, in terms of resilience ($P < 0.0001$; $F = 29.31$), self-compassion ($P < 0.0001$; $F = 72.26$), sexual satisfaction ($P < 0.0001$; $F = 85.53$), and pessimism ($P < 0.0001$; $F = 51.07$); in other words, mindfulness training increased self-compassion, sexual satisfaction, and resilience in the experimental group.

Discussion

The findings showed that mindfulness training had a significant effect on self-compassion, sexual satisfaction, and resilience in pregnant women. It seems reasonable to conclude that participants attending mindfulness training sessions use their typical responses as secret emotional triggers (antecedent strategies) and learn how to quickly discard stressful exposures by learning new mindfulness techniques, such as tagging and consideration (a response-oriented strategy). The use of these types of emotion regulation strategies focused on antecedents and responses may be the underlying mechanism that can explain the effectiveness of mindfulness in enhancing compassion (Mark, Herbenick, Fortenberry, Sanders, & Reece, 2014). The second and most important mechanism likely to explain the decrease in stress and exhaustion, and mental health that is associated with mindfulness may be related to the elicitation of positive self-strategic attitudes. When participants learn to become aware of their own mental processes, such as emotions, behaviors, and habitual cognitive tendencies, they are able to avoid negative self-esteem and being absorbed in ruminative tendencies. Shapiro, Carlson, Astin, and Freedman (2006) view this process as a reactionary reaction in which there is a fundamental shift in the relation of the individual to the experience.

Table 2. Results of multivariate analysis of covariance on mean posttest scores of psychological well-being and optimism in the experimental and control groups with pretest control

Test name	Value	DF hypothesis	DF Error	F	Significant level	Eta squared	Statistical power
Pillai's trace	0.57	3	56	34.36	0.0001	0.57	1.00
Wilks' Lambda	0.01	3	56	34.36	0.0001	0.57	1.00
Hotelling effect	65.29	3	56	34.36	0.0001	0.57	1.00
The largest root	65.29	3	56	34.36	0.0001	0.57	1.00

Table 3. Results of one-way analysis of covariance in the Mankua text on mean posttest scores of self-compassion, sexual satisfaction, and resilience in the experimental and control groups with pretest control

Variables	Sum of the squares	Degrees of freedom	Mean of the squares	F	Significant level	Eta squared	Statistical power
Resilience	15.31	1	15.31	29.31	0.0001	0.34	1.00
Self-compassion	1760.34	1	1760.34	72.26	0.0001	0.45	1.00
Sexual satisfaction	100.61	1	100.61	85.53	0.0001	0.51	1.00

This process is thought to be very helpful in changing automated processes and conditional interaction between thoughts, feelings, and behaviors. As a result, people are more likely to practice forgiveness and compassion for themselves and others. Research has shown that people who engage in compassionate and loving exercises improve their mental health and emotional balance. Mindfulness training makes it possible for a person to be more receptive to others and to accept others without prejudice and negative judgments. It also encourages people to be kinder and more responsive to the needs of others. In fact, as pregnant women increase their capacity for mindfulness, empathic concerns and emotional regulation of mindfulness provides steps to increase their communicative capacity (Neto, 2012).

In explaining this finding, it can be said that the presence of the mind, which means being and living in the present moment, has an impact on increased sexual satisfaction in pregnant women. It enables them to be aware of their strengths and weaknesses and their shared life at any given moment, and this awareness creates a conceptual harmony for couples and enables them to live together (Greenfield, Roos, Hagler, Stein, Bowen, & Witkiewitz, 2018), and assess and retrieve themselves and their problems. People with high situational awareness can create a constantly dynamic and flexible environment in their lives because of their aristocracy over time and lack of fear of change (Carsley, Khoury, & Heath, 2018). This dynamic and flexible environment prevents the growth of chronic conflicts and long-term emotional and emotional distress, conflicts, and psychological distance that will create a chain of subsequent problems. Importantly, high-minded people pay close attention to their own and their spouse's point of view, as a means of keeping the relationship dynamic and preventing frostbite and ultimately enhancing the quality of marital relationships. Langner believes that, in a conscious mind relationship, the ideas and attitudes within an individual or a relationship are more easily exchanged. This conscious mindfulness creates lasting effects on couples in terms of problem-solving with respect, intimacy, and empathy. People with high minds are not only aware of themselves and their inner and outer state, but are also aware of changes in their spouse's appearance and behavior. This awareness will help change empathetic attitudes as well as enhance the quality of marital relationships.

In explaining this finding, it can be said that increasing mindfulness leads to reduced avoidance or excessive involvement with distressing thoughts and emotions, thus keeping the emotions in balance. If conscious attention is given to emotion regulation, the improvements in emotion regulation may be due to an overall increase in positive emotional experiences and a decrease in negative emotional experiences. Increasing positive emotional experiences through mindfulness exercises can relieve anxiety and other psychological stresses, thus leading to better regulation of emotions. It has a clear structure and homework assignments, enhances the ability of clients to pursue treatment, and has significantly influenced the relevant techniques in changing clients' mental status (Thomas & Atkinson, 2016). This treatment changes the fundamental beliefs and negative self-thoughts of the clients, and after making cognitive changes in

them and concurrently (after the tenth session) making them aware of their cognitive and emotional content, enables them to explore more appropriate alternatives and prevent automatic responses. The mindfulness training method, due to its underlying mechanisms, such as acceptance, increased awareness, desensitization, presence in the moment, observation without judgment, confrontation, and release, in combination with traditional cognitive behavioral therapy techniques is effective in increasing resilience and maintaining the long-term effectiveness of treatment.

Conclusion

The results of this study showed that mindfulness training is effective in promoting self-compassion, sexual satisfaction, and resilience in pregnant women.

Conflict of Interests

Authors have no conflict of interests.

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Cross-Cultural, Interdisciplinary Health Studies

Comparison of Happiness among Students of Different Fields in Shahid Beheshti University of Medical Sciences, Iran

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Quantitative Study

Abstract

Background: Happiness is the most basic requirement of human mental health. The health of medical students who deal with the health of the community is very important. The aim of this study was to compare the happiness of students in different fields in Shahid Beheshti University of Medical Sciences, Tehran, Iran.

Methods: This descriptive-analytic study was performed on 100 medical, dental pharmacy, nursing, and health students in Shahid Beheshti University of Medical Sciences in 2019. The data were collected using the Iranian euphoria questionnaire.

Results: All students obtained an average happiness score. The highest level of happiness was related to dentistry and the lowest was related to nursing and health. There was no significant difference in the level of happiness among students in different disciplines, and it did not correlate with gender, marital status, educational status, place of birth and residence, mother's education, number of children in the family, and employment. There was a significant relationship between happiness and father's education (P = 0.02) and satisfaction with the field of study (P = 0.003).

Conclusion: Considering the moderate level of happiness observed in this study and the direct effect of students' happiness on the future of the society, in order to educate a more productive generation, it is necessary to take measures to increase happiness and determine the factors affecting it. Creating job opportunities and valuing different jobs can increase the happiness of these students, which requires further in-depth studies.

Keywords: Happiness, Students, University medical centers

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Introduction

Happiness is the most basic requirement of human mental health (Sanagoo, Jouybari, Rezaiean, Jafari, & Hosseini, 2011). Happiness is a good and pleasant emotional state with experiences like happiness, satisfaction with life, wellness, security, and enhappinessment.

A happy person feels good, enhappiness the activities of his life, has developed inner peace, has accepted his weaknesses, and is resilient in the face of difficulties (Jafari, Liaghatdar, & Abedi, 2004). In addition, happiness facilitates people's passion for social activity and social interaction and provides a positive attitude to life, positive self-concept, mental health and emotional balance, hope for the future, and better job-learning and decision-making (Zeinih & Nilsaz, 2012; Akkasheh, 2000; Dinener & Seligman, 2000).

Today, the world is heavily exposed to various developments. These various developments in the cultural, social, economic, and technological arena may cause distinctions and have unforeseen consequences, which may result in reduced happiness among people in communities (Seligman & Csikszentmihalyi, 2000).

Young adults aged 18-25 years are at high risk of developing a mental illness, such as anxiety disorder. Mental illnesses are very rarely diagnosed at an early stage and the risk of late diagnosis is often accompanied by long-term medical resistance and long-term outcomes (Halgin & Whitbourne, 2004). A look at the state of happiness in countries around the world shows that Iran does not rank well in terms of happiness and the level of happiness in our country is low.

According to the World Happiness Report in 2015, Iran ranked 110th among the 158 countries surveyed, but its rank has risen compared to the 2013 report in which it ranked 115th. However, in general, compared to 2005, the level of happiness in Iran had decreased by 2012 (Helliwell, Layard, & Sachs, 2015).

Students in each community are considered as human resources and constructors of the future; therefore, their mental health is of great importance. Students of medical sciences and related disciplines dealing with human health, whose happiness can affect all levels of society, have attracted the attention of researchers (Sharifi, Sooky, Tagharrobi, & Akbari, 2010; Jouybari, Nodeh Sharifi, Sanagoo, Saeedi, Saeedi, & Kalantari, 2017). Poor mental health has a profound effect on students' academic performance; it can cause a drop in grades and sometimes dropping out of school and is the cause of behavioral problems in students (Kohoulat & Jowkar, 2012; Sadeghiniri, 2012; Hosseini & Kamalizadeh, 2012).

In addition, students endure multiple psychological pressures such as immigration, cultural changes, dormitory environment problems, and unwillingness to study, educational issues, high course load, and concerns about their occupational and educational future, which pose a threat to their mental health (Akkasheh, 2000).

Previous researches in other countries have investigated the state of happiness in different individuals and its impact on their mental health. Nevertheless, very few studies have been conducted in this area in our country. Therefore, this study aimed to compare the happiness of students in different disciplines in Shahid Beheshti University of Medical Sciences, Tehran, Iran, in 2019.

Methods

The present descriptive-analytic study was performed on 100 medical, dental, pharmacy, nursing, and health students of Shahid Beheshti University of Medical Sciences in 2019. This article was part of a thesis with the ID p784.

In this study, with a precision of 5% and a 95% confidence interval, 117 students of Shahid Beheshti University of Medical Sciences who were studying in the spring of 1998 were selected and surveyed. Questionnaires in which less than 50% of

questions were answered were excluded from the study, and finally, 100 individuals were examined as the statistical population.

In this study, the Subjective Happiness Scale was used to collect information. This questionnaire was designed by Dr. Kambiz Abachizadeh and professors of the Social Medicine Department of Shahid Beheshti University of Medical Sciences to measure happiness in an Iranian population (Abachizadeh, 2015).

This questionnaire consists of 44 items that is more than the Oxford University Excellence Assessment Questionnaire. Some of the items are tailored to the cultural differences between Iranians and other nations, for example, "Sincere communication with God gives me a sense of happiness".

These items are scored on a 5-point scale ranging from 1 to 5; 9 items (13, 14, 26, 27, 29, 33, 36, 38, and 42) are reverse scored.

The total number of points is divided by the total number of items and the number obtained represents the level of happiness of the individual. The highest score is 5 and the lowest score is 1 and the average total score of happiness was 97.6 in the community.

In this study, the relationship between happiness and other variables such as gender, place of residence, grade, marital status, and degree of satisfaction with the field of study, parents' education, and employment status were also studied.

The data gathered by the questionnaire was analyzed in SPSS software (version 15, SPSS Inc., Chicago, IL, USA). Qualitative variables are presented as frequency and percentage, and quantitative variables as mean and standard deviation. For the purpose of inferential analysis, Kolmogorov-Smirnov test was used to examine the normal assumption. Independent t-test, analysis of variance, and non-normalization of Mann-Whitney and Kruskal-Wallis tests were also used for data analysis.

Moreover, the significance of the relationship between variables was interpreted using Pearson's parametric tests (or in the absence of normal distribution of Spearman data).

In all tests, a P-value of 0.05 was considered as significant.

Results

In this study, 39 students (39%) were women and 61 (61%) were men.

The degree of happiness was classified into 3 categories, weak (score: 1.33-2), average (score: 2-3.66), and well (score: 3.66-5).

All disciplines ranked average in terms of happiness, and none of them ranked well. The highest level of happiness was related to dentistry students and the lowest was related to nursing and health students (Table 1). There was no significant difference in happiness between students of different disciplines (P = 0.094).

Table 2 shows the students' happiness rate in terms of other variables studied in the study. There was only a statistically significant relationship between the degree of happiness of the students, and the father's educational level (P = 0.02) and the degree of satisfaction with the field of study (P = 0.003).

Table 1. Mean and standard deviation and comparison of happiness rate of medical, dentistry, pharmacy, health, and nursing students

Field	Number	Max	Min	Standard deviation	Mean	P-value
Medical	23	4.59	2.68	0.45	3.39	0.094
Dentistry	23	4.45	2.07	0.4	3.4	
Pharmacy	20	4.14	1.61	0.51	3.25	
Health	12	3.57	2.95	0.17	3.2	
Nursing	19	3.55	2.18	0.30	3.2	
Other	3	4	2.07	1.11	2.71	
Total	100	4.59	1.61	0.43	3.29	

Table 2. Student satisfaction rate by gender, marital status, average, place of residence, parental education, student employment, and academic satisfaction

Variable		number	Standard deviation	Mean	P-value
Sexuality	Male	39	0.43	3.22	0.18
	Female	61	0.44	3.33	
Marital status	Single	72	0.45	3.31	0.67
	Divorced	3	0.37	3.22	
	Married	25	0.42	3.22	
Grade	Under 16	40	0.35	3.31	0.61
	16-20	60	0.49	3.27	
Housing	With family	42	0.44	3.23	0.31
	Independent	28	0.46	3.21	
	Dormitory	30	0.39	3.45	
Father's education	Pre-diploma and diploma	4	0.72	2.68	0.02
	Associate degree	29	0.39	3.24	
	BSc	41	0.41	3.28	
	MSc	13	0.32	3.19	
	PhD	13	0.50	3.48	
Mother's education	Pre-diploma and diploma	8	0.80	3.23	0.19
	Associate degree	40	0.35	3.28	
	BSc	40	0.45	3.24	
	MSc	8	0.34	3.65	
	PhD	4	0.18	3.29	
Employment	No	69	0.39	3.32	0.33
	Yes	31	0.53	3.22	
Satisfaction with the field of study	Very low	4	1.03	2.95	0.003
	Low	11	0.38	3.05	
	Medium	48	0.18	3.24	
	High	22	0.17	3.47	
	Very high	13	0.81	3.55	

Based on the results of post hoc test, there was a statistically significant relationship between the degree of happiness of students and the father's education level, undergraduate and postgraduate education (P = 0.03), and sub-diploma and PhD (P = 0.01).

Based on post hoc test results, there was a statistically significant relationship between the degree of students' happiness and low and high levels of satisfaction with the field of study (P = 0.036) and low and very low levels (P = 0.023).

Discussion

Happiness is an emotional state that can be considered the basis of human tranquility. Evidently, finding the exact definition for happiness remains one of the greatest philosophical challenges (Hoggard, 2005). The factors affecting happiness are many, including family, marital satisfaction, beliefs, physical and mental health, social environment, occupation, and education (Zohour & Fekri, 2004). Some psychologists have designed questionnaires to measure some of these dimensions and elements or all of them, and the results of researches indicate that the questionnaires have been largely coordinated and consistent (Stewart, Watson, Clark, Ebmeier, & Deary, 2010; Martin, 2006).

In this study, all students obtained an average happiness score and none obtained a good score. In various studies conducted in recent years on medical students with the aim of evaluating the amount of happiness and the factors affecting it, the mean score of happiness varied from 42.6 to 46.7% in students (Sharifi et al., 2010; Jouybari et al., 2017) which indicates the inappropriate state of happiness among students.

A study conducted by Akkasheh (2000) in medical students of Kashan University of Medical Sciences, Iran, showed that 28% of

newly born students do not have mental health. Moreover, in a study examining some academic factors affecting the sense of happiness, Hemmati (2019) has shown that students' sense of happiness is slightly higher than the average. Sherina, Rampal, and Kaneson (2004) in their study in Malaysia reported that psychosocial stress is common among medical students and has a significant relationship with depression. In a study conducted in England, Firth (1986) showed that the average number of stresses was higher in students than in the general population, and that stress should be taken seriously in medical students and measures should be taken to eliminate it.

In this study, the highest level of happiness was related to dentistry students and the lowest level of happiness was related to nursing and health students. Based on the results of this study, no significant difference was found in terms of happiness between medicine, dentistry, pharmacy, nursing, and health students.

The lower level of happiness in the mentioned disciplines may be due to the difficulty of work or the disproportionate valuation of the type of job related to the type of degree; this requires extensive research in larger statistical populations for better comparison.

In the study by Jouybari et al. (2017), the highest average happiness score was observed in laboratory sciences students. The study by Karami also showed that the field of study, and living with the family have a significant role in students' well-being and satisfaction (Mocrie, Mohammadifar, & Yazdani, 2002).

In this study, there was no significant relationship between students' gender and happiness. Khodarahimi (2011), in a research on adolescents and young people, also rejected the influence of gender on the interplay between happiness and concern. There was no significant difference in happiness between men and women in the study by Shayan and AhmadiGatab (2012) in Babol University of Medical Sciences, Iran. In the study by Omidi, the results showed a higher level of happiness in women. However, in this study, the statistical community, unlike our study, was not specific to medical students.

In the present study, there was no significant relationship between marital status and happiness in students, which was similar to the findings of Jouybari et al. (2017). Nevertheless, Sharifi et al. (2010) reported a statistically significant correlation between vitality and the marital status of students. This difference in findings may be due to the different data collection tools used. In the present study, Oxford standard test was used to evaluate happiness and to investigate the factors related to vitality; however, Sharifi et al. (2010) used a 31-item researcher-made questionnaire.

In this study, the relationship between academic performance and happiness was not significant. In the study by Jouybari et al. (2017), the relationship between happiness and mean grade was also not significant. Abdulghani, Alkanhal, Mahmoud, Ponnamperuma, and Alfaris (2011), in their study in Saudi Arabia, also found no significant relationship between academic grades and stress levels. However, in the study by Sharifi et al. (2010), there was a significant correlation between vitality and student's average. Furthermore, Mohebian, Dadashi, Motamed, and Safdarian (2017) found that fear of failing in exams was a major stressor for students.

In the present study, there was no significant relationship between students' happiness and their current location. In their study on dental students in Zanjan University of Medical Sciences, Iran, Mohebian et al. (2017) also showed that there was no significant difference in the levels of depression, anxiety, and stress in terms of place of residence, although distance from the family was reported by students as a significant stressor. Sharifi et al. (2010) also found no statistically significant relationship

between native or non-native and current students' living conditions. Karami explained in his study that living in a student dormitory, due to being away from the family, assuming different responsibilities for life, experiencing different cultures, and adapting to new conditions, requires energy and special power so that students can achieve inner satisfaction and happiness (Mocrie, Mohammadifar, & Yazdani, 2002).

In the present study, there was no statistically significant relationship between employment rate while studying and the level of happiness of the students. However, Peterson, Park, and Seligman (2005) stated that the happiness of individuals depended on three factors, enhappinessment in life, work and activity, and purpose in life.

In our study, there was a significant relationship between happiness and satisfaction with the field of study (P = 0.003). This finding was similar to that of Sharifi et al. (2010) in Kashan University of Medical Sciences. Hemmati (2019) also found that self-efficacy and satisfaction with the field of study directly affect the student's sense of happiness.

This study showed that there was a significant relationship between the rate of happiness and father's education (P = 0.02). However, there was no significant relationship between mother's education and happiness. Farzianpour, Eshraghian, Emami, Hosseini, Hosseini, and Farhud (2011) reported a significant relationship between the amount of happiness and the economic, educational, and cultural conditions of the family. However, contrary to the present study, Farzianpour et al. (2011) studied different groups of students.

Considering the direct impact of students on the future of each society, it is necessary to plan for a happier and more productive future generation of the society, take measures to increase the amount of happiness and reduce stress, and to investigate the relationship between multiple factors affecting the amount of happiness in students. Solhi and Irandoost (2017) explained that consideration of the social aspect of achieving happiness and the impact of the welfare state on it is of particular importance, and appropriate education policies and plans for students and efforts to improve their economic conditions are necessary to increase happiness.

Abedi (2001) conducted the Fordyce Happiness Program and concluded that the program could enhance student happiness, in addition to reducing anxiety and depression. The results of the interventional study by Shayan and AhmadiGatab (2012) showed a significant difference in the happiness level before and after the social skills training program. Thus, it can be said that social skills training can increase the level of happiness.

Suggestions: Considering the direct impact of students on the future of each society, it is necessary to take measures to increase the level of happiness and reduce stress and risky behaviors in students in order to educate a happier and more productive generation in the society.

It is also recommended that more studies with larger sample size be undertaken at a more appropriate time after creating the correct culture of filling the questionnaire, which requires continuous cooperation between the university authorities and the Ministry of Health.

Conclusion

The results of this study illustrated that all students had an average happiness score and none had a good score. The highest happiness score was related to dentistry and the lowest to the fields of nursing and health, although it did not significantly differ among students of different disciplines.

It seems that meaningfulness and appreciation of field-related jobs and the creation of appropriate job opportunities can increase the happiness of these students, which require further in-depth studies.

Moreover, the rate of happiness did not correlate with student gender, marital status,

and academic performance, place of residence, mother's education, and employment during their studies. However, there was a significant relationship between happiness and satisfaction with the field of study and the degree of education of the father.

Conflict of Interests

Authors have no conflict of interests.

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Cross-Cultural, Interdisciplinary Health Studies

Report of the Psychosomatic Disorders Research, Treatment, and Educational Center at Kashan University of Medical Sciences, Iran since 2012

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Introduction

The Department of Clinical Psychology was found at the School of Medicine in 2011 to achieve its prime objectives of teaching and research in the field of clinical psychology. Since 2012, in addition to educating postgraduate students, all Undergraduate medical sciences students have been taught in the school. About 60 research projects and near 70 researches published in fairly reputable domestic and international journals are the members' considerable accomplishments. At that time, the institute specialized in psychosomatic disorders in the community, with a focus on education. The institute established research projects and appropriate treatment. The center is backed by the Health Technology Center of the Vice Chancellor for Research of Kashan University of Medical Sciences, Kashan, Iran.

To attain the general objective of research in psychosomatic medicine and other mental fields with emphasis on contextual behavioral approach, this department aimed at empowering students in counseling and psychology, research in psychosomatic fields, and utilization of the most recent scientific findings and practical concepts.

Visions

Extending educational fields of clinical psychology, especially in contextual behavioral science approach

-Acquiring and developing a talented, academic workforce

-Collaborating with Universities around

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the world include.

-Research and developed practice in psychosomatic medicine (such as pain, cancer, cardio vascular disease, stress related disease, obesity and emotional eating, Illness anxiety, etcetera)

Our center offers clinical research education and training programs for students and researchers. In particular, it presents a curriculum aimed at nurturing clinical research, which was developed jointly with the University Hospital Clinical Trial Alliance. Psychologists and physicians appointed based on recommendation from clinical departments concurrently serve as clinical instructors. They also centrally manage clinical research and disseminate information on education and training programs. Some of the researches undertaken in our center are in the field of psychosomatic disorders; the topics of which have been explained in the following sections.

One of the research fields was headache. In individuals with tension headache, a randomized controlled clinical trial (RCT) examined the effect of mindfulness-based stress reduction on pain severity and mindful awareness (Omidi & Zargar, 2014). Another RCT examined the effects of mindfulness-based stress reduction (MBSR) on perceived stress and psychological health in the same population (Omidi, & Zargar, 2015). Furthermore, in patients with chronic daily headache (CDH), an RCT studied the effectiveness of acceptance and commitment therapy (ACT) on cognitive emotion regulation (ER) strategies, headache-related disability, and headache intensity (Khazraee, Omidi, Daneshvar Kakhki, Zanjani, & Sehat, 2018). Additionally, in people with migraines, one study can be mentioned that has focused on the role of coping strategies and beliefs related to pain in disability due to migraine (Gilasi, Omidi, Gharlipour, Tavassoli, Haghir, & Sorkhabi, 2014), and another study in which the construct and convergent validity and reliability of Psychological Inflexibility in Pain Scale (PIPS) has been evaluated (Abdollah, O., Zahra, Z., Mohammad Hosein, F. K., & Reza, D. K. 2018).

Another field in which research is carried out in the center is head injury. One study compared ER problems in patients with mild traumatic brain injury (mTBI) and healthy individuals (Shafiei, Fakharian, Omidi, & Akbari, 2016). Another study compared emotions and difficulties in ER between individuals with mTBI and healthy individuals (Mohammadi, Zargar, Malekpour, Omidi, Akbari, 2018). A Similar study compared difficulties in ER between patients with mTBI and normal controls (Shafiei, Esmaeil, Nademi, Omidi, Sharifi, & Akbari, 2018). The mental status and disorders of patients with head injuries have also recieved much attention. One study assessed the mental status of patients with mTBI (Fakharian, Omidi, Shafiei, & Nademi, 2015), and another research studied the factors effective on the prediction of mental disorder in patients with mTBI based on logistic regression (Shafiei, Fakharian, Omidi, Akbari, & Delpisheh, 2016a). Furthermore, in one study, mental disorders were predicted after TBI using principle component approach (Nademi, Shafiei, Fakharian, & Omidi, 2018). The effect of mTBI and demographic factors on psychological outcome has also been studied in a study by Shafiei, Fakharian, Omidi, Akbari, and Delpisheh (2016b). In addition, Shafie, Fakhariyan, Omidi, and Nademi (2019) investigated the effect of mTBI on intelligence and memory function in motorcycle riders). In addition, a prospective cohort study was conducted on visual spatial working memory in patients with mild brain injury using the Benton Visual Retention Test (BVRT) (Shafiei, Fakharian, Omidi, Akbari, & Delpisheh, 2017). Some of the researches conducted by this center have also compared the methods used to predict post-traumatic mental disorder. Moreover, two researches on patients with mild brain injury have compared an artificial neural network with

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logistic regression in predicting post-traumatic mental disorders (Shafiei, Nademi, Fakharian, & Omidi, 2017; Shafiei, Fakharian, Omidi, Akbari, Delpisheh, & Nademi, 2016). The same comparison was performed in predicting psychological symptoms six months after mTBI (Shafiei et al., 2017).

Eating disorders is another field of research in this center. An RCT was conducted on the effect of dialectical behavior therapy (DBT) on binge eating, difficulties in ER, and BMI in overweight patients with binge-eating disorder (BED) (Rahmani, Omidi, Asemi, Akbari, 2018). In addition, two studies examined unified therapy. A single-blind RCT examined the effect of dialectical behavior therapy on binge eating and difficulties in ER in patients with BED (Rahmani, Omidi, Asemi, & Akbari, 2018). Furthermore, an RCT studied the effect of unified transdiagnostic therapy on the quality of life (QOL) of patients with eating disorder (Rahmani, Omidi, & Rahmani, 2018).

This center has also extended its research to smokers and substance abusers. An RCT has examined the effects of ACT on comorbid depression and anxiety symptoms and smoking cessation in male smokers (Davoudi, Omidi, Sehat, & Sepehrmanesh, 2017) and a study has compared anxiety and depression symptoms between male daily smokers and nondaily smokers (Davoudi, Omidi, & Sehat, 2017). Moreover, a double-blind RCT has examined the effects of oxytocin on withdrawal, craving, and stress response in heroin-dependent patients (Moeini, Omidi, Sehat, & Banafshe, 2019).

Other studies conducted by the researchers of the center are related to irritable bowel syndrome (IBS). Two of these studies have focused on the QOL of people with IBS (Jamali, et al., 2012; Jamali, Raisi, Matini, Moravveji, Omidi, & Amini, 2015).

Another population chosen by the researchers of this center is pregnant women. Among these investigations, two clinical trials have employed mindfulness training. One of them has examined the effect of mindfulness-integrated cognitive behavior therapy on depression and anxiety (Yazdanimehr, Omidi, Sadat, & Akbari, 2016) and the other has examined the effect of mindfulness training on QOL (Yazdanimehr, Omidi, Akbari, & Sadat, 2016).

At this center, one of the varied fields of study that the researchers have focused on is obsessive-compulsive disorder (OCD). Two researches are well worth mentioning; a double-blind RCT that has examined the effectiveness of cognitive behavioral therapy (CBT) and fluoxetine on sexual function of women with OCD (Sabetnejad, Assarian, Omidi, & Najarzadegan, 2016), and a case study in which the effect of aversion therapy has been investigated in a case with conversion disorder associated with mood disorder and OCD (Bagherzadeh-Shahidi, Sepehrmanesh, & Omidi, 2013).

Other fields of research have also been of interest to our researchers. In the field of sexual function, for instance, the effects of treatment with sildenafil and CBT on sexual dysfunction in women have been compared in an RCT (Omidi, Ahmadvand, Najarzadegan, & Mehrzad, 2016). A single-blind RCT has been conducted on cardiac patients to examine the effects of MBSR on blood pressure, perceived stress, and anger (Momeni, Omidi, Raygan, & Akbari, 2016). In the field of psychosomatic disorders, an RCT was performed on the effect of ACT on body image flexibility and body awareness (Givehki, Afshar, Goli, Scheidt, Omidi, & Davoudi, 2018). In hemodialysis patients, a randomized, double-blind, parallel-group trial has been conducted to examine the efficacy of MBSR on anxiety and depression (Haghshenas, Assarian, Omidi, Razaghof, & Rahimi, 2019). Furthermore, the effectiveness of transdiagnostic, emotion-focused treatment for ER and individual-social adjustment has been examined in a quasi-experimental study on a sample of female students (Omidi, Azimi, Shafiei, & Nademi, 2018). In the field of bipolar disorder, a study

can be mentioned here that has been conducted to determine the effect of DBT on the executive function (EF) of these patients (Afshari, Omidi, & Sehat, 2018). A case-control study on veterans with post-traumatic stress disorder (PTSD) can also be noted that has examined the effectiveness of a combined mindfulness-based cognitive therapy (MBCT) and MBSR intervention on depression symptoms and QOL (Omidi & Hamidian, 2018). A preliminary study of curriculum design is the last research to be noted in this paper. The study assessed the knowledge and attitudes of medical students and graduate students on behavioral medicine (Omidi, Mohammadi, Zargar, Mousavi, & Attari, 2012).

Ongoing research projects

Adaptation and factor structure of the Valuing Questionnaire (VQ) in ACT approach; The effect of DBT on EF in patients with bipolar disorder; Comparison of the effectiveness of exposure and response prevention (ERP) therapy and mindfulness-based ERP therapy on oxidative stress indexes, activity of Na/K ATPase pump in RBC and obsessive symptom in people with contamination/washing OCD; Comparison of emotional reactivity and anxiety sensitivity in people with health anxiety and helathy individuals; The relationship of spiritual health and mental health with the tendency to use narcotics in the student population of Kashan, Iran; Effect of mindfulness-based stress management therapy on ER, anxiety, depression, and food addiction in obese people; Investigation of the effect of DBT on ER, EF, risky decision-making, and craving in opiate substance use disorder comorbid with attention deficit hyperactivity disorder (ADHD) in adult patients; The effect of DBT on ER, impulsivity, depression, anxiety, EF, BMI, and waist circumference in overweight and obese adolescent girls; The effectiveness of ACT on anxiety, depression, marital satisfaction, pain acceptance, psychological flexibility, and body composition among patients with breast cancer; Comparison of the effects of CBT and ACT on family function, care burden, QOL, experimental avoidance, anxiety, depression, and stress in informal caregivers of patients with TBI; Investigation of psychometric properties of the Persian version of the Emotional Reactivity Scale in the students of the University of Kashan, Iran; Effect of MBSR and CBT on emotional strategies, EF, disease activity, QOL, and sleep in patients with rheumatoid arthritis; Comparison of the effect of ERP therapy and mindfulness-based ERP therapy on improvement of clinical symptoms in contamination/washing OCD; Comparison of the effects of CBT and ACT on psychological flexibility, EF, anxiety, depression, and QOL of the patient and caregiver in patients with major depressive disorder (MDD) after TBI; The effect of transcranial direct current stimulation (tDCS) on craving, relapse, and mental health parameters in opiate patients under methadone maintenance treatment (MMT); Comparison of the effectiveness of CBT and DBT on emotional dimensions, QOL, migraine disability, severity of headache, and severity of anxiety symptoms in patients with migraine syndrome with general anxiety symptoms; Comparison of the effectiveness of ACT and CBT on emotional, behavioral, and cognitive components in patients with illness anxiety disorder

Seminars, congress, and Workshops

Four seminars, two national congresses, and forty five educational workshop were held.

Conflict of Interests

Authors have no conflict of interests.

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