Cross-Cultural, Interdisciplinary Health Studies

International Journal of Body, Mind & Culture

eISSN: 2345-5802
http://ijbmc.org

Volume 6, Issue 1, 2019

International Journal of Body, Mind & Culture

Vesnu Publications

Volume 6, Issue 1, 2019

http://ijbmc.org

ALBERT-LUDWIGS-UNIVERSITÄT FREIBURG
DEPARTMENT OF PSYCHOSOMATIC MEDICINE

مرکز تحقیقات روان‌تنی
Psychosomatic Research Center

موسسه علمی فرهنگی تحقیقاتی دانش تندرستی
تاسیس: ۱۳۷۴
DANESHHE TANDOROSTI INSTITUTE

International Journal of
Body, Mind & Culture

Cross-Cultural, Interdisciplinary Health Studies

Publisher

Vesnu Publications
Telfax: +98 31 32 22 43 35,
+98 31 32 22 43 82
Website: vesnupub.com
Email: farapublications@gmail.com

Owner

Albert- Ludwigse- Universität Freiburg
Department of Psychosomatic Medicine &
Danesh-e Tandorosti Institute
Email: ijbmc@uniklinik-freiburg.de
info@ijbmc.org, info@iranianhealth.com

Please visit our website at
http://ijbmc.org

Cover page: Painting by Rene Magritte, Belgian Surrealist Artist

International Journal of Body, Mind & Culture
Cross-Cultural, Interdisciplinary Health Studies

Information for Authors

AIM AND SCOPE

Modern medicine is thought to be in a paradigmatic crisis in terms of the accelerative demographic, epidemiologic, social, and discursive aspects. The ontological, epistemological, and methodological gaps in biomedicine lead to a chaotic condition in health beliefs and behaviors. The *International Journal of Body, Mind and Culture* (IJBMC) is an international, peer-reviewed, interdisciplinary medical journal and a fully "online first" publication focused on interdisciplinary, cross-cultural, and conceptual research. The researches should focus on paradigmatic shift and/or humanizing medical practice.

All interdisciplinary researches, such as social sciences (e.g., sociology, anthropology, and psychology), humanities (e.g., literature, religion, history, and philosophy), and arts (e.g., music and cinema), which have an impact on medical education and practice, are acceptable.

The IJBMC team is based mainly in Germany and Iran, although we also have editors elsewhere in Europe and in the US.

Instruction to Authors

MANUSCRIPTS

The website is updated weekly with IJBMC's latest theoretical and original research, case reports, education, news, and comment articles. All IJBMC research is published with open access and up to 5000 word counts. There is an exception for theoretical papers; they can exceed the word limitation of the journal.

The mission of IJBMC is to lead the debate on health and to engage, inform, and stimulate doctors, researchers, and other health professionals in ways that will design more humanistic health promotion and clinical settings. We aim to help health system managers and therapists to make more integrative decisions.

STUDY DESIGN

We advise authors to design studies based on the appropriate guidelines. In randomized controlled trials, the CONSORT guideline (www.consort-statement.org/consort-statement), in systematic reviews and meta-analyses, the PRISMA (formally QUOROM) guideline (www.prisma-statement.org), in studies of diagnostic accuracy, the STARD guideline (www.stard-statement.org), in observational studies in epidemiology, the STROBE guideline (www.strobe-statement.org), and in meta-analyses of observational studies in epidemiology, the MOOSE guideline (www.consort-statement.org/index.aspx?o=1347) should be used.

HUMAN AND ANIMAL RIGHTS

Researches involving human beings or animals must adhere to the principles of the Declaration of Helsinki (www.wma.net/e/ethicsunit/helsinki.htm).

Types of Articles

- *Review articles, theoretical studies, qualitative studies, quantitative studies, letter to the editor, case reports, and clinical trials* can be submitted by all authors, but *other types* of articles can only be submitted by the journal's editorial board.

SUBMISSION

- Only online submission is acceptable. Please submit online at: *http://ijbmc.org*
- The manuscripts should be divided into the following sections: (1) Title page, (2) Abstract and Keywords, (3) Main text (can be divided into some parts according to the type of manuscript), (4) References, and (5) Figure

legends, (6) Appendices, and (7) Tables and (8) Figures (figures should be submitted in separate files) if present.

- Please supply a word count in title page.
- Use normal page margins (2.5 cm), and double-space throughout.
- Prepare your manuscript text using a word processing package (save in .doc or .rtf format). Submissions of text in the form of PDF files are not permitted.

COVER LETTER

A covering letter signed by all authors should identify the corresponding author (include the address, telephone number, fax number, and e-mail address). Please make clear that the final manuscript has been seen and approved by all authors, and that the authors accept full responsibility for the design and conduct of the study, had access to the data, and controlled the decision to publish.

AUTHORSHIP

As stated in the Uniform Requirements for Manuscripts Submitted to Biomedical Journals (http://www.icmje.org/#privacy), credit for authorship requires substantial contributions to: 1. Substantial contributions to the conception or design of the work; or the acquisition, analysis, or interpretation of data for the work; AND 2. Drafting the work or revising it critically for important intellectual content; AND 3. Final approval of the version to be published; AND 4. Agreement to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved. Each author must sign authorship form attesting that he or she fulfills the authorship criteria. There should be a statement in manuscript explaining contribution of each author to the work. Acknowledgments will be limited to one page of *International Journal of Body, Mind and Culture* space, and those acknowledged will be listed only once.

Any change in authorship after submission must be approved in writing by all authors.

ASSURANCES

In appropriate places in the manuscript please provide the following items:

- If applicable, a statement that the research protocol was approved by the relevant institutional review boards or ethics committees, and that all human participants gave written informed consent
- The source of funding for the study
- The identity of those who analyzed the data
- Financial disclosure, or a statement that none is necessary

TITLE PAGE

With the manuscript, provide a page giving the title of the paper; titles should be concise and descriptive (not declarative). Title page should include an abbreviated running title of 40 characters, the names of the authors, including the complete first names and no more than two graduate degrees, the name of the department and institution in which the work was done, and the institutional affiliation of each author. The name, post address, telephone number, fax number, and e-mail address of the corresponding author should be separately addressed. Any grant support that requires acknowledgment should be mentioned on this page. Word count of abstract and main text, and number of tables, figures, and references should be mentioned on title page. If the work was derived from a project or dissertation, its code should also be stated.

Affiliation model: Academic Degree, Department, Institute, City, Country.

Example: Associate Professor, Department of Radiology, School of Medicine, Isfahan University of Medical Sciences, Isfahan, Iran.

ABSTRACT

Provide, on a separate page, an abstract of no more than 250 words. This abstract should briefly describe the problem being addressed in the study, how the study was performed, the salient results, and what the authors conclude from the results, respectively. In total, 3 to 10 keywords may be included. Keywords are preferred to be in accordance with MeSH (http://www.ncbi.nlm.nih.gov/mesh) terms.

CONFLICT OF INTEREST

Authors of research articles should disclose, at the time of submission, any financial arrangement they may have with a company whose product is pertinent to the submitted manuscript or with a company making a competing product. Such information will be held in confidence while the paper is under review and will not influence the editorial decision, but if the article is accepted for publication, a disclosure will appear with the article.

Because the essence of reviews and editorials is selection and interpretation of the literature, the *International Journal of Body, Mind and Culture* expects that authors of such articles will not have any significant financial interest in a company (or its competitor) that makes a product discussed in the article.

REVIEW AND ACTION

Submitted papers will be examined for the evidence of plagiarism using some automated plagiarism detection service. Manuscripts are examined by members of the editorial staff, and are sent to external peer-reviewers under a double-blinded peer-review process. We encourage authors to suggest the names of possible reviewers, but we reserve the right of final selection. Communications about manuscripts will be sent after the review when the editorial decision-making process is complete. After acceptance, the editorial system makes a final language and scientific edition. No substantial change is permitted by authors after acceptance. It is the responsibility of the corresponding author to answer probable questions and approve the final version.

COPYRIGHT

Authors who publish with this journal agree to the following terms:

a. Authors retain copyright and grant the journal right of first publication with the work simultaneously licensed under a Attribution-NonCommercial 4.0 International that allows others to share the work with an acknowledgement of the work's authorship and initial publication in this journal.

b. Authors are able to enter into separate, additional contractual arrangements for the non-exclusive distribution of the journal's published version of the work (e.g., post it to an institutional repository or publish it in a book), with an acknowledgement of its initial publication in this journal.

c. Authors are permitted and encouraged to post their work online (e.g., in institutional repositories or on their website) prior to and during the submission process, as it can lead to productive exchanges, as well as earlier and greater citation of published work (See The Effect of Open Access).

OPEN ACCESS POLICY

This journal provides immediate open access to its content on the principle that making research freely available to the public supports a greater global exchange of knowledge.

PUBLICATION FEE

There is no charge for publication in this journal.

JOURNAL STYLE

Tables

Provide double-space tables and a title for each.

Figures

Figures should be no larger than 125 (height) x

180 (width) mm (5 x 7 inches), and should be submitted in a separate file from that of the manuscript. The name of image or figure files should be the same as the order that was used in the manuscript (fig1, fig2, and etc.). Only JPEG, tif, gif, and eps image formats are acceptable with CMYK model for colored image at a resolution of at least 300 dpi. Graphs must have the minimum quality: clear text, proportionate, not 3 dimensional, and without disharmonic language. Electron photomicrographs should have internal scale markers.

If photographs of patients are used, either the subjects should not be identifiable or the photographs should be accompanied by written permission to use them. Permission forms are available from the Editorial Office.

Medical and scientific illustrations will be created or recreated in-house. If an outside illustrator creates the figure, the *Journal of Body, Mind and Culture* reserves the right to modify or redraw it to meet its specifications for publication. The author must explicitly acquire all rights to the illustration from the artist in order to publish the illustration. Legends for figures should be an editable text as caption and should not appear on the figures.

References

The American Psychological Association (6th ed., 2nd printing) style of referencing should be used. References must be double-spaced.

Units of Measurement

Authors should express all measurements in conventional units, with Système International (SI) units given in parentheses throughout the text. Figures and tables should use conventional units, with conversion factors given in legends or footnotes. In accordance with the Uniform Requirements; however, manuscripts containing only SI units will notbe returned for that reason.

Abbreviations

Except for units of measurement, abbreviations are discouraged. Consult the Scientific Style and Format: The CBE Manual for Authors, Editors, and Publishers (6th edition. New York: Cambridge University Press, 1994) for lists of standard abbreviations. Except for units of measurement, the first time an abbreviation appears, it should be preceded by the words for which it stands.

Drug Names

Generic names should generally be used, except for studies on comparative effects of different brands. When proprietary brands are used in research, include the brand name and the name of the manufacturer in parentheses in the Methods section.

For any more detail about the writing style for your manuscripts refer to:

http://ijbmc.org

International Journal of Body, Mind & Culture
Cross-Cultural, Interdisciplinary Health Studies

Table of Contents

DOI: 10.22122/ijbmc.v6i1.153 Published by Vesnu Publications

International Journal of Body, Mind & Culture
Cross-Cultural, Interdisciplinary Health Studies

Fostering Care Sensitivity: From Therapy to Healing

Farzad Goli[1]

[1] Professor, Faculty Instructor, Energy Medicine University, California, USA AND Danesh-e Tandorosti Institute, Isfahan, Iran

Editorial

Citation: Goli F. **Fostering Care Sensitivity: From Therapy to Healing.** Int J Body Mind Culture 2019; 6(1): 1-2.

Received: 20 Jan. 2019
Accepted: 5 Feb. 2019

Psychosomatics is not only a discourse and a field of knowledge but a theme of care and cure which a therapist should be aware and cautious of.

Sensitivity to the interwoven contexts of life, illness, and therapy has been added by psychosomatics to the biomedical model of care.

The psychosomatic approach is a bridge between various clinical specialties (Fritzche, 2004) and the groundwork for understanding and managing general adaptation and healing response (Goli, 2010, pp.133, 174).

The main concepts of psychosomatic medicine are the contextual factors that affect all sorts of therapy from surgery to psychotherapy. Contextual issues such as doctor-patient relationship and communication, clinical reasoning, placebo response, epigenetics, attachment style, coping strategies, lifestyle, family structure, resources, and salutogenesis are the most important factors that psychosomatic caregivers should know, be aware of, and apply in their practice. Contradictorily, biomedicine is focused on contents such as signs, symptoms, disease, pathogenesis, and disabilities.

Clinical education and training mostly stresses the recognition and interpretation of signs and symptoms, reducing them to diseases, and approaching its etiology, pathology, and/or symptoms. Evidently, biomedical education is knowledge/technique-based and problem-focused by nature, while psychosomatic education in addition to knowledge and technique needs some insight and emotion-based training in order to engage with patients' phenomenal world, relational map, and moment–to–moment emotions and reflections. Fostering these thematic expertise requires different didactic objectives, tools, and techniques.

Supervision, balint groups, live interviews, case discussions, role playing, and other skill-based educational techniques are used to meet these contextual educational objectives.

These methods can play an important role in the effectiveness of treatment, but before and more than that are critical with the aim of promoting care sensitivity. Everybody knows implicitly or explicitly that healing atmosphere is very similar to parenting ambiance. Even a paternalistic biomedical visit includes many elements of care.

Corresponding Author:
Farzad Goli
Email: dr.fgoli@yahoo.com

There are many correlations between attachment in child-parent and client-therapist contexts. Attachment style can be mentioned as one of the predictors of rapport, compliance, and even healing response.

Asymmetric relationship, bounding behavior, and care giving/taking roles are some of the contextual sensitive caregivers in both parenting and therapy contexts that can create a secure and healing atmosphere. Care sensitivity, as Ainsworth (1968) described for a good parent, has levels, namely, "sign recognition", "appropriate interpretation", "proper response", and "prompt response".

A therapist, like a good mother, needs accurate and specific sign recognition, proper conceptualization and explanation of signs, appropriate response in the form of secure relationships, rapport and a feasible management plan, and prompting of the desired response in clients via positive reflection, exploring resources, shared decision-making, homework, and follow-ups.

These competencies are the requirements of caring for child development needs as well as salutogenesis and sustainable development of health. A sensitive caregiver is the facilitator of life and healing through the development of balance in the body, security in emotions, and coherence in narrative.

To train sensitive caregivers, we should change the approach used in our educational program from a positivistic approach to a more phenomenological one, and we should extend the boundaries of clinical education from knowing and acting as a therapist to the more emotional and reflective territory of being a healer.

Conflict of Interests

Authors have no conflict of interests.

References

Ainsworth, M. D. (1969). Object relations, dependency, and attachment: A theoretical review of the infant-mother relationship. Child Development, 40(4), 969-1025.

Fritzche, K. (2014). What is psychosomatic medicine? In K. Fritzche, S. McDaniel, M. Wirsching (Eds). Psychosomatic medicine: An international primer for the primary care setting (pp.3-9). New York, NY: Springer.

Goli, F. (2010). *Bioenergy economy: A methodological study on bioenergy-based therapies.* Bloomington, In: Xlibris.

DOI: 10.22122/ijbmc.v6i1.150 Published by Vesnu Publications

International Journal of Body, Mind & Culture
Cross-Cultural, Interdisciplinary Health Studies

(Body) Psychotherapy Regarding Tension between Professionalization, Occupationalization and Professional Ethics

Ulrich Sollmann[1]

[1] Dipl. rer. soc., Guest Professor, Shanghai University of Political Science and Law, China

Theoretical Study

Abstract

Psychotherapy is, on the one hand, a certain form of helping people in personal need and, on the other hand, it is a profession, a service. The development towards a profession includes the development of certain quality criteria, structures, and regulations for the training as well as the social anchoring of the activity and its recognition. However, it also includes professionalization, this is to be understood as the development of a general ethics and personal ethos. Both are value systems that give orientation to both the therapist and the patient. Professional and personal (self-) reflection are indispensable to achieving professionalization. The development of an ethics code also has an effect on psychological science.

Keywords: Ethics, ethos, Psychotherapy, Professionalization, Organizational discourse, Abuse, Ethics guidelines

Citation: Sollmann U. **(Body) Psychotherapy Regarding Tension between Professionalization, Occupationalization and Professional Ethics.** Int J Body Mind Culture 2019; 6(1): 3-13.

Received: 05 Nov. 2018
Accepted: 20 Jan. 2019

Introduction

In the last 30 years, "helping work" with people has not only developed rapidly, but has also become a sociologically and legally regulated profession. It therefore makes sense to look at what is meant by occupationalization/professionalization in detail. In addition, the development of ethical guidelines is a necessary further step in looking at what and how one does things in detail, and toward shedding light on the basic attitude with which one is active.

Corresponding Author:
Ulrich Sollmann
Email: nfo@sollmann-online.de

Professionalization and occupationalization are the process of development to become a profession or an occupation, as a social type of professional work.

According to Kalkowski (2019), occupationalization characteristics are as follows:

- Special fields of activity, special qualifications (skills and competences)
- Systematic vocational training with recognized qualification (accreditation and certificate)
- More or less high professional prestige (social position in companies and society)
- Characteristic mobility paths (ascent ladders, and further education and training)

- The individual's inner attachment to the profession (professional socialization and identity, and values)

While in the beginning, whether in psychotherapy or counseling, the focus was on qualification and the development of quality standards, in the context of professionalization this was condensed into generally applicable standards and competence characteristics that were shared by the majority of the people involved. In Kalkowski's scientific literature, the term profession is reserved for the academic field. This leads to quality improvements, standardization, and ultimately to an improvement in the results and a corresponding comparability of results to and inclusion of scientific research. "In return for the autonomy granted by society, professionals are expected to perform outstandingly and to commit themselves to professional ethics, which reward society with high prestige and income" (Kalkowski, 2019).

The better *professionalization* succeeds, the better known it becomes in society and the sooner a profession can develop. This is characterized, among other things, by the fact that a professional career is appropriate, combined with certain access requirements and qualifications, development opportunities, goal formulation, ethics, etc. It is part of the nature of the challenges facing the profession "that knowledge cannot be regarded as "stable" in a given situation, that one must rather "swim" in it, and that the description of a situation includes the professionals" (Buchholz, 1999, p.139) The situations that characterize professional practice are complex, uncertain, unstable, and unique, and they require value decisions and cannot be fully described (Buchholz, 1999, p.193ff.). They require permanent (self-) reflection.

Finally, a professionalization occurs through the development of appropriate organizational structures, structures that guarantee the training, the professional practice, the examination of that practice, and the development of the professional practice. This also includes professional regulations. Such forms of organization in the counseling and therapeutic field can be professional associations, psychotherapists' chambers, training institutes, university training courses, etc. In my opinion, professionalization aims at the interplay between occupational and professional development within the framework of specific institutionalization, organization, or structures.

Role and function of professional ethics and ethos

The better this occupationalization is accepted in society, the more likely it is that the professional ethics developed in each case will have an effect. Professional ethics can be understood to mean personal values that are important in exercising the tasks of that occupation. In addition, there is also the totality of the values and norms of the respective occupation, the profession, which are to be absolutely observed in the exercise of that activity. Professional-professional behavior, goal-oriented behavior, and the personal basic attitude of the active persons, the service providers, are oriented towards these professional ethical principles. Compliance with this behavior is checked by the organizations, associations, institutions, educational establishments, etc. in question and, if necessary, individuals are warned against or even punished for lack of compliance.

Cierpka (1997) postulated four additional criteria that define the profession of the psychotherapist:

The self-observation of the therapist: This includes the demand for a better understanding of one's own person in order to achieve personal maturity and professional success, and adequate self-control. The psychotherapist can only heal others if he is also concerned about his own health, in the sense of personal care.

Training and practice: Training and consecutive experience change the treatment technique, and thus, the therapist's tools of

the trade. However, these changes do not remain part of "external nature". The experiences obtained in dealing with people also have an effect on the therapists and lead to personal developments; this is a lifelong process.

Person / personal needs of the therapist: This refers to self-reflection, integration, and corrective self-understanding. The means to ensure this are teaching therapy, supervision, the climate of ethical culture in one's own professional organizations, etc.

Self-reflection: This refers to an examination of the various aspects of the profession. The psychotherapist refers to empirical research, the acquisition of professional and practical knowledge, and lifelong learning. This has and always will have an active part in the discourse of professional ethics and personal ethos. According to Willutzki, Botermans, and the Society for Psychotherapy Research (SPR) Collaborative (1997), however, a corresponding competence development is a constructive, rather than an instructive, process that does not function like a Nuremberg funnel.

Behavior based on professional ethics is an essential aspect of the quality of the respective service as well as a relevant factor in the social acceptance of it.

Ethics is in a constant, discursive process and can never be conclusively defined. Many people working in the field of "human work" therefore experience ethics as the heart of the profession. On the one hand, such an impression results from the fact of the intensive and engaged arguments on the topic of ethics. If psychotherapy can be understood "as the art of understanding in a caring, helpful, and interpersonal encounter" (Tibone, 2017), ethical guidelines act as protection for the therapeutic relationship. In this respect, they create identity. Tibone (2017) therefore points out that the ethical guidelines of the DGPT (Deutsche Gesellschaft für Psychoanalyse, Psychotherapie, Psychosomatik und Tiefenpsychologie; German Society for Psychoanalysis, Psychotherapy, Psychosomatics and Depth Psychology) "usually do not list the prohibition of certain attitudes and behaviors, but rather create the positive picture of the desirable..... Such ethical guidelines try to answer the question "How can I treat well? They appeal to the power of the ego ideal (a realistic ego ideal) and allow - if they are really read - a strengthening, positive identification, while the notion of prohibition awakens unconscious, very widespread fantasies of punishment, which can easily be followed by corresponding internal resistance measures" (Tibone, 2017). In my opinion, such an attitude reflects something that could be described as the "heart" of one's own “helping work”. Ethics and self-commitment are to be distinguished from pure professional (service) action based on orders and carried out. After all, the basic ethical attitude "in and towards" one's own activity is always implicitly an action designed for ethics. One can therefore also speak of a permanent ethical discourse in which both the individual person (the individual service provider) and the organization as a whole must be included.

Foucault, on the other hand, finds stronger words to define ethics and calls it a "battlefield". Thus, ethics is also something fluid and dynamic, i.e., behind every morality there is an enormous conflict between different forms of arguing for the binding (Foucault, 2019). Ottomeyer (2008) also sees this event as a territorial struggle on the background of the practical and economic perspective of the profession. "People who have completed a psychotherapy training want to secure their livelihood...., it has to be marketed, therefore you compete on the psychotherapy market and of course you have to raise your own school to support the aura of the special" (Ottomeyer, 2008).

In distinction to this, but also in personal expansion, personal ethos can be seen and evaluated. In educational terms, ethos refers

to the moral attitude of a person, a community, or a special social group (e.g., a service provider) in the context of one's own professional activity.

The Duden (German Dictionary) defines ethos as "an attitude shaped by the consciousness of moral values or an overall attitude as ethical consciousness". Ethos can (must?) also be seen in contrast to professional ethics. While professional ethics, one could almost say, shows the ethical guidelines and regulates the handling of these guidelines, ethos is more in the "synonym field of morality, personal sense of duty, sense of duty, loyalty to duty, morality, sense of responsibility, morality" (Duden 2015). It thus also expresses itself as a professional "habit of living", as a personal basic attitude within the framework of professional activity.

Instrumentalisation of ethics in power discourse

Christof Stock (2019) offers in his present guide for professionals in counseling and therapy a kind of toolbox for the "practice of one's own occupation". After all, the relationship with clients is always a professional-personal one, and therefore, also a legal one. Stock wants to describe, explain, and make useful the legal framework, which will be discussed in the following section. The development of occupationalization in the "field of helping work" leads above all to occupational associations, scientific societies, and occupational organizations, which serve to represent the interests of the profession. The more an occupational organization, such as further education institutes and occupational associations, develops in the therapeutic and advisory field, the more it is characterized by its own dynamics and the further this organization can distance itself "from the object of its work", the client/patient. A professional ethics, which is oriented towards the interests of the professionals as a professional group and those of the target groups, can act in the sense of a corrective to structure and prevent possible dangers. This includes, among other things, a discursive process of scientification with a stronger inclusion of social science traditions with regard to "helping work."

Hockel (1999) makes it clear, even before the Psychotherapists Act was adopted [The psychotherapists act was adopted in Germany in 1999 and it regulates the role of psychotherapists, the legal frame of occupation, and the role and function of professional (self-) organization. This psychotherapist act does not regulate psychotherapy, but the role and function of the psychotherapist.], that both medical treatment and the psychological psychotherapist are (more medically) constructs. Such constructs are created by humans and occupational groups and are not primarily shaped by the object of work, i.e., the patient and his symptoms of illness.

In this context, he explains that only doctors define what a sick person is. It remains open how the terms illness, medical, psychotherapeutic treatment, and "what is in need of treatment" are defined in psychotherapy guidelines. The extent to which the specific interests of patients are taken into account as independent issues within the framework of the psychotherapy guidelines has been the subject of constant discussion since the Psychotherapists Act came into existence, and the aforementioned construct is conditionally questioned. Such a discourse represents an important corrective to the implicit power dynamics in the field of psychotherapeutic activity, training, and development.

In this context, Hockel (1999) refers to the difference between psychological expertise and medical expertise, a difference which certainly exists and which logically should lead to a different professional ethical viewpoint. At this point, I will refrain from going into the discussion, which is certainly useful, as to who is entitled to practice medicine and how. If such a discourse reflects, on the one hand, factual and ethical

aspects, it is, on the other hand, also a means/instrument in a power discourse.

Therapeutic institutions and organizations, such as training institutes, are discursive places of power. Therapeutic training institutes are like a system that "contains such high oedipal gratuities, as soon as one has penetrated to the - as Kernberg (2007, p 186) calls it - power elite.... that it is equal to a direct satisfaction of the oedipal phantasm. It is very difficult to question the system itself from the position of this gratification" (Zagermann, 2014, p. 12). Kernberg even speaks of a "self-engendering", "self-proclaimed", and "self-preserving power elite" (Kernberg 2006, p.161, 2007, p.186; Sollmann, 2008).

The necessity of addressing such power relations within the framework of professional ethics is reflected in the logic of professional ethics itself; it also makes systemically clear the paradox that exists in such an organization. Can and should this be applied not only to the therapist-patient relationship, but also to the way in which the respective professional organization applies professional ethics to itself? Therefore, an important yardstick for the implementation of professional ethics is the, one might say, ethical climate culture within the organization itself. This makes the professional application of professional ethics possible or more difficult and is on a permanent discursive test bench due to professional ethical incidents. "Because of the real existing power gap between teacher and student, the education system in all psychotherapeutic schools is a gateway for the establishment and permanent establishment of abuse of power.... It only becomes problematic if the training methods force infantilisation and regression and the abuse of power is institutionally anchored" (Wirth, 2007).

Zagermann (2014) therefore believes that it is an illusion to think "that the individual could evade this unconscious dynamic of the institution in which he finds himself". Whether an organization/institute/association has abused or anchored its power is reflected, on the one hand, in the statutes/statutes/structure of the organs in the association. Even if today ethics committees are an integral part of the organizational structure as a rule, they often embody, to the greatest possible extent, the basic orientation of professional ethics. On the other hand, in rarer cases, there are only basic remarks on the procedure of dealing with ethical guidelines and hardly any arbitration or mediation committees. Democratic structures in society and politics make a clear distinction between their legislative and executive branches. If this does not happen in a training institution or in a professional association, abuse of power is anchored, potentially and structurally. At this point, I do not want to go further into specific dynamics of the abuse of power.

From a psychoanalytical and organizational point of view, one can also understand what happens in a psychotherapeutic organization in terms of the self-idealization of the functionaries. One of the roots for this is "...the ambivalence of the idealization, of the person... (of the school founder, the author) who consequently withdraws this idealization through a collective identification with... (the school founder, the author), which leads to the self-idealization of... (the person responsible for training, the author) as the guardian of the true teaching and the pure gold of... (the respective psychotherapeutic method, the author). This is about the longing for the appropriation of the creative capacity of the founder of the ... (own psychotherapeutic school, the author) and the appropriation of the father's phallus with all the aggression contained therein directed against the father" (Zagermann, 2014, p. 28). Unfortunately, it is not possible for me at this point, although this is appropriate, to respond to specific dynamics of abuse of power.

"Helpful work" in the field of tension between service, successful occupationalization, and reflexivity

"Helping work" with people is counseling, therapy, psychotherapy, coaching, supervision, and mediation. Moreover, a promising, successful, but also lucrative service sector has developed, which is being used by more and more people. If the work, and by this I mean the "helping work" with people, was initially based on a specific, often personally supported motivation, it has varied, been specified, and technically and substantially developed over the last 30 years. In the beginning, it was personal initiative, individual commitment, or the endeavor of educational institutions to professionalize "helping work" to justify it scientifically and to test it or to make it verifiable, but the way was paved for what could be called occupationalization.

As previously stated, occupationalization is characterized by, among other things, scientification, institutionalization, and expertise, especially in the field of "helping work" in which a positive professionalization has developed to the extent that in many cases a social-scientific orientation and an increase in reflexivity have become visible or a leading paradigm. The sociology of professionalization therefore states, and this applies in particular to "helping work", that the fact that psychology can no longer claim to offer an objective and reliable truth, but at most a plurality of transient truths, can compel one toward reflexivity, which is guaranteed precisely by the social sciences. One can regard the development process of qualification, occupationalization, professionalization, and development of professional ethics as successful, even if in individual cases there are quite different developments in the fields of counseling, coaching, psychotherapy, and supervision. They can only be compared to a limited extent. Structurally or sociologically, however, they are subject to a similar dynamic.

Determination and implementation of ethical guidelines

The need to develop and define professional ethical guidelines arises from the special need to protect the people being helped, be they clients or patients. "Comparable to the situation between parents and children, patients are entrusted with their care and are therefore also largely unprotected against abuse of psychotherapeutic power" (Schleu, 2018). However, it also results from the potential and/or structurally conditioned danger of abuse of power in organizations. Finally, the necessity also arises from the fact that the persons involved are in some cases in complex dependency relationships. This is how one meets others as a colleague, as a trainer, as a certifier, as an ethics officer, etc. The possible danger of narcissistic abuse of power as well as of role diffusion or overlapping in principle can be counteracted by professional ethics. However, this can also be seen as an expression of the general defense against ethical discourses (Tibone, 2017). One is the opinion that it would be sufficient to have ethical guidelines. If the ethical body of rules then lacks information on implementation and application of the guidelines, or on the structure of the procedure, it is to be feared that the ethical guidelines thus formulated will have more of the character of an announcement. A specific form of concrete defense in individual cases can be the behavior of members, namely "preferring not to learn anything about the cases and to have to vote on them at all, but to leave the decision to the board or the arbitration commission (the author: insofar as there is an arbitration commission) itself" (Tibone, 2017). In principle, one can understand such a pattern of behavior as arising from the unconscious imagination; "ethical principles and legal norms would .....be superego norms to be rigidly combated" (Tibone, 2017). This also seems to be part of a great narcissistic fantasy that can be understood as an expression of one's own powerlessness in the occurrence of serious

border violations.

The reflections of Richter (1963), Schmidbauer (1977), and Willi (1975) on the specific role relationships, diffusions, and collusions point to two typical (helper) role types. "Either the therapist seeks a substitute in the patient for an aspect of his own self (narcissistic projection) or he wants to urge the patient into a role of being a substitute for another partner (transference)" (Wirth, 2007).

In principle, it seems as if these role types could also be transferred in principle to organizational relationship patterns. If such a role dynamic serves the therapist to stabilize the fragile self-esteem through admiring dependency, one could fear that many dependency relationships, especially in educational institutions, embody a special form of organizational dependency.

Possible differences in the formulation and design of these ethical guidelines are due to the particularities of the respective occupational group, the respective professional association, or the specific training organization, or the respective level of professionalization. On closer examination of the established ethical guidelines, however, two aspects stand out, as already mentioned. On the one hand, there is often no detailed definition of implementation rules, namely a procedure for dealing with the ethical guidelines. On the other hand, quite a number of professional groups or associations or institutes find it difficult to apply and implement the ethical guidelines in practice if they are applied in practice in individual cases. There are very different reasons for this. I would like to briefly mention a few of them at this point:

- The circle of relevant, interrelated persons within the scope of the established ethical guidelines of an institute is so small (one is so familiar) that there are no representatives who would have sufficient distance, neutrality, and objectivity for the professional application of ethical guidelines.

- The drafting of ethical guidelines, in addition to their implementation and handling, can often collide with the internal (power) dynamics in the respective association/institute/profession. Thus, the procedure for dealing with ethical guidelines rather reflects power interests that are expressed in the respective procedure/handling of the ethical guidelines.

- Even if there are ethical guidelines, perhaps even references to the procedure or effects/consequences, the respective ethics committees have no arbitration function. Ethics committees then tend to have a subordinate function or fulfill orders from the superordinate (power) committees in the respective organization. This is an explosive dilemma at a time when the higher-level body itself is part of the ethics case.

- Even if at best the ethics-committee and the mediation-committee are structurally anchored, specific difficulties may still arise in individual cases. If no relevant solution/arbitration can be found in the treatment of a specific ethics case, there is no regulation as to how to proceed. Which instance is then addressed? Which next higher function can then help? In my opinion, the corresponding responsibility for dealing with such special cases must be structurally anchored.

"Helping work" and dealing with legal provisions

Occupationalization and professionalization, or legal regulation of professional activities, absolutely require a legal orientation. This is reflected in a basic orientation, in a specified guideline, but also in concrete tools, in application-related toolboxes.

Christof Stock's book "Rechtlicher Leitfaden für Beratung, Therapie, Psychotherapie in humanistischen Verfahren"(Legal Guide for Counselling, Therapy, Psychotherapy in Humanistic Procedures - Coaching, Supervision, Mediation; A manual for psychosocial professions, Verlag für Humanistische Psychologie, Cologne) is a concrete, pragmatic, meaningful, and relevant guide.

This legal guideline for counseling, therapy, and psychotherapy in humanistic procedures only refers to the German situation, and yet his proposals can be helpful for colleagues in other countries. The structure of Stock's book can be transferred to other countries; the concrete legal provisions of each country has then to be added.

Whereas in the past, according to Stock, when there was "sand in the gearbox", one could perhaps get everything running again with a "screwdriver" or a little common sense, it is more advisable today to go to a specialist workshop. Therefore, why, one might ask, should one concern oneself with legal questions, even if the law seems to have become so complicated that it would perhaps be better to consult a lawyer?

Stock addresses those "human-workers"; I would also like to address those persons who are active in helping, namely those who are active in the field of counseling, therapy, etc. This activity presupposes knowledge of where one stands as a service provider.

The relationship with the clients is a professional-personal relationship, and thus, also a legal relationship. In the background, there is always a legal framework to be pointed out and explained. It must be taken into account that this is not a voluntary service, but an obligatory, binding, and, if necessary, legally enforceable service.

In the first part of his book, Stock describes the legal bases on which a consultant, therapist, etc. operates. In the second and third parts, he deals with the legal position that can be taken as an employed person in general or in a specific occupational field. Understandably, there are clear differences between the consulting field, the therapeutic field, and the psychotherapeutic field.

In Part 4, Stock deals with the relationship between the "human worker" and the client/patient. This, of course, is characterized by trust, good chemistry, personal circumstances, and by certain obligations. Stock explains in detail what this means and, above all, how one takes this into account, satisfies the information requirement, observes confidentiality, guarantees digital communication, complies with the abstinence requirement, etc.

The fifth part refers to the surrounding dimension, the health and social system, and one learns about triangular and quadrangular relationships "which can make their contribution to the financial security of employment". Finally, in the appendix, Stock offers sample texts that can be used as a legal toolbox.

To explain briefly, the book fills a clear gap in the context of the professionalization of psychotherapy, coaching, and supervision. It is a careful, detailed, clearly understandable, and experienced book on a subject that is usually only neglected in the context of training and practice. Stock is a proven connoisseur of the subject, having been involved for more than 25 years with the legal questions of the profession, in particular with questions of ethics. His experience before all German courts up to the Federal Constitutional Court is reflected in the thoroughness and comprehensibility of his remarks. I highly recommend this book. It is necessary in the practice of every colleague.

General and discursive ethical guidelines

Stock also quotes the ethical guidelines of the German Association for Gestalt Therapy. He emphasizes how important it is to develop ethical guidelines, and to give the ethics committee an arbitration function. It becomes complicated when role conflicts arise. In order to maintain the necessary objectivity and distance, members of the ethics committee should not have any further function in the association. Furthermore, they should have no further role relationship with the persons concerned, be it through (previous) training or through specific project work, if necessary, external experts would have to be called in.

Moreover, professional regulations, laws, and ethical guidelines of a professional

organization may collide. This is particularly the case if, for example, a training institute operates on a national level and at the same time as an affiliated or accredited institute on an international level. The latter would be expressed in the fact that there is, for example, a European or international company that develops and controls the training curricula and awards accreditation to local or regional institutes after a qualified examination of a corresponding application. What should be done in such a case? How does one deal with a possible collision between ethical guidelines and possible impact on the accreditation/license?

Finally, professional ethical guidelines in the sense of ethical goals can only have a concrete effect if concrete criteria have been formulated for achieving these ethical goals. These can be of a general nature (e.g., prohibition of sexual relations with patients/clients). However, these should always be formulated concretely enough; they must make sense in relation to the corresponding professional context and must be achievable or feasible. If one understands the role and function of professional ethics in this sense, then a constant review, redefinition, and alteration is required in order to be able to adjust to the changing social and professional reality in a process-oriented manner. What was frowned upon or even prohibited some time ago or earlier within the framework of professional ethics can change over the course of time into a reorientation in line with social development. Here is an example: In the past, the therapist may have shaken the patient's hand to greet him/her during the first conversation, and only shaken his/her hand a second time to say goodbye in the last therapy session. However, today, there are quite different forms of greeting. Some do it like the therapists used to; others perhaps greet each other with a hug. Some say "Du" (the German salutation for friends and family; others stay with the "Sie" in the mutual address (the official salutation for business and public).

Ethics in the field of "helping work" therefore consists of indispensable, unchangeable, and fixed codices (e.g., no sexual relationship) and others that have grown out of the concrete social and cultural development in each case.

Thirdly, there are codices that have a scenic and processual effect in individual cases.

Beauchamp and Childress have formulated six ethical principles, which belong to the fixed, to be fixed, not changeable, and basic ethical principles. They serve as basic orientation. In addition to the "principles of respect for autonomy, care, equality and justice, truthfulness, confidentiality, this also includes the principle of non-harm" (Schleu, 2018, p.16). In this respect, the requirements of professional law and professional ethics go beyond the rules of the Penal Code.

The principles formulated by Beauchamp and Childress must be concretized and weighed against each other in individual cases. Thus, for example, the principle of damage avoidance in the sense of refraining from harmful interventions may conflict with the principle of social welfare. Interventions could play a role as harmful interventions, which should of course be avoided, especially in the case of "intervening therapies". However, damage can also be caused in economic terms by the fact that psychotherapies last longer than professionally indicated. Such relationships are tantamount to dependency relationships, which are not only a malpractice, but also a violation of ethical principles.

Epilog

Becoming a psychotherapist is a personal career choice. The activity relates to the concrete needs/problems of the client and takes place within the framework of professional diagnostics and indication. This activity is also embedded in a legal as well as organizational-institutional framework.

Professional ethics shapes the character of the respective "helping work" in the

therapist-client or client-consultant-relationship, or in the relationship of colleagues within the organization. In addition, ethics determines the role, function, and meaning of the activity carried out in the organizations/institutions developed within the framework of the profession.

Finally, ethos characterizes the personal attitude/conviction of the people working in the field of "helping work".

The current debate about professional ethics and the concrete implementation/application therefore currently represents a central and significant challenge for each individual. To face this challenge is a permanent characteristic of one's own professional activity. It accompanies one concretely, every day in the therapy/consultation process. Nevertheless, it also corresponds to an implicit demand within the field of "helping work" to live together with others in discourse.

Only if it is possible to develop a consistent theory independent of the founder of the school, which then triggers its own dynamic of development according to its implicit logic, can the school develop further on the subject level.

That is why psychotherapeutic organizations are considered the best in the relationship with the founder; only if it is possible to "kill" the founder, will the former students become adults and capable of learning (Simon, 2008, p. 193). Psychotherapists should not lose sight of this dynamic. To face it processually seems to be both a categorical imperative (Kant, 2011) and an ethical one (von Foerster, 1993).

Conflict of Interests

Authors have no conflict of interests.

Acknowledgments

None.

References

Ambuhl, H., Orlinsky, D., & SPR Collaborative, R. N. (1997). Zum Einfluß der theoretischen Orientierung auf die psychotherapeutische Praxis. *Psychotherapeut, 42*(5), 290-298.

Beauchamp, T. L., & Childress, J. F. (2013). *Principles of biomedical ethics* (7th ed.) Oxford, UK: Oxford University Press.

Buchholz, M. B. Psychotherapie als Profession (1999). Gießen, Germany: Psychosozial-Verlag.

Cierpka, M. (1997). Psychotherapeutinnen und Psychotherapeuten und ihr Beruf. *Psychotherapeut, 42*(5), 267-268.

Cierpka, M., Orlinsky, D., Kächele, H., & Buchheim, P. (1997). Studien *über* Psychotherapeutinnen und Psychotherapeuten. *Psychotherapeut*, *42*(5), 269-281.

Duden (2015), Deutsches Universalwörterbuch, Berlin, Bibliographisches Institut

Foucault, M. (2019). Sexualität und Wahrheit, Bd. 4: Die Geständnisse des Fleisches, Frankfurt a.M,, Suhrkamp Verlag

Himmer, N. Philosophische Nachhilfe für Nerds. (2019). Available from: URL: https://www.faz.net/aktuell/beruf-chance/informatik-und-ethik-gehoert-das-zusammen-15971263.html. Accessed 4, January, 2019.

Hockel, C. M. (1999): Psychotherapeutische Behandlung – Konsequenzen der gesetzlichen Anerkennung als Heilberuf. Report Psychologie, 24, 108- 112.

Hoff, E. H. (1998). Probleme der Psychologie als Profession. Report Psychologie, 23(1), 18–25.

Kant, I. (2011). Kritik der praktischen Vernunft. Verlag, Germany: Anaconda.

Kernberg, O. F. (2006). The coming changes in psychoanalytic education: part I. *Int.J.Psychoanal., 87*(Pt 6), 1649-1673. doi:9ARNL1524QYLRWRF [pii]. Retrieved from PM:17130087

Kernberg, O. F. (2007). The coming changes in psychoanalytic education: Part II. *Int.J.Psychoanal., 88*(Pt 1), 183-202. doi:1RNX2D4LHEB14V2A [pii]. Retrieved from PM:17244574

Märtens, M. (2002). *Therapieschäden: Risiken und Nebenwirkungen von Psychotherapie*. Mainz, Germany: Grünewald-Verlag.

Ottomeyer, K. (2008). Gespräch mit Univ.-Prof. Dr. Klaus Ottomeyer. *Psychotherapie Forum, 16*(4), 172-178.

Richter, H.E. (1963). El*tern, Kind und Neurose. Zur Psychoanalyse der kindlichen: Rolle in der Familie*. Reinbek, Germany: Rowohlt-Verlag.

Schleu, A. (2018). *Sexueller Missbrauch in der Psychotherapie*. Psychotherapeutenjournal, 1, 11-19.

Schmidbauer, W. (1977). *Hilflose Helfer*. Reinbek, Germany: Rowohlt-Verlag.

Simon, F. B. (2008). "Er findet die von ihm selbst versteckten Ostereier" Identifikation, Ritualisierung und Lernen am Modell. *Psychotherapie Forum, 16*(4), 192-193.

Sollmann, U. (2008). Affektive Gratifikation und Organisationsentwicklung. *Psychotherapie Forum, 16*(4), 179-183.

Sollmann, U. (1999). Was macht Psychotherapie aus? *Psychotherapie Forum, 2*(Suppl 7), S72.

Stock, Ch. (2019) Psychotherapie, Beratung und Supervision im Humanistischen Verfahren – Ein rechtlicher Leitfaden. Gevelsberg, Germany, EHP-Verlag

Tibone, G. (2017). Jenseits ethischer Grenzen. Nachdenken über einen dunklen Bereich psychoanalytischer Tätigkeit. In B. Unruh, I. Moeslein-Teising, & S. Walz-Pawlita (Eds.), *Grenzen* (pp. 130-147). Gießen, Germany: Psychosozial-Verlag.

von Foerster, H. (1993). *Wissen und Gewissen - Versuch einer Brücke*. Frankfurt, Germany: Suhrkamp Verlag.

Willi, J. (1975). *Die Zweierbeziehung*. Reinbek, Germany: Rowohlt-Verlag.

Willutzki, U., Botermans, J. F., & SPR Collaborative, R. N. (1997). Ausbildung in Psychotherapie in Deutschland und der Schweiz und ihre Bedeutung für die therapeutische Kompetenz. *Psychotherapeut, 42* (5), 282-289.

Wirth, H. J. (2007). Narzissmus und Machtmissbrauch in der Psychotherapie. *Psychoanalytische Familientherapie*, *8*(1), 85-98.

Zagermann, P. (2014) Thesen zum Herz der Finsternis. Der ungelöste Ödipuskomplex der psychoanalytischen Institutionsbildung, Vortrag DPV, Bad Homburg, 22.11.2014.

Kalkowski, P. Zur Klärung der Begriffe Beruflichkeit und Professionalisierung". Available from: http://docplayer.org/16942270-Peter-kalkowski-zur-klaerung-der-begriffe-beruflichkeit-und-professionalisierung.html. Accessed, 2019.

Ethos. (2019). Available from: URL: https://www.duden.de/rechtschreibung/Ethos. Accessed, 2019.

Wikipedia. Ethos (2019). Available from: URL: https://de.wikipedia.org/wiki/Ethos. Accessed, 2019.

Ethik ist ein Kampfplatz. (2019). Available from: URL: https://www.deutschlandfunkkultur.de/foucaults-letztes-buch-ethik-ist-ein-kampfplatz.2162.de.html?dram%3Aarticle_id=409961&fbclid=IwAR0h0T5GXQIYbD4T-8fFOkOCmQYc5dBureandKmIO167cYsoq4KiWT5n_P4. Accessed, 2019.

DOI: 10.22122/ijbmc.v6i1.151 Published by Vesnu Publications

International Journal of Body, Mind & Culture
Cross-Cultural, Interdisciplinary Health Studies

Consciousness system

Shahram Bagheri[1]

[1] Danesh-e Tandorosti Institute, Isfahan, Iran

Theoretical Study

Abstract

The aim of the current essay is to present the focal points of what Niklas Luhmann describes as human consciousness. Luhmann recognizes consciousness as an entity and reality, which cannot be reduced to other disciplines such as biology or sociology. The whatness and features of consciousness become clear through identifying the internal structures, procedures, elements, and logic of consciousness itself. Luhmann attempted to show all of these through having a systemic view of consciousness. He recognizes consciousness as an autopoietic system whose rule-governedness and specific boundaries separate it from biology and society.

Keywords: Consciousness, Consciousness system, Human

Citation: Bagheri S. **Consciousness system.** Int J Body Mind Culture 2019; 6(1): 14-20.

Received: 05 Jan. 2019
Accepted: 10 Feb. 2019

Introduction

Human being has consciousness (German: Bewusstein). By making use of their senses, perception, interpretation, process of remembering and forgetting, self/other/future-expectations, attention, awareness, organizing structures, language, thought, and cognition, human beings become aware of what happens inside and outside of themselves. In addition, human beings are aware of their being conscious and can think about the whatness and howness of their consciousness; they attempt to understand and know consciousness, being conscious, and become conscious by the help of consciousness. These led many to identify human consciousness as the greatest astonishing thing in existence and that which distinguishes human beings from other animals and things. Finding out the whatness and howness of the phenomenon of consciousness is undoubtedly the key to finding the answers to fundamental questions on human life. Nevertheless, comprehensive knowledge about consciousness, clarifying its internal procedure, structures, and elements, separating and showing consciousness boundaries and explaining its relations to nervous system, biological facts, unconsciousness, reflections, and domains of society and culture should be simultaneously acknowledged as the greatest intellectual and scientific challenges. Amongst these attempts, those who have reduced consciousness to neocortical and biochemical processes or to society and culture in order to

The Persian version of this article was published previously in Tan, Ravan, Farhang Journal 2015, 3-4, p.141-151.

Corresponding Author:
Shahram Bagheri
Email: daneshtandorosti@gmail.com

show its whatness and howness have had no achievements. As a whole, consciousness has some qualities and functions that are not found in the above-mentioned disciplines and external processes, and thus, such attempts have reached no inclusive and satisfying results. Hence, we need an approach that acknowledges consciousness as an independent entity, can explain what is specific to or is raised from this totality, and of course, specify its relation to other realities. We can find such an approach in the views of Niklas Luhmann.

In his examinations and theoretical investigations, more than anything else, Luhmann wants to develop a theoretical framework and system for understanding and knowing society and social facts. For this reason, he separated the three realms of society, individual consciousness, and biology. He distinguishes each one of these realms as independent of the other two realms and notes that they have their own specific internal logic, structure, procedures, and elements. Despite their independence, these three realms are interconnected and interrelated. Each realm is an independent system with clear-cut boundaries, organizes and maintains itself based on the autopoiesis principle, and has structural connection with other systems. Therefore, human being and human consciousness belong to a realm outside the realm of society and social affairs in Luhmann's view. However, as a classic sociologist who has first dealt with explaining society based on systems theory, he made use of this theory to explain the individual consciousness system and its relation to the social system. The aim of the current essay is to introduce his general achievements in this respect. Luhmann has developed his theory on consciousness titled "Die Autopoiesis des Bewusstseins" in a systematic and specialized way. His reflections on consciousness, which are dealt with in this essay, are adapted from this manuscript. In a methodological way, he has developed a theory about the consciousness phenomenon which is not reducible and explains its themes based on its own necessities, but does not ignore the relationship of consciousness with other areas. Therefore, familiarization with his theories can promote the advancement of knowledge regarding consciousness. Luhmann's theory on consciousness is one of the explanatory possibilities among other possibilities; however, it is evident that for a more exact knowledge of complicated, difficult, far-reaching, and enigmatic phenomena such as consciousness, we should make use of other views.

1

Luhmann founded his theory on consciousness on the concept of autopoiesis. This concept was first introduced by Humberto Maturana – the Chilean neuroscientist – for describing biological phenomena. Luhmann redefined and extended it to fields of consciousness and society. He explains that autopoietic systems create and recreate their creating elements through the help of their own creating elements. The components themselves determine and specify anything that these systems use as units, that is, their elements, processes, and structures, and the units themselves. In other words, there is no system input and output (Luhmann, 2008). However, this does not mean that an autopoietic system such as consciousness has no relationship with its periphery, but rather that it is not dependent upon its periphery in the process of creating and recreating itself. In this sense, consciousness is a closed and autopoietic system and is reality independent of other levels of reality such as society and biology. However, it is evident that no consciousness emerges until a live body, brain, and nervous system exist; what Luhmann means simply is that consciousness has a logic and structure that is not gained from other levels of reality. Furthermore, consciousness systems have a direct and non-mediating relationship with other

consciousness systems, but have no non-mediating availability to each other. In contrast, every consciousness system has two possibilities to have a mediating contact with other consciousness systems; these are observation (Beobachtung) and intentionality in the process of communication (Kommunikation) (Bagheri, 2012).

Each of these two possibilities makes the communication possible in a specific and restricted framework. Observation is constantly conducted from a certain window such as expectations and based on differentiation – for instance, the differentiation between being conscious and unconscious. Meanwhile, awareness of the observer is aware of what has remained unobserved and unclear in observed consciousness. For this reason, the other consciousness system remains constantly as the black box for the observer as the observer can never observe all his/her consciousness background (Luhmann, 2008). The other possibility – intentionality to communication – inevitably leads to social systems emergence. In their own turn, social systems also make possible communication in a selective way. From Luhmann's point of view, this shows that consciousness is a closed system. The many more limitations and lower acceleration and speed of communication compared to consciousness makes consciousness aware of its separation and differentiation from social fact. Consciousness understands through communication that it cannot retell what is happening within it; it also finds out that it is sometimes misunderstood (Luhmann, 2008). After this general definition, an investigation of the constructing elements and autopoiesis process of consciousness system is necessary.

2

In Luhmann's view, the feature of consciousness system is that each present moment is replaced with the present moment that proceeds it. Each present moment which takes place vanishes at the same moment. In this way, consciousness is a time-bound and fluent phenomenon in time. These events, which replace each other, are basic elements that form consciousness system. As these element are event-like and transient, the sustainability of consciousness system depends on its non-intermittent and continuous element-making. Luhmann calls this situation "dynamic sustenance". Of course, dynamic sustenance and general maintenance of the system are not achieved by reproduction. Rather, each element has to be distinct and recognizable from its former and latter elements. Therefore, no element exists in an isolated and separated manner, but they gain their meaning in a chain of elements and in the framework of autopoietic consciousness system (Luhmann, 2008). Consciousness system and its structures underlie the continuous moment-to-moment emergence of basic events. The interchangeability of each event or element guarantees the maintenance of consciousness system. The capacity of the system for organization is disturbed if each element is fixed in consciousness (Luhmann, 2008).

However, for a more exact knowledge of the way in which consciousness system functions, its constructing units and elements have to be determined and defined more exactly. Hence, Luhmann calls these elements "observer's thought" (Gedanke). Nevertheless, by this name he does not mean the capacity of consciousness for thinking and contemplating. He means that which takes place in the mind and constructs the chain of thinking ranges from exact, clear, and mathematical thought to imagination (Luhmann, 2008). Each thought comes and passes, and therefore, is an event. However, all these event-like thoughts are interconnected, take place, and emerge in a selective way.

Every thought, which takes place in the now and present moment, observes its prior thought. This observation (Beobachtung) distances itself from that thought and recognizes it as a specific and separated unit detached from itself. This observer's thinking

makes thinking of a specific thing possible. Luhmann named the observed thought image (Vorstellung) and the observation imagining an imagination (Luhmann, 2008). The observer's thought sees the observed thought or image as a separated and atomistic part on the one hand, and as an image of one thing on the other.

By separating the observer's thought from image, we can conclude that consciousness goes on looking at the past while backing to the future. "In contrast to time, consciousness looks at the past and always sees itself in the future and where it was. Hence, it is only the past of consciousness, which can find the future beyond itself by seeing its goal and accumulated expectations. Consciousness does not follow a goal in itself, but understands what has happened. Consciousness becomes aware of itself. It is not that consciousness sets the goals in the future, which does not yet exist, to follow them. Rather, it finds what is in the future in memory and…" (Luhmann, 2008). Consciousness does not work retroactively, but proactively; however, by looking at the past, it finds the accumulated expectation of the future" (Luhmann, 2008). Now the important question is "How does a thought observe, determine, and specify an image and at what basis?"

3

The observer's thought observes the thought prior to itself, which is the same as imagination. The observer's thought observes based on the criterion of being self-referent and other-referent. Therefore, the observed thought is the imagination of something; this thought is intentional and returns to something either external, other-referent, or, to the consciousness itself and imagining, self-referential.

On the one hand, consciousness is being aware of a perceived object. On the other hand, the condition for becoming aware of what is imagined and the condition for consciousness in general is being self-referent or observing the self. If it was not self-referent, other-referents, like beads of a torn chain, would follow each other and pass without becoming conscious (Luhmann, 2008). In Luhmann's view, the basic constructing elements of consciousness system do not have a specific quality and orientation in themselves individually; rather, they gain them through being observed based on self-referentiality and other-referentiality. Evidently, the observer's thought is not observed while observing; hence, consciousness system remains unclear continuously.

Each element of consciousness system orients either to itself or to another thing. It allows the element next to it in order to make itself or another thing the focus of its attention. It is due to this very point that consciousness system is not like a simple machine that creates a specific output from a specific input. However, self-referent always accompanies other-referent in consciousness system. To put it another way, being aware of a certain affair always takes place in the framework of and is embedded in consciousness system. This framework can be very versatile. It can be either lively or awake or tired, either saturated with knowledge or thirsty for knowledge, either experienced or inexperienced. In addition, that which the self has experienced recently influences events and experiences which ensue. Hence, consciousness system is not a simple machine. Even if this system's procedures and events are recognized as deterministic and its inputs are very few, the events and its outcomes cannot be predicted since consciousness system takes various states and situations. Therefore, consciousness system has no way other than knowing its behavior to emerge from its decisions (Luhmann, 2008).

Consciousness systems reach a general image of themselves based on their history and states. They fix this image as their identity. This fixed identity then becomes a framework for determining the position and

relationship between events and case perceptions. This causes the experience of freedom since consciousness system gains the ability to assess and select through knowing itself and its identity. Evidently, the fixed conception of the self can be either flexible or inflexible. However, it is fundamentally relative and one of the many possibilities, and hence, replaceable affairs. One of the possibilities is always identified as necessary and other possibilities are negated. As Luhmann states, it is for this reason that keeping the conception of the whoness of the self requires emotional accompaniment and high support (Luhmann, 2008). Consciousness system contacts external world events through selecting and mediating the neurocerebral system, which has its own specific and different organization. Subsequently, it reconstructs these conceived events based on its conception of itself and its internal structures. Now the important question is "How do the internal structures of consciousness system emerge?"

4

In Luhmann's view, continuous elements of consciousness system are separated from the structures of the system. Structures emerge inside the consciousness system itself and are metamorphosized. The initial point of a structure is an imagination's observation by the observer's thought. Observing an imagination gives it the possibility to find itself and determine its position in the vague instant of the present moment, and makes possible the transition to the next moment. For this transition to happen, some relations transform to expectation due to repetition and being established, and consciousness will take a structure in this way. However, the emergence of a structure takes place in respect to its being either self-referent or other-referent. With the help of this difference, consciousness distinguishes itself from the other and defines a relation with it. The relation that is given to a certain thing is established and transforms to structure through repetition. These structures provide orientation and framework for the autopoiesis process of consciousness; however, they themselves can change and ruin themselves. In Luhmann's view, consciousness can re-employ what has initially taken place accidentally or in a specific situation, keep it in itself, and make a structure from it. In this way, what has been initially a single case or small thing may transform into a framework (Luhmann, 2008). For instance, an individual is stung by a wasp; he/she then emphasizes on and repeats this case and external experience for himself/herself, and in this way, the structure of fearing a wasp is formed in him/her. Another instance is the experience of someone who can convince others in a certain situation that his/her idea is true. Then, he/she attributes this experience to his/her inherent capability to convince others, and in this way, a specific personality trait and behavioral structure is gradually formed in him/her.

Another name that Luhmann gives to consciousness-specific structures is "expectation". Emerged expectations in consciousness system are confirmed and either satisfied or unsatisfied in each case or specific situation. Consciousness finds satisfaction with expectations as a normal affair and is not excited or occupied by them. Through the confirmation of expectations, the autopoiesis process of consciousness system goes on smoothly based on being aware of itself. Conversely, consciousness recognizes unsatisfied expectations as abnormal. Non-satisfaction has a threatening function for consciousness system and makes consciousness busy with itself. It is in this point that emotions and feelings can be evoked and come to help and accompany the consciousness system to overcome the emerged disorder (Luhmann, 2008).

Luhmann identifies the emergence and complication of the structures of consciousness system as an intra-systemic event. Overall, this emergence is not possible

without the association of consciousness system with its periphery and specific peripheral situation. In Luhmann's view, consciousness system is associated with the neurophysiological system of the body as well as social system; however, its inner logic is independent of the two. Luhmann explains this point more based on the relationship between language and consciousness. Luhmann believes that the view that consciousness finds complicated structure only through language has to be revised. He claims that language is not the constructor of the observer's thought, imagination, and structural procedures of consciousness. In addition, themes of consciousness cannot be reduced to what is expressed through language. Language does not determine internal logic and the themes of consciousness system. Nevertheless, consciousness system makes use of language; it needs language so that the transition from one thought to the other happens more smoothly. Language makes possible the expressing of thoughts and constructing elements of consciousness clearly and differentially without the disturbance of consciousness system. Consciousness continuously becomes more complicated. For this reason, it is at risk of becoming vague and disturbed. Language as a tool prevents this risk (Luhmann, 2008). Another significant question is "How does consciousness system recognize itself from the peripheral world and find itself distinct from it?

5

By considering itself as an integrated thing and differentiating itself from its periphery, especially from the society, a consciousness system will have a relation and relationship with it. Luhmann seeks the roots of this process more inside the consciousness system and less in social and linguistic relations. In his view, for consciousness to find itself as an individual and differentiated thing, it has to disjoin itself from something and find itself distinct from that thing. Luhmann calls this thing body. Consciousness finds that the body always exists, and can be observed in separation from transient states such as fatigue or pain. Consciousness reaches integration and individuality through seeing this body, its biological foundation. Consciousness recognizes itself with the help of the body and by distinguishing itself from the body. Nevertheless, this does not mean that consciousness sees the body as the other or in differentiation with itself since this other is not the external world, but its own body. Therefore, in a complicated way, the live body and consciousness are in separation from each other and simultaneously with each other, belong to each other, and none of them is perceived without the other (Luhmann, 2008).

In Luhmann's view, it is through recognizing and differentiating its own body, that consciousness knows where it is. Furthermore, it becomes familiar with the experience of being observed through this. Being aware of being observed is only possible through being aware of the visibility of the body. This makes consciousness accept the responsibility of the body, although it cannot thoroughly observe or survey the body. In this way, consciousness responds to others' expectations, it either accepts them or refrains from them and participates in the social system.

The key point here is that consciousness experiences itself as an integrated whole and has to appear as an integrated whole before others through experiencing others' expectations and being experienced by others. Luhmann, however, sees and finds all of these from the window of consciousness system and identifies them as separated from social system processes; consciousness does not adopt all the norms and behavioral patterns constructed by society through its contact with society. Rather, everything that comes from outside is reconstructed and understood based on internal needs and necessities. Among these necessities, the most important include the continuity of the self-

autopoieses procedure of the consciousness system and replacing the constructing elements of this system. Consciousness system inevitably goes from one observer's thought to the next observer's thought. For this reason, it uses whatever is accessible and is effective (Luhmann, 2008).

Conclusion

It was attempted in the current essay to briefly introduce Luhmann's view on consciousness phenomena. In the view of this well-known representative of the systemic view to human phenomena, consciousness is an independent and autopoietic system. Imagination and the observer's thought are fundamental constructing elements of this system. That which determines the content of these elements includes the perceptions and conceptions of consciousness system of itself.

Conflict of Interests

Authors have no conflict of interests.

Acknowledgments

None.

References

Bagheri, S. (2012). Negah-e koli bar rahyafte samaneie beh padidehaye ziat-e ensani [A general glance at systemic approach to human life phenomena]. Tan Ravan Farhang, 1(1,2), 121-130.

Luhmann, N. (2008). Die Autopoiesis des Bewusstseins. In Luhmann, N (Eds) Soziologische Aufklärung, VS Verlag für Sozialwissenschaften.

DOI: 10.22122/ijbmc.v6i1.142 Published by Vesnu Publications

International Journal of Body, Mind & Culture
Cross-Cultural, Interdisciplinary Health Studies

The Effectiveness of Mindfulness-Based Cognitive Therapy on Health-Related Quality of Life and Self-efficacy in Patients with Rheumatoid Arthritis

Mina Azarnik[1]

[1] MSc, Department of Psychology, School of Psychology and Educational Sciences, Isfahan Branch, Islamic Azad University, Isfahan, Iran

Original Article

Abstract

Background: The purpose of this study was to determine the effectiveness of mindfulness-based cognitive therapy (MBCT) on health-related quality of life (QOL) and self-efficacy in patients with rheumatoid arthritis.

Methods: The present experimental field study was conducted with a pretest-posttest design. The statistical population of this study included all patients with rheumatoid arthritis in Isfahan, Iran, in 2018. From among the statistical population, 30 patients were selected as the sample 15 of whom constituted the experimental group and 15 the control group. The measurement tools used included the Health-Related Quality Of Life Questionnaire (SF-36) and the General Self-Efficacy (GSE) scale. First, the pretest was performed in both groups. Then, the experimental group took part in 8 sessions of mindfulness training twice a week, each time for 1.5 hours. After the intervention, the posttest was conducted in both groups. The follow-up was performed 45 days later. Data analysis was performed using multivariate covariance analysis (MANCOVA) and one-way analysis of covariance (ANCOVA).

Results: The findings showed that the mean (standard deviation) of QOL of the experimental group was 79.8 (10.2) in the pretest, and increased to 82.8 (8.8) in the post-test ($P < 0.01$). However, the mean (SD) of QOL in the control group was 77.7 (9.2) and 77.8 (9.5) in the pretest and posttest, respectively. This difference was not statistically significant ($P < 0.05$). The mean (SD) of self-efficacy in the experimental group was 27.5 (8.1) in the pretest and increased to 33.4 (9.4) in the posttest ($P < 0.01$). However, the mean (SD) of self-efficacy in the control group was 26.1 (4.9) and 27.7 (6.6) in the pretest and posttest, respectively. This difference was not statistically significant ($P < 0.05$).

Conclusion: This study showed that MBCT has an effect on health-related QOL and self-efficacy in patients with rheumatoid arthritis. Mindfulness training is an effective therapeutic approach that is possible in the form of group work. Moreover, MBCT can provide a conceptual framework to help clients to adapt and accept their problems.

Keywords: Mindfulness therapy, Quality of life, Self-efficacy, Rheumatoid arthritis

Citation: Azarnik M. **The Effectiveness of Mindfulness-Based Cognitive Therapy on Health-Related Quality of Life and Self-efficacy in Patients with Rheumatoid Arthritis.** Int J Body Mind Culture 2019; 6(1): 21-6.

Received: 15 Nov. 2018
Accepted: 20 Jan. 2019

Corresponding Author:
Mina Azarnik

Email: mazarnik@yahoo.com

Introduction

Rheumatoid arthritis is the result of the complicated interaction of biological, psychological and social variables. Thus conceived, diversity in disorder manifestations has its origin in the interrelations between biological changes, psychological modes, and cultural and social backgrounds that form the patient's notion of his/her disorder as well as his response to it (Smolen et al., 2014). One of the disorders that influence all aspects of human existence, and in addition to physical problems and inabilities, has social and psychological outcomes like depression, distress and lack of a purposeful life is rheumatoid *arthritis*. This disorder is a chronic, multi-systemic, illness. In approximately two-thirds of patients, it gradually begins with fatigue, anorexia, general weakness and vague musculoskeletal symptoms, lasts for weeks or months, and when several joints, especially the joints of hands, wrists, knees, and feet, are symmetrically affected, the disorder starts to show itself. Inflammation in the joints causes pain, swelling, complete dryness of the joints, and, along with it, decreased muscle strength in the muscles attached to the joint and results in motor problems. This condition can sometimes be very painful, and in addition to the detrimental effects on the joints, the effect on other tissues and organs of the body reduces their longevity and effectiveness. In periods of silence, symptoms such as swelling, pain, sleep disorders and weakness disappear, but in others, the disease is always active and progresses with time (Lin et al., 2016).

This illness can overshadow the patient's evaluation of his health condition and quality of life (QOL) by creating physical, social and economic disorders. Therefore, the study of QOL can be very effective in guidance, preservation and development of health in various societies and cultures (Devlin, Shah, Feng, Mulhern, & Van, 2018). It is argued that individual QOL is a significant criterion of the effectiveness of health care measures and provides the path for prediction of occurrence of disability and death. Evaluation of QOL assists us in taking into consideration the problems of patients in a fundamental way (van Uem et al., 2016). Moreover, the study of QOL of the patients helps in the improvement of therapeutic plans and determination of the predicting factors of feeling good (Punnen, Cowan, Chan, Carroll, & Cooperberg, 2015).

Another significant factor that is affected by the disorder is the sense of self-efficacy. According to the definition offered by Bandura, self-efficacy features an individual's sense of self-trust in a behavior. Self-efficacy beliefs determine the feeling, though, motivation and behaviors of people. Researchers believe that the sense of self-efficacy takes form as the result of facing challenges and continuous and gradual conduction of behavior, and it can be improved by implementation of programs designed based on the needs of patients (Chiarotto et al., 2016). Individuals with a powerful sense of self-efficacy choose more challenging duties. They think of ambitious goals, make more efforts and are more steadfast in tough conditions (Haugland, Wahl, Hofoss, & DeVon, 2016). Jerusalem and Mittag (1995) showed that self-efficacy has a positive correlation with optimism, self-respect, self-overcoming and progress motivation, and a negative correlation with anxiety, depression and neurosis.

One of the treatments of the third wave is mindfulness-based cognitive therapy (MBCT) that has been designed for special medical cases in patients with chronic pains and stresses related to the illness (Frank, Reibel, Broderick, Cantrell, & Metz, 2015). Mindfulness with such factors as acceptance of reality, presence in the present time and avoidance of rumination includes such goals as the promotion of wellbeing, awareness of self, and association of environment with mind

modification. Contrary to many of the schools of psychoanalysis and, of course, in line with the goals and theses of positive psychology, the goal of mindfulness is not ideological changes, but rather contribution to the awareness of processes that provide the path for the individual to have a pathological mentality or be bogged down in those mental states (Abbott et al., 2014). Given the fact that mindfulness as a lifestyle in line with human primordial nature is capable of influencing the human emotional system, i.e., thoughts, bodily senses, raw feelings, and their practical impulses, it can change their life and promote the quality of their relations with others and a world based on a compassionate and realistic vision. MBCT is used with aim to decrease psychological symptoms of frustration and QOL, and in an increasing way both in psychological and physical health. According to this theory, an individual's vulnerability before psychological disorders depends on the extent of his dependency on one aspect of the mind that would unintentionally stop other aspects (Herman, Anderson, Sherman, Balderson, Turner, & Cherkin, 2017). The studies show that mindfulness training has an effective impact on health in the form of reduction of pain, depression and distress. Moreover, Kabat-Zinn (2003) has shown that mindfulness techniques are influential in increasing muscular tranquility as well as reducing depression and stress. de Vibe, Bjørndal, Fattah, Dyrdal, Halland, and Tanner-Smith (2017), in their study entitled *Mindfulness-based stress reduction (MBSR) for improving health, quality of life and social functioning in adults: A systematic review and meta-analysis,* have concluded that mindfulness training improves health, QOL and social functioning in adults.

Methods

The current study was an experimental field study with a pretest-posttest design and a control group. The experimental group and control group were chosen based on convenience sampling method. Before the implementation of experimental interventions, a pretest was conducted in the experimental and control groups, and finally, a posttest was done at the end of treatment. The difference between the pretest and posttest of each group was studied in terms of statistical significance. Thus, the effectiveness of MBCT was implemented as an independent variable so that its influence on the health-related QOL and self-efficacy of patients with rheumatoid arthritis in Isfahan city, Iran, was clarified as a dependent variable. The statistical population of this research included all patients with rheumatoid arthritis in Isfahan city in 2018. The statistical sample included 30 patients chosen by means of convenience sampling. Thus, first, from among all patients with rheumatoid arthritis in Isfahan city, 100 patients were selected, and then, all of them completed the Health-Related Quality of Life Questionnaire (SF-36) and General Self-efficacy Scale (GSE). Finally, 30 patients with the minimum grades were chosen; 15 patients formed the experimental group and the other 15 were chosen as the control group.

Health-related Quality of Life Questionnaire (SF-36): This questionnaire has been designed by Ware and Sherbourne in the US for measurement of the QOL of healthy and ill people (Ware & Sherbourne, 1992). The validity and reliability of the Persian version of the SF-36 have been confirmed by Montazeri, Goshtasebi, Vahdaninia, and Gandek (2005) through an independent survey of the citizens of Tehran. This questionnaire includes 36 items with 8 subscales related to health in which two subscales of the physical and mental factors are evaluated. The physical factor includes the aspects of physical function, role restriction due to physical problems, physical pain and general health. The mental factor includes the aspects of role restriction due to emotional problems, mirth and joy, social function and mental health.

Table 1. The mean and standard deviation of the scores of variables in the pretest and posttest

Scale	Training type	Pretest Mean ± SD	Posttest Mean ± SD	P
Health-related quality of life	Experimental	79.8 ± 10.2	82.8 ± 8.8	0.001
	Control	77.7 ± 9.2	77.8 ± 9.5	0.590
Self-efficacy	Experimental	27.5 ± 8.1	33.4 ± 9.4	0.001
	Control	26.1 ± 4.9	27.7 ± 6.6	0.630

SD: Standard deviation

The items are rated based on the RAND system ranging from 0 to 100. By scaling the scores of each subscale and dividing the number obtained by the number of questions in all subscales, the score for that scale is obtained. High scores in every subscale represent a better condition. Finally, the scores of these 8 subscales are summarized into the physical factor (physical health) and mental factor (mental health).

General Self-Efficacy Scale: The GSE scale has been designed by Schwarzer, Jerusalem, and Lange (1983). This questionnaire includes 10 items scored based on 4-point Likert scale ranging from 1 to 4 (strongly disagree = 1, hardly agree = 2, almost agree = 3, and totally agree = 4). The score of each individual in the rating scale is equivalent to the total sum of his scores in all questions. The score of this test ranges from 1 to 40. The internal consistency of the GSE was reported as 0.75-0.90% based on the reliability of Cronbach's alpha (Luszczynska, Scholz, & Schwarzer, 2005).

Results

Among the patients, 16 (53.3%) were adolescents and women and 14 (46.6%) were men. The mean (standard deviation) of age in the experimental and control groups was 36.19 (8.5) and 35.05 (8.1), respectively.

According to the results presented in table 1, the SF-36 and GSE scores were not meaningful in Levene's test; thus, it can be stated that the two groups were homogeneous in terms of the variance in the research variable before the interventions ($P > 0.05$). The evaluation of the assumption of normality of data distribution shows that all scales of the SF-36 and GSE follow the assumption of normality ($P > 0.05$). Moreover, none of the scales of the SF-36 and GSE was meaningful in terms of homogeneity of regression ($P > 0.05$).

The results presented in table 2 show that the mean (SD) of the QOL score of the experimental group was 79.8 (10.2) in the pretest and increased to 82.8 (8.8) in the posttest ($P < 0.01$). However, the mean (SD) of the QOL score of the control group was 77.7 (9.2) in the pretest and reached 77.8 (9.5) in the posttest; this variation was not statistically significant ($P < 0.05$). The mean (SD) of the self-efficacy score in the experimental group was 27.5 (8.1) in the pretest and increased to 33.4 (9.4) in the posttest ($P < 0.01$). However, the mean (SD) of the control group was 26.1 (4.9) in the pretest and reached 27.7 (6.6) in the posttest; this difference was not statistically significant ($P < 0.05$).

Discussion

This study showed that by controlling pretest, a significant difference was observed between the experiment and control groups in terms of the dependent variables of QOL and self-efficacy. The results of this study are in line with the results of the research by de Vibe et al. (2017).

Table 2. Summary of analysis of covariance of the effectiveness of mindfulness-based cognitive therapy on health-related quality of life and self-efficacy

Variation source		Sum of squares	df	Mean of squares	F	P	Partial Eta-squared
Life in relation to health	Group effect	1054.82	1	527.41	11.93	0.001	0.29
	Error effect	2562.51	28	44.18			
Self-efficacy	Group effect	532.86	1	266.43	6.86	0.002	0.19
	Error effect	2251.13	28	38.81			

df: Degree of freedom

One can feasibly argue that in mindfulness and awareness skills in each instant the individual seeks to understand the patterns of thoughts, emotions and interaction with others so that later he can choose purposeful responses in a professional way instead of reacting in an automatic way with ordinary unconscious methods. Moreover, mindfulness allows the individuals to turn back and analyze their own living conditions and react based on a new method instead of the habitual norms (Frank et al., 2015). Given the fact that audacious behavior leads to the development of successful and open relationships, expression of positive emotions, love and appreciation, and an increase in self-respect and veneration in one's confrontation with others, mindfulness can improve self-expression and audacity. According to the cognitive perspective, distress and anxiety disorders are the results of incorrect, unreal and illogical thoughts and beliefs, particularly, illogical exaggerated beliefs concerning natural hazards. From the cognitive perspective, individuals acquire data, interpret and understand them and make use of them in solving their life problems. In MBCT (a clinical perspective based on cognitive theory), two goals are followed; first, individuals are forced to doubt their fundamental, but mistaken beliefs, and, second, to replace them with more constructive beliefs. Mindfulness is also one of the meditation techniques. Meditation is an act of mental awareness that includes emotions, memories and dreams. Through meditation, we can recognize our mistakes and arrange our mind in a way that we can handle thinking and reaction in a more realistic and honest way (Cairncross & Miller, 2016). We learn to expect less from the people and objects around us, and thus, to reduce our sense of despondence and despair. This causes our relations to improve and our life to become more stable and satisfying. We obtain an extensive and clear sense of our environment. One of the mechanisms of mindfulness is "metacognitive awareness" that refers to beliefs that people have about their thoughts. This knowledge includes beliefs about particular types of thinking as well as a set of beliefs regarding the functionality of memory or power of concentration. These beliefs influence an individual's response and the regulation of his/her thought. As a result, according to the mentioned points, one can argue that mindfulness has an undeniable effect on the concern over the body picture and uniqueness of patients on the waiting list for aesthetic surgery. Shapiro, Bootzin, Figueredo, Lopez, and Schwartz (2003) declared this process a reaction. It is assumed that this process plays an effective role in the changing of automatical processes in thoughts, sensations and behaviors. Thus, MBCT leads to the improvement of health-related QOL and self-efficacy of patients. As a result, individuals probably practice forgiveness and compassion toward themselves and others. Previous studies show that individuals who show love and kindness in their practices are improving in terms of mental health and emotional balance (Taylor, Cavanagh, & Strauss, 2016). MBCT provides the individual with the opportunity to be more receptive toward others and accept others without prejudice and negative presumptions. Moreover, it persuades people to be tenderer towards others and pay attention to their needs. In fact, with the increase in the capacity for mindfulness, sympathetic concerns and emotional regulation, mindfulness provides stages for increase in the communicational capacity of students.

Conflict of Interests

Authors have no conflict of interests.

Acknowledgments

The researcher is obliged by all those who helped him in the process of implementation of this study as well as those who took part in the trial.

References

Abbott, R. A., Whear, R., Rodgers, L. R., Bethel, A., Thompson, C. J., Kuyken, W. et al. (2014). Effectiveness of mindfulness-based stress reduction and mindfulness based cognitive therapy in vascular disease: A systematic review and meta-analysis of randomised controlled trials. *J Psychosom.Res*, *76*(5), 341-351. doi:S0022-3999(14)00054-3 [pii];10.1016/j.jpsychores.2014.02.012 [doi]. Retrieved from PM:24745774

Cairncross, M., & Miller, C. J. (2016). The Effectiveness of Mindfulness-Based Therapies for ADHD: A Meta-Analytic Review. *J Atten.Disord*. doi:1087054715625301 [pii];10.1177/1087054715625301 [doi]. Retrieved from PM:26838555

Chiarotto, A., Vanti, C., Cedraschi, C., Ferrari, S., de Lima E Sa Resende, Ostelo, R. W. et al. (2016). Responsiveness and Minimal Important Change of the Pain Self-Efficacy Questionnaire and Short Forms in Patients With Chronic Low Back Pain. *J Pain*, *17*(6), 707-718. doi:S1526-5900(16)00563-0 [pii];10.1016/j.jpain.2016.02.012 [doi]. Retrieved from PM:26975193

de Vibe, M., Bjørndal, A., Fattah, S., Dyrdal, D. G., Halland, E., & Tanner-Smith, E. E. (2017). Mindfulness-based stress reduction (MBSR) for improving health, quality of life and social functioning in adults: a systematic review and meta-analysis. Campbell Systematic Reviews 13:

Devlin, N. J., Shah, K. K., Feng, Y., Mulhern, B., & van, H. B. (2018). Valuing health-related quality of life: An EQ-5D-5L value set for England. *Health Econ.*, *27*(1), 7-22. doi:10.1002/hec.3564 [doi]. Retrieved from PM:28833869

Frank, J. L., Reibel, D., Broderick, P., Cantrell, T., & Metz, S. (2015). The Effectiveness of Mindfulness-Based Stress Reduction on Educator Stress and Well-Being: Results from a Pilot Study. *Mindfulness*, *6*(2), 208-216.

Haugland, T., Wahl, A. K., Hofoss, D., & DeVon, H. A. (2016). Association between general self-efficacy, social support, cancer-related stress and physical health-related quality of life: a path model study in patients with neuroendocrine tumors. *Health Qual.Life.Outcomes.*, *14*, 11. doi:10.1186/s12955-016-0413-y [doi];10.1186/s12955-016-0413-y [pii]. Retrieved from PM:26787226

Herman, P. M., Anderson, M. L., Sherman, K. J., Balderson, B. H., Turner, J. A., & Cherkin, D. C. (2017). Cost-effectiveness of Mindfulness-based Stress Reduction Versus Cognitive Behavioral Therapy or Usual Care Among Adults With Chronic Low Back Pain. *Spine.(Phila Pa 1976.)*, *42*(20), 1511-1520. doi:10.1097/BRS.0000000000002344 [doi]. Retrieved from PM:28742756

Jerusalem, M., & Mittag, W. (1995). Self-efficacy in stressful life transitions. In A. Bandura (Ed.), Self-efficacy in changing societies (pp. 177-201). New York, NY: Cambridge University Press.

Kabat-Zinn, J. (2003). Mindfulness-Based Interventions in Context: Past, Present, and Future. *Clin Psychol (New York).*, *10*(2), 144-156.

Lin, J., Liu, J., Davies, M. L., & Chen, W. (2016). Serum Vitamin D Level and rheumatoid arthritis disease activity: review and meta-analysis. *PLoS.One.*, *11*(1), e0146351. doi:10.1371/journal.pone.0146351 [doi];PONE-D-15-32843 [pii]. Retrieved from PM:26751969

Luszczynska, A., Scholz, U., & Schwarzer, R. (2005). The general self-efficacy scale: multicultural validation studies. *J Psychol*, *139*(5), 439-457. doi:10.3200/JRLP.139.5.439-457 [doi]. Retrieved from PM:16285214

Montazeri, A., Goshtasebi, A., Vahdaninia, M., & Gandek, B. (2005). The Short Form Health Survey (SF-36): translation and validation study of the Iranian version. *Qual.Life.Res*, *14*(3), 875-882. Retrieved from PM:16022079

Punnen, S., Cowan, J. E., Chan, J. M., Carroll, P. R., & Cooperberg, M. R. (2015). Long-term health-related quality of life after primary treatment for localized prostate cancer: results from the CaPSURE registry. *Eur Urol.*, *68*(4), 600-608. doi:S0302-2838(14)00844-6 [pii];10.1016/j.eururo.2014.08.074 [doi]. Retrieved from PM:25242555

Schwarzer, R., Jerusalem, J., & Lange, B. (1983 Apr 11-15). The change of self-concept with respect to reference groups in school. Proceedings of the Annual Meeting of the American Educational Research Association; Montreal, Canada.

Shapiro, S. L., Bootzin, R. R., Figueredo, A. J., Lopez, A. M., & Schwartz, G. E. (2003). The efficacy of mindfulness-based stress reduction in the treatment of sleep disturbance in women with breast cancer: an exploratory study. *J Psychosom.Res*, *54*(1), 85-91. doi:S0022399902005469 [pii]. Retrieved from PM:12505559

Smolen, J. S., Landewe, R., Breedveld, F. C., Buch, M., Burmester, G., Dougados, M. et al. (2014). EULAR recommendations for the management of rheumatoid arthritis with synthetic and biological disease-modifying antirheumatic drugs: 2013 update. *Ann Rheum.Dis.*, *73*(3), 492-509. doi:annrheumdis-2013-204573 [pii];10.1136/annrheumdis-2013-204573 [doi]. Retrieved from PM:24161836

Taylor B L., Cavanagh, K., & Strauss, C. (2016). The Effectiveness of Mindfulness-Based Interventions in the Perinatal Period: A Systematic Review and Meta-Analysis. *PLoS.One.*, *11*(5), e0155720. doi:10.1371/journal.pone.0155720 [doi];PONE-D-15-38979 [pii]. Retrieved from PM:27182732

van Uem, J. M., Marinus, J., Canning, C., van, L. R., Dodel, R., Liepelt-Scarfone, I. et al. (2016). Health-Related Quality of Life in patients with Parkinson's disease--A systematic review based on the ICF model. *Neurosci.Biobehav.Rev.*, *61*, 26-34. doi:S0149-7634(15)30027-0 [pii];10.1016/j.neubiorev.2015.11.014 [doi]. Retrieved from PM:26645499

Ware, J. E., Jr., & Sherbourne, C. D. (1992). The MOS 36-item short-form health survey (SF-36). I. Conceptual framework and item selection. *Med Care*, *30*(6), 473-483. Retrieved from PM:1593914.

DOI: 10.22122/ijbmc.v6i1.149 Published by Vesnu Publications

International Journal of Body, Mind & Culture
Cross-Cultural, Interdisciplinary Health Studies

The Effectiveness of Mindfulness-Based Cognitive Therapy on Catastrophizing and Anxiety associated with Pain in Adolescents with Leukemia

Mandana Sepanta[1], Marzieh Shirzad[2], Sara Bamdad[2]

[1] PhD in Psychology, Department of Psychology, School of Psychology and Educational Sciences, University of Isfahan, Isfahan, Iran
[2] MSc, Department of Counseling, School of Psychology, Islamic Azad University, Khomeinishahr Branch, Isfahan, Iran

Quantitative Study

Abstract

Background: Disorders and pain anxiety in adolescents with leukemia are very important. The purpose of this study was to determine the effectiveness of mindfulness-based cognitive therapy (MBCT) on catastrophizing and anxiety associated with pain in adolescents with leukemia.

Methods: A field experiment was conducted with a pretest and posttest design and control group. The statistical population of this study included all adolescents with leukemia in Isfahan, Iran, in 2016. Of these, 30 adolescents were selected as the sample (15 in the experimental group and 15 in the control group). The study tools used were the Pain Catastrophizing Scale (PCS) and the Pain Anxiety Symptoms Scale (PASS-20). First, the pretest was conducted in both groups. Then, the experimental group was subjected to 8 sessions of MBCT twice a week and each time for 1.5 hours. After the intervention, posttest was conducted in the two groups. Follow-up was conducted in both groups 45 days after the completion of the intervention. Data analysis was performed using multivariate covariance analysis (MANCOVA) and one-way analysis of covariance (ANCOVA).

Results: The results showed that MBCT decreased catastrophizing and anxiety associated with pain in adolescents with leukemia, and this reduction persisted at the follow-up stage.

Conclusion: The present study results showed that MBCT decreased catastrophizing and anxiety associated with pain. MBCT is an effective therapeutic approach that is possible in the form of group work. This method can provide a conceptual structure to help clients adapt to and accept their problems.

Keywords: Mindfulness, Catastrophizing, Pain, Anxiety, Leukemia

Citation: Sepanta M, Shirzad M, Bamdad S. **The Effectiveness of Mindfulness-Based Cognitive Therapy on Catastrophizing and Anxiety associated with Pain in Adolescents with Leukemia.** Int J Body Mind Culture 2019; 6(1): 27-34.

Received: 25 Nov. 2018
Accepted: 15 Jan. 2019

Introduction

Cancer is one of the major public health problems the incidence and mortality rate of which increase each year. According to previous research, cancer is the main cause of death in developed countries and the second leading cause of death in developing countries (Busjan, Hasenkamp,

Corresponding Author:
Marzieh Shirzad
Email: moshaver.6253@yahoo.com

Schmalz, Haak, Trumper, & Ziebolz, 2018). Across the globe, leukemia is the most common type of malignancy in children under the age of 5 years, has been reported more frequently in boys than in girls, and most cases have been observed in the age group of 2-4 years (Kim et al., 2017). Approximately 95% of cases of acute lymphoblastic leukemia (ALL) are diagnosed in childhood, and long-term survival of these patients is associated with adverse effects due to various therapies (such as chemotherapy and radiotherapy) during the course of treatment (Ren et al, 2017). Survival rate is the share of cancer patients who survive in a given period after diagnosis and is an appropriate indicator for assessing the effectiveness of care and diagnostic and therapeutic interventions for cancer (Jung, Tverdek, & Kontoyiannis, 2014). Although in recent decades, the survival rate of children with cancer has improved significantly and their five-year survival rate is 80%, there are many concerns about the survival of young people and young adults (Kong et al., 2015).

One of the components that causes more psychological problems in adolescents with leukemia is a disaster. Disaster is a negative emotional cognitive process that includes the exponential components of pain or distress and rumination. Pain calculation is one of the most important predictors of the therapeutic outcome of pain (Khongkow et al., 2016). Pain-induced disaster has a significant effect on pain experiences and is one of the small dimensions of pain matching that has a strong and stable relationship with pain experience. The most important impact of pain-induced disaster is that patients acquire an assessment of their pain that may make them feel tender or intimidated and fearful of experiencing pain in the future (Moore et al., 2015).

Anxiety is one of the factors that are effective in understanding and adapting to pain. For example, researchers have shown that various anxiety structures such as pain-related anxiety, health anxiety, trait anxiety, and anxiety sensitivity are related to pain experience (Gasser et al., 2014). Pain-related anxiety, a common and universal experience in humans, occurs at an intensity of extreme or severe. Pain-related anxiety has various aspects including physical (including increased heart rate), cognitive (including negative thoughts on pain), behavioral (including avoidance behaviors), and emotional (including fear of pain) (Karibe, Shimazu, Okamoto, Kawakami, Kato, & Warita-Naoi, 2015). Pain-related anxiety predicts pain behaviors, hospitalization duration, post-traumatic stress disorder (PTSD), and physical constraints and contributes to the development of chronic pain and anxiety disorders. If pain-induced anxiety is not revealed, it will present in the form of fear, sleep deprivation, depression, and inability, and will lead to ineffective coping and lack of patient collaboration with therapies (Lin, Wu, & Yi, 2017). Based on clinical evidence, anxiety leads to selective attention to threatening triggers. Many of the anxiety-related clinical theories have reported that attention bias toward threatening triggers prompted the rapid identification of these stimuli, and consequently, the formation and continuation of anxiety (Lerman, Rudich, Brill, Shalev, & Shahar, 2015).

Cognitive-behavioral therapy (CBT) was effective in helping adolescents with leukemia. One of the shortcomings of this treatment is that it does not include all aspects of the symptoms of the disorder, and further studies are recommended in this regard (Bohlmeijer, Prenger, Taal, & Cuijpers, 2012). Mindfulness training can be considered as an intervention to reduce disaster-induced pain and anxiety associated with pain because it is a stress reliever. From that point of view, irritability and mood fluctuations are one of the main problems in patients with leukemia. Mindfulness is a momentary experience in the present, and one of the consequences of the skill of mind-consciousness is the understanding that most

thoughts are oscillating and unstable and this present-day experience can be considered simply as a mental phenomenon in comparison with reality (Bluth, Gaylord, Nguyen, Bunevicius, & Girdler, 2015). Given that fluctuations are caused by hormones, mind-awareness skills are a good study for disorders (Baer, 2013). The inability to stay in the moment separates one from reality and does not allow one to understand the position correctly and provide reasonable answers to his life (Gu, Strauss, Bond, & Cavanagh, 2015). Many scientific studies have shown that the reason for many of the psychological problems of individuals is their absence from here and the present moment, their very moment of life, while perceiving the conscious minds of the inner and outer realms freely and without distortion provides one with the ability to deal with a wide range of thoughts, emotions, and experiences (both pleasant and unpleasant) (Mak, Chan, Cheung, Lin, & Ngai, 2015).

The presence of mind with components such as acceptance (reality), presence (in the present time), and avoidance (from rumination) includes goals such as promoting one's well-being and awareness and that of the environment associated with modifying the mind. Unlike many psychotherapy schools, and of course, consistent with the goals and assumptions of positive psychology, the purpose of using the presence of the mind is not to create ideological changes, but to help to be aware of the processes that lead a person toward the mentality of harm or in situ in those mental states (Pidgeon, Ford, & Klaassen, 2014). Studies have shown that mindfulness education has a variety of health outcomes such as pain relief and anxiety, depression, and stress reduction; in addition, studies by Kabat-Zinn (2003) showed that mindfulness techniques are effective in increasing muscle relaxation and reducing anxiety and stress. In the study by Bluth et al. (2015), mindfulness-based stress reduction (MBSR) as a promising intervention for the improvement of the symptoms of premenstrual dysmorphic disorder (PMDD) was carried out on 21 university students in North Carolina, USA. The results showed that after 8 sessions of MBSR, signs of stress such as depression, anxiety, mood swings, sensitivity, irritability, and conflict with others in the experimental group were significantly lower than the control group. However, a significant difference was not observed between the two groups in terms of symptoms such as headache, joint pain, and insomnia. Previous studies have shown that due to the high prevalence of this disorder, the effectiveness of mindfulness education on disaster and anxiety related to pain in adolescents with leukemia has not been studied. Therefore, in order to achieve this goal, the effectiveness of education on disaster awareness mindedness conception and anxiety associated with pain in adolescents with leukemia.

Methods

In this research, a field experiment was conducted with a pretest and posttest design and control group. The experimental and control groups were selected through available sampling method. The pretest was applied to experimental and experimental groups and a pretest was performed on them. Posttest was performed at the end of treatment. The difference between pretest and posttest in each group was statistically significant. Thus, the effectiveness of mindfulness education was applied as an independent variable in order to determine its effect on assertiveness disorder and pain-related anxiety among adolescents with leukemic in Isfahan, Iran, as a dependent variable. The statistical population of this study included all adolescents with leukemia in Isfahan in 2016. The statistical sample included 30 individuals from the statistical population, who were selected using available sampling method. First, 100 people were selected from among all leukemia adolescents, and then, all of them were tested for disaster

and anxiety associated with pain. Subsequently, 30 of those who obtained the lowest score in these tests were selected. Of these, 15 were selected as the experimental group and 15 were selected as the control group. The study inclusion criteria included hospitalization in Shariati Hospital in Tehran, Iran, due to leukemia in 2016, willingness to participate in the research, and age range of 13 to 18 years. The exclusion criteria included physical and psychological illnesses associated with leukemia and the supplying of incomplete and invalid information.

Ethical considerations included assuring the subjects that all their information will remain confidential, and be used for research purposes only. In order to observe their privacy, the name of the participants was not registered, and to ensure the process, all the questionnaires were conducted by the researcher himself. The participants were also assured that they could leave the study whenever they wished.

The Pain Catastrophizing Scale (PCS) was designed by Sullivan, Bishop, and Pivik in 1995 to assess an individual's catastrophic thoughts and behaviors. This self-administered questionnaire consists of 13 articles and requires at least 6 literacy classes to be answered. The scale has been designed to assess the various dimensions of pain catastrophizing and better understand the mechanism of the disaster-induced impact on pain experience. Factor analysis has shown that it includes the subscales of ruminations, magnification or exaggeration, and helplessness. The questionnaire assesses the three components of pain-related negative thoughts. Participants are asked to select a number from 0 (never) to 4 (always) to describe the frequency of occurrence of 13 different feelings and thoughts related to pain experience. Lower scores represent less disaster, disabling pain, and chronic pain condition. The reliability of this scale was obtained using Cronbach's alpha for the subscales of ruminations, magnification, helplessness as, respectively, 0.88, 0.67, and 0.98 and 0.92 for the whole scale (Nunes, 2014). In Iran, the convergent validity of this scale was calculated with the Beck Depression Inventory (BDI) and a positive and significant correlation (R = 0.46) was found between these two scales (Davoudi, Zargar, Mozaffaripour, Nargesi, & Molah, 2012). In this study, the Cronbach's alpha of the scale was 0.83.

A short version of the Pain Anxiety Symptoms Scale (PASS-20) is a self-report tool consisting of 20 statements that were made in 2002 by McCracken and Dhingra based on the original PASS-40 scale. The PASS-20 was used in the present study to measure pain-related anxiety. The PASS-20 consists of the four subscales of cognitive, escape-avoidance, fear, and physiological (McCracken, & Dhingra, 2002). Each item of the scale is scored on a scale ranging from 0 (never) to 5 (always) and the total score of the scale ranges from 0 to 100 (Davoudi et al., 2012). Davoudi et al. (2012), among a group of 50 patients with rheumatoid arthritis in Iran, calculated the reliability of this scale using Cronbach's alpha coefficient for the total pain anxiety score ($\alpha = 0.88$) and for the subscales ($\alpha = 0.44$-0.87).

A pretest-posttest design and follow-up was implemented in a control and experimental group. Mindfulness training will was held in 8 weekly sessions for an hour and a half. The treatment guide proposed by Kabat-Zinn (2003) was implemented (Table 1). The mindfulness educational package was also adapted to the characteristics of the clients. Each session started with a training session, and continued with discussions about the practice and homework assignments. Follow-up was conducted in both groups 45 days after the posttest. Therapeutic interventions were conducted during the treatment sessions.

Table 1. Mindfulness training of Kabat-Zinn (2003)

Meeting	Sessions
One	Meditation and exercise awareness, the technique of eating raisins, 45 minutes of body checks and talking about emotions and homework, attending the moment, and closing the technique of eating raisins with other activities
Two	Discussion on homework, barriers to practice, and mindfulness solutions for it, meditation and practice exercises, mind-seeing exercises, 45-minute sitting session meditation, and daytime breathing Homework: performing a body examination for 45 minutes and increasing knowledge level in daily activities such as eating, bathing, sitting, and brushing
Three	Discussion on homework, 45-minute meditation practice and body checks, myths about meditation, the completion of calendars, useful events, and 3-minute breath-taking practice Homework: calendar recording, pleasant events, and continuity of daily activities with awareness and the practice of meditation
Four	Home reviews, 45-minute meditation exercises, body check, stress response, 1-minute respiratory exercise, calendar completion, unpleasant events, and daily activities Homework: completion of the calendar of unpleasant events and 3-minute workout of the respiratory tract
Five	House home exam, 45-minute meditation practice and body check, 3-minute respiratory report, and completion of contact work to focus on interactions that matter to your major people during the week Homework: completion of the contact worksheet and accompanying daily activities with awareness
Six	Discussion on homework, 45-minute meditation practice, conflict management styles, and discussion on stress responses, individual responses to difficult situations, and alternative attitudes and behaviors Homework: 45-minute meditation exercises, body checks, and daily activities
Seven	Home study, 45-minute meditation exercises, body check, discussion of pain process, relief from pain and anger processes, and pain reporting Homework: 45-minute meditation and body check, daily activity continuity, and pain reporting
Eight	Home reviews, 45-minute meditation exercises and body checks, 3-minute breathing space, and correction of what has been taught so far, and questions about the whole intervention, such as Have the participants achieved their expectations?; Do they feel that their personality has grown?; Do they feel that their coping skills have increased; and Do they want to continue meditation?

The collected data were analyzed using descriptive and inferential statistics in SPSS software (version 22, IBM Corporation, Armonk, NY, USA). In order to describe the data, mean and standard deviations, inferiority analysis, analysis of covariance (ANCOVA), and the validity of the underlying assumptions were used.

Results

Among the adolescents, 16 (53.3%) were girls and 14 (46.6%) were boys. The mean (standard deviation) age in the experimental group was 19.19 (0.5) and in the control group was 15.5 (4.1). In terms of education, all of the adolescents were educated in the first grade.

The results show that none of the subscales in the lone test are significant among the scales related to catastrophic pain and anxiety related to pain; therefore, it can be said that the groups were homogeneous in terms of the research variables before the beginning of the intervention ($P > 0.05$). Considering that the significance level of the calculated value of the spider spheres is greater than 0.05 ($P > 0.05$) and the data assume homogeneity of covariance under question, ANCOVA can be used. In table 2, a summary of ANCOVA of grades is presented.

As shown in table 2, the summary of ANCOVA indicates that the effect of mindfulness training on disaster is significant. Pretest and posttest catastrophizing scores had a significant difference ($P < 0.05$). The results of ANCOVA indicated that the effect of mindfulness training on pain-related anxiety was significant.

Table 2. Summary of analysis of covariance to assess the effect of mindfulness-based stress reduction on the concept of disaster

Variables		SS	df	MS	F	P	Eta
Catastrophizing	Group	1054.82	2	527.41	11.93	0.0001	0.29
	Error	2562.51	58	44.18			
Anxiety associated with pain	Group	532.86	2	266.43	6.86	0.0020	0.19
	Error	2251.13	58	38.81			

df: Degree of freedom

Discussion

The study showed that, by pretest control, the significant levels of all tests indicated that among adolescents with leukemia in the experimental and control groups, a significant difference in at least one of the dependent variables (pain catastrophizing and anxiety related to pain). The results of this study were consistent with the results of Bluth et al. (2015).

Mindfulness allows individuals to look back on and analyze their living conditions, and react in a new way, rather than a habitual way (Frank, Reibel, Broderick, Cantrell, & Metz, 2015). Considering that behavior combined with rebellion promotes the development of successful communication and the expression of positive emotions, love, and appreciation, and increased respect and mindfulness can improve the expression of self and excitement. According to the cognitive perspective, anxiety and anxiety disorders are the result of false and unrealistic thoughts and beliefs, especially irrational beliefs that are exaggerated regarding natural hazards. The cognitive view holds that individuals acquire, interpret, and use information in solving their life problems. In rational-emotional therapy (a clinical approach based on a scholarly theory), two goals are pursued; first, individuals are made to doubt their fundamental, but mistaken, beliefs, and second, they are provided with more constructive beliefs. In mindfulness, one of the techniques is "meditation." Meditation is an activity of mental consciousness (including emotions, memories, and dreams). Through meditation, we can understand our mistakes and adjust our minds so that we can think and react more realistically and honestly (Cairncross & Miller, 2016). We learn to have fewer irrational expectations from people and things, as a result, we are less confused and frustrated, relationships improve, and life becomes more stable and satisfying. We develop a broad, clear sense of what is going on around us. One of the mechanisms of mind-consciousness is meta-cognitive awareness, which refers to the beliefs people have about their thinking. This knowledge includes beliefs about specific types of thinking as well as beliefs about memory efficiency or power. These beliefs affect how people respond and how their thoughts are regulated. As a result, according to the above facts, it can be argued that mindfulness has an undeniable effect on dissonance and anxiety related to the pain among adolescents with leukemia. Indeed, it seems that the tendency to engage in automated processes, rather than informed-based processes, with a lack of flexibility and awareness regarding the current moment, makes people think more and more about the present moment, and thus, its risk is more likely to increase. Based on the definitions of the presence of mind, it seems that a state of unconsciousness without an evaluation of the presence of mind can prevent the onset of pain assessment processes and, by interrupting or reducing habitual patterns in the face of different experiences, reduce pain intensity anxiety. Consciousness means the special, purposeful, and contemporary, and empty of prejudice and judgment. A conscious individual, at any moment, becomes aware of the mode of thought. For the mind, two main ways are considered, doing and being. Individuals learn consciousness to move the mind from one way to another. The mindfulness requires a behavioral, cognitive, and metacognitive strategy to concentrate the

attention process, and to the growth of a new perspective and the emergence of pleasant thoughts and excitements (Idusohan-Moizer, Sawicka, Dendle, & Albany, 2015).

Research carried out in laboratory experiments has shown that the manipulation of attention without correction or cognitive change causes a change in the mood. Researchers have shown that mindfulness education helps individuals modulate negative behavior patterns and auto-thinking thoughts and regulate positive health-related behaviors (Ruffault et al., 2017). In other words, educating mindfulness through the combination of vitality and clear experiences can lead to positive changes in disaster and anxiety related to the pain among adolescents with leukemia. Subjective education also helps the modification of unconscious feelings and increasing of awareness of psychological and physical emotions and helps the clear observation and acceptance of emotions and physical phenomena as they happen. Thus, it can play an important role in adjusting the anxiety scores associated with pain in adolescents with leukemia. This has been shown in previous studies to help educate the mindset in modulating negative behaviors and negative thoughts and causing positive health behaviors. In other words, it can be said that the education of the mind increases the attention of the individual towards emotional and psychological feelings, and the feeling of trust in life, deep sympathy, and real acceptance of life events (Jennings, 2015).

Conclusion

This study showed that mindfulness education has an impact on dissonance and anxiety associated with pain in adolescents with leukemia in Isfahan. Although drug and therapeutic interventions may have a greater impact on psychological issues and behavioral counseling on aggression and the reduction of physical discomfort, symptoms, and complaints, mindfulness awareness has also illustrated this effect.

Conflict of Interests

Authors have no conflict of interests.

Acknowledgments

The researcher would like to thank all those involved in the implementation of this research, as well as all the study participants.

References

Baer, R. A. (2003). Mindfulness training as a clinical intervention: A conceptual and empirical review. *Clin Psychol (New York)*, *10*(2), 125-143.

Bluth, K., Gaylord, S., Nguyen, K., Bunevicius, A., & Girdler, S. (2015). Mindfulness-based stress reduction as a promising intervention for amelioration of premenstrual dysphoric disorder symptoms. *Mindfulness (N.Y)*, *6*(6), 1292-1302. doi:10.1007/s12671-015-0397-4 [doi]. Retrieved from PM:26594254

Bohlmeijer, E., Prenger, R., Taal, E., & Cuijpers, P. (2010). The effects of mindfulness-based stress reduction therapy on mental health of adults with a chronic medical disease: a meta-analysis. *J Psychosom.Res*, *68*(6), 539-544. doi:S0022-3999(09)00415-2 [pii];10.1016/j.jpsychores.2009.10.005 [doi]. Retrieved from PM:20488270

Busjan, R., Hasenkamp, J., Schmalz, G., Haak, R., Trumper, L., & Ziebolz, D. (2018). Oral health status in adult patients with newly diagnosed acute leukemia. *Clin Oral.Investig.*, *22*(1), 411-418. doi:10.1007/s00784-017-2127-x [doi];10.1007/s00784-017-2127-x [pii]. Retrieved from PM:28536781

Cairncross, M., & Miller, C. J. (2016). The Effectiveness of Mindfulness-Based Therapies for ADHD: A Meta-Analytic Review. *J Atten.Disord*. doi:1087054715625301 [pii];10.1177/1087054715625301 [doi]. Retrieved from PM:26838555

Davoudi, I., Zargar, Y., Mozaffaripour, E., Nargesi, F., & Molah, K. (2012). The relationship between pain catastrophizing, social support, pain-related anxiety, coping strategies and neuroticism, with functional disability in rheumatic patients. *Health Psychology*, *1*(1), 59-73.

Frank, J. L., Reibel, D., Broderick, P., Cantrell, T., & Metz, S. (2015). The effectiveness of mindfulness-based stress reduction on educator stress and well-being: Results from a pilot study. *Mindfulness*, *6*(2), 208-216.

Gasser, P., Holstein, D., Michel, Y., Doblin, R., Yazar-Klosinski, B., Passie, T. et al. (2014). Safety and efficacy of lysergic acid diethylamide-assisted psychotherapy for anxiety associated with life-threatening diseases. *J Nerv.Ment Dis*, *202*(7), 513-520. doi:10.1097/NMD.0000000000000113 [doi]. Retrieved from PM:24594678

Gu, J., Strauss, C., Bond, R., & Cavanagh, K. (2015). How do mindfulness-based cognitive therapy and mindfulness-based stress reduction improve mental health and wellbeing? A systematic review and meta-analysis of mediation studies. *Clin Psychol.Rev., 37*, 1-12. doi:S0272-7358(15)00019-7 [pii];10.1016/j.cpr.2015.01.006 [doi]. Retrieved from PM:25689576

Idusohan-Moizer, H., Sawicka, A., Dendle, J., & Albany, M. (2015). Mindfulness-based cognitive therapy for adults with intellectual disabilities: an evaluation of the effectiveness of mindfulness in reducing symptoms of depression and anxiety. *J Intellect.Disabil.Res, 59*(2), 93-104. doi:10.1111/jir.12082 [doi]. Retrieved from PM:24020487

Jennings, P. A. (2015). Early Childhood Teachers' Well-Being, Mindfulness, and Self-Compassion in Relation to Classroom Quality and Attitudes Towards Challenging Students. *Mindfulness, 6*(4), 732-743.

Jung, D. S., Tverdek, F. P., & Kontoyiannis, D. P. (2014). Switching from posaconazole suspension to tablets increases serum drug levels in leukemia patients without clinically relevant hepatotoxicity. *Antimicrob.Agents.Chemother., 58*(11), 6993-6995. doi:AAC.04035-14 [pii];10.1128/AAC.04035-14 [doi]. Retrieved from PM:25199774

Kabat-Zinn, J. (2003). Mindfulness-based interventions in context: Past, present, and future. Clinical Psychology: Science and Practice, 10(2), 144-156.

Karibe, H., Shimazu, K., Okamoto, A., Kawakami, T., Kato, Y., & Warita-Naoi, S. (2015). Prevalence and association of self-reported anxiety, pain, and oral parafunctional habits with temporomandibular disorders in Japanese children and adolescents: A cross-sectional survey. *BMC.Oral.Health, 15*, 8. doi:1472-6831-15-8 [pii];10.1186/1472-6831-15-8 [doi]. Retrieved from PM:25604542

Khongkow, P., Gomes, A. R., Gong, C., Man, E. P., Tsang, J. W., Zhao, F. et al. (2016). Paclitaxel targets FOXM1 to regulate KIF20A in mitotic catastrophe and breast cancer paclitaxel resistance. *Oncogene., 35*(8), 990-1002. doi:onc2015152 [pii];10.1038/onc.2015.152 [doi]. Retrieved from PM:25961928

Kim, S., Shannon, V., Sheshadri, A., Kantarjian, H. M., Garcia-Manero, G., Im, J. S. et al. (2017). Th1/17 Cells Are Expanded in Bronchial Alveolar Lavage (BAL) Fluid from Leukemia Patients with Checkpoint Inhibitor-Induced Pneumonitis. *Blood, 130*(Suppl 1), 3588.

Kong, Y., Zhang, J., Claxton, D. F., Ehmann, W. C., Rybka, W. B., Zhu, L. et al. (2015). PD-1(hi)TIM-3(+) T cells associate with and predict leukemia relapse in AML patients post allogeneic stem cell transplantation. *Blood Cancer J, 5*, e330. doi:bcj201558 [pii];10.1038/bcj.2015.58 [doi]. Retrieved from PM:26230954

Lerman, S. F., Rudich, Z., Brill, S., Shalev, H., & Shahar, G. (2015). Longitudinal associations between depression, anxiety, pain, and pain-related disability in chronic pain patients. *Psychosom.Med, 77*(3), 333-341. doi:10.1097/PSY.0000000000000158 [doi]. Retrieved from PM:25849129

Lin, C. S., Wu, S. Y., & Yi, C. A. (2017). Association between Anxiety and Pain in Dental Treatment: A Systematic Review and Meta-analysis. *J Dent Res, 96*(2), 153-162. doi:10.1177/0022034516678168 [doi]. Retrieved from PM:28106507

Mak, W. W., Chan, A. T., Cheung, E. Y., Lin, C. L., & Ngai, K. C. (2015). Enhancing Web-based mindfulness training for mental health promotion with the health action process approach: randomized controlled trial. *J Med Internet Res, 17*(1), e8. doi:v17i1e8 [pii];10.2196/jmir.3746 [doi]. Retrieved from PM:25599904

McCracken, L. M., & Dhingra, L. (2002). A short version of the Pain Anxiety Symptoms Scale (PASS-20): preliminary development and validity. *Pain.Res Manag., 7*(1), 45-50. Retrieved from PM:16231066

Moore, Z., Chakrabarti, G., Luo, X., Ali, A., Hu, Z., Fattah, F. J. et al. (2015). NAMPT inhibition sensitizes pancreatic adenocarcinoma cells to tumor-selective, PAR-independent metabolic catastrophe and cell death induced by beta-lapachone. *Cell Death.Dis, 6*, e1599. doi:cddis2014564 [pii];10.1038/cddis.2014.564 [doi]. Retrieved from PM:25590809

Nunes, N. A. (2014). The quality of life of Brazilian patients in palliative care: validation of the European Organization for Research and Treatment of Cancer Quality of Life Questionnaire Core 15 PAL (EORTC QLQ-C15-PAL). *Support.Care Cancer, 22*(6), 1595-1600. doi:10.1007/s00520-014-2119-1 [doi]. Retrieved from PM:24463615

Pidgeon, A. M., Ford, L., & Klaassen, F. (2014). Evaluating the effectiveness of enhancing resilience in human service professionals using a retreat-based Mindfulness with Metta Training Program: a randomised control trial. *Psychol.Health Med, 19*(3), 355-364. doi:10.1080/13548506.2013.806815 [doi]. Retrieved from PM:23767987

Ren, G., Zhang, J., Li, M., Yi, S., Xie, J., Zhang, H. et al. (2017). Protein blend ingestion before allogeneic stem cell transplantation improves protein-energy malnutrition in patients with leukemia. *Nutr.Res, 46*, 68-77. doi:S0271-5317(17)30488-8 [pii];10.1016/j.nutres.2017.08.002 [doi]. Retrieved from PM:28964569

Ruffault, A., Czernichow, S., Hagger, M. S., Ferrand, M., Erichot, N., Carette, C. et al. (2017). The effects of mindfulness training on weight-loss and health-related behaviours in adults with overweight and obesity: A systematic review and meta-analysis. *Obes.Res Clin Pract., 11* (5 Suppl 1), 90-111. doi:S1871-403X(16)30083-7 [pii];10.1016/j.orcp.2016.09.002 [doi]. Retrieved from PM:27658995

DOI: 10.22122/ijbmc.v6i1.148 Published by Vesnu Publications

International Journal of Body, Mind & Culture
Cross-Cultural, Interdisciplinary Health Studies

The Effectiveness of Acceptance and Commitment Therapy on Pain Severity, Perceived Stress, and Aggression in Patients with Multiple Sclerosis in Isfahan, Iran

Fakhri Al Sadat Khalifeh-Soltani[1], Mahdi Borhani[2]

[1] PhD Candidate, Behavioral Sciences Research Center AND Psychosomatic Research Center, Isfahan University of Medical Sciences, Isfahan, Iran
[2] Research Center for Biochemistry and Nutrition in Metabolic Diseases, Kashan University of Medical Sciences, Kashan, Iran

Quantitative Study

Abstract

Background: Multiple sclerosis (MS) is the most common neurological disease. The aim of this study was to determine the effectiveness of acceptance and commitment therapy (ACT) based on pain severity, perceived stress, and aggression in patients with MS.

Methods: This experimental research was conducted with a pretest-posttest design. The study population included all patients with MS referred to health centers in Isfahan, Iran, in 2016. The study participants consisted of 60 patients selected using convenience sampling. The participants were divided into two groups (30 patients in the experimental group and 30 patients in the control group). The data collection tools included the short-form McGill Pain Questionnaire (SF-MPQ) and Perceived Stress Scale (PSS). Data analysis was performed using multivariate analysis of covariance (MANCOVA) and analysis of covariance (ANCOVA).

Results: The results showed that ACT was effective in reducing pain ($F = 28.22$; $P < 0.01$), perceived stress ($F = 5.16$; $P < 0.03$), and aggression ($F = 6.86$; $P < 0.01$) in patients with MS, and these results were persistent in the follow-up period.

Conclusion: ACT is effective in reducing pain, perceived stress, and aggression in patients with MS.

Keywords: Acceptance and commitment therapy, Pain severity, Perceived stress, Aggression

Citation: Khalifeh-Soltani FS, Borhani M. **The Effectiveness of Acceptance and Commitment Therapy on Pain Severity, Perceived Stress, and Aggression in Patients with Multiple Sclerosis in Isfahan, Iran.** Int J Body Mind Culture 2019; 6(1): 35-41.

Received: 15 Nov. 2018
Accepted: 15 Jan. 2019

Introduction

Multiple sclerosis (MS) is one of the most common neurological disorders, most commonly occurs in the ages of 20-40 years, and women are almost twice as likely to be affected as men. The pathology of this disorder is characterized by demyelination in a scattered manner, and more than 5.2 million people worldwide are affected by MS

Corresponding Author:
Mahdi Borhani
Email: borhani-m@kaums.ac.ir

(Kenner, Menon, & Elliott, 2007). Localized weakness, tingling, numbness, sudden blurred vision in one eye, and loss of balance are the primary symptoms of MS and are usually transient and disappear within a few days to a few weeks (McCabe, 2005). MS affects different aspects of the patients' lives, and may lead to sensory and motor dysfunction as well as psychopathological signs and symptoms. MS is unpredictable and may have life-changing impacts as it usually affects the best time of the patients' lives and gradually causes disability, and unfortunately, there is no definite cure for it (Rasova, Havrdova, Brandejsky, Zalisova, Foubikova, & Martinkova, 2006.). Moreover, 80% of people with this disorder have some degree of disability (Rickards, 2005). MS has an unknown cause and a progressive nature with periods of relapse and recovery. Throughout their lives, the affected people experience diverse physical and mental impairment resulting from the disorder that greatly affect their daily functioning, family and social life, functional independence, and planning for the future (Tepavcevic, Kostic, Basuroski, Stojsavljevic, Pekmezovic, & Drulovic, 2008). People experience varying degrees of stress, which has a critical impact on patients with MS. Pain management is one of the priorities of treatment. According to the International Association for the Study of Pain (IASP), pain is a hidden feeling and an emotional experience associated with acute or potential tissue damage. This definition emphasizes pain as a bio-psychological experience and the sign of tissue damage (Shekar Beigi, 2011). The pain resulting from MS is a severe problem with negative effects on the quality of life (QOL) of patients and may cause stress, extreme fear of pain, and illness that sometimes may lead to aggressive behaviors; these uncontrolled behaviors are a response to fears and perceived stress resulting from illness and pain in patients with MS (Farzin Rad, 2010). Stress is defined as an adaptive response to an external factor that bears physiological, behavioral, cognitive, and psychological consequences for each individual. It can even drive the person out of normal state and increase the risk for development of tumor cells, and therefore, negatively influence the survival of patients with cancer (Sehatnia, 2010). Research studies have shown that stress is a very complex process that may affect the lymphatic system as well as other paths, especially in patients with MSl; therefore, stress reduction should be a priority in the treatment of these patients (Mirzaei, Neshatdoost, Kalantari, Nematolahzade Mahani, Jabalameli, & Mehrollahi, 2012). Stress and inability to cope with pain and other problems resulting from MS may lead the individual toward aggression; therefore, aggression is regarded as a complication of chronic disorders such as MS that should be controlled using appropriate treatment methods so that the patient can relax and a more desirable healing procedure can be attained (Ghamari-Givi, Fathi, & Senobar, 2014). One of the components influenced by MS is increased aggression. Aggression is a defensive behavior expressed in response to danger or threats. Aggression is a learned behavior supporting the person in a way that violates the rights of others. Aggressive behavior is typically punitive, reproachful, domineering, and hostile. Some examples of aggressive behaviors include threatening or insulting behavior, physical punishment, mocking smiles, and sarcastic statements. The origin of aggression is anger; when anger causes harm to others it is called aggression. Various treatments are used for the problems associated with MS. Instead of focusing on changing psychological events, these interventions are aimed at directly changing the function of these events and the individual's relationship with them, through strategies like concentration, acceptance, and cognitive fusion (Mo'tamedi, Rezaiemaram, & Tavallaie, 2012). Acceptance and Commitment Therapy (ACT) is a type of behavioral therapy based on acceptance and aimed at operationalizing experimental avoidance and trying to control irritating experiences. This

method of therapy helps the clients to give a less real meaning to their thoughts and emotions, and learn how to observe their reactions to psychological distress, and improve their commitment to life values (Hayes & Wilson, 1994).

Methods

In the present research, an experimental design with pretest-posttest and a control group was used. The experimental and control groups were matched using a simple random method. A pretest was performed in both groups before conducting the experimental intervention, and a posttest was performed at the end of the intervention phase. The statistical difference between pretest/posttest scores was examined for each study group. The effectiveness of ACT was applied as the independent variable to determine its impact on reducing pain intensity, perceived stress, and aggression (dependent variables) among patients with MS. The study population included all patients with MS attending the health clinics in Isfahan, Iran, in 2016. The sample included a total of 60 MS patients who were selected using convenience sampling method. From among all patients with MS, 100 patients were selected, then, the study instruments were administered and 60 patients who had the lowest scores on these tests were selected as the study sample. From among these, 30 were selected for the experimental group and 30 for the control group.

Short-form McGill Pain Questionnaire: The short-form McGill Pain Questionnaire (SF-MPQ) was developed by Melzack in 1997. It consists of 20 phrases that measure respondents' perception of pain in the four dimensions of sensory pain, emotional pain, pain evaluation, and varied pain. The short and revised form of the SF-MPQ was designed by Deworkin et al. (2009). A Cronbach's alpha of 0.85 has been reported for the total scale. Reliability estimates in all domains (sensory, emotional, etc.) were above 0.80. The SF-MPQ consists of 15 questions and the two sensory and affective subscales. It is scored on a 4-point Likert-type scale ranging from 0 (no pain) to 3 (severe pain) (Dworkin et al., 2009). In the present study, a Cronbach's alpha of 0.81 was calculated for the total scale, indicating its good reliability.

Perceived Stress Scale: The original version of the Perceived Stress Scale (PSS) includes 14 items assessing a person's feelings and thoughts in relation to the events and situations that have occurred during the past month. The scale contains 14 items of which 7 items are positive and 7 items negative. Each item is rated on a 5-point scale ranging from 0 (never) to 4 (very often). Some of the Items of the PSS are reverse-scored (4, 5, 6, 7, 9, 10, and 13). Klein reported Cronbach's alphas of 0.86, 0.77, and 83 for the 7 positive items, 7 negative items, and all items, respectively (Cohen, Kessler, R& Gordon, 1997.). In the present study, a Cronbach's alpha of 0.70 was found for the total scale, indicating the good reliability of the PSS.

Ahvaz Aggression Questionnaire: The Ahvaz Aggression Questionnaire (AAGQ) is a self-reported paper and pencil scale. This questionnaire was made by Buss and Perry (Buss & Perry, 1992). It contains 30 questions of which 14, 8, and 8, respectively, measure anger, aggression, and hostility. The AAGQ is rated on a 4-point scale ranging from 0 (never) to 4 (always). In Iran, Zahedifar, Najarian, and Shokrkon (2000) reported the psychometric properties of the scale to be good.

Results

The mean (standard deviation) age of the subjects in the experimental and control groups was 54.17 (11.02) and 52.63 (10.18) years, respectively. Their minimum and maximum age was, respectively, 49 and 58 years in the control group and 48 and 58 years in the experimental group. Regarding education level, most participants in both groups [12 (30%) in the experimental and 9 (40%) in the control group] had a high school diploma. Descriptive findings, including the mean and standard deviation estimates, are presented in table 1.

Table 1. Mean and standard deviation of study variables

Type of training	Pretest		Posttest		Follow-up	
	Experimental Mean ± SD	Control Mean ± SD	Experimental Mean ± SD	Control Mean ± SD	Experimental Mean ± SD	Control Mean ± SD
Pain intensity	41.70 ± 5.02	41.40 ± 5.97	29.30 ± 6.76	41.50 ± 7.00	51.00 ± 9.43	47.20 ± 9.31
Perceived stress	43.60 ± 6.93	42.20 ± 7.12	37.60 ± 4.61	40.50 ± 6.23	47.00 ± 10.94	43.60 ± 6.33
Aggression	45.60 ± 14.00	43.80 ± 10.23	29.80 ± 15.90	42.40 ± 12.54	45.40 ± 7.67	43.00 ± 15.72

SD: Standard deviation

The null hypothesis regarding the equality of variances in the participants' scores on the study variables was confirmed; that is to say, the assumption of equality of variances is confirmed for the scores of both the experimental and control groups. However, due to equal sample sizes, violation of the assumption of equality of variances has no impact on the analysis of covariance (ANCOVA). All significance levels are above 0.05; therefore, the assumption of normality is confirmed for the distribution of pain intensity, perceived stress, and aggression scores for both groups of participants. The interaction F-test for homogeneity of regression slopes is not significant for all study variables. Therefore, it can be concluded that there is no interaction between groups and pretest scores; in other words, the homogeneity of regression slopes is accepted for all variables.

As you can see in table 2, while controlling for pretest significance levels for all tests, the results indicated a significant difference in at least one dependent variable (pain intensity, perceived stress, and aggression) between the experimental and control groups ($F = 9.00$; $P < 0.0001$). In the next step, three one-way ANCOVA were conducted in the context of MANCOVA; the results are presented in table 2. The effect or difference in size is equal to 0.54, in other words, 54% of individual differences in posttest scores of pain intensity, perceived stress, and aggression are related to the effect of the independent variable. The statistical power is equal to 0.98.

The results indicated the positive effect of ACT on pain intensity ($F = 28.22$; $P < 0.01$), perceived stress ($F = 5.16$; $P < 0.03$), and aggression ($F = 6.86$; $P < 0.01$) in patients with MS.

Discussion

The study results indicated a reduction in the mean posttest scores of pain intensity, perceived stress, and aggression in the experimental group compared to the control group; this is consistent with the findings of previous studies (Irandoost, Neshat-Doost, Nadi, & Safary, 2014;, Anvari, Ebrahimi, Neshatdoost, Afshar, Abedi, 2014; Dousti, Gholami, & Torabian, 2016).

This finding can be explained in terms of a large body of evidence indicating the important role of acceptance in the reduction of the amount of pain experienced by patients with MS. ACT is a therapeutic approach that utilizes behavior modification to create flexibility (Hayes, Luoma, Bond, Masuda, & Lillis, 2006). The acceptance and commitment model emphasizes acceptance, present moment awareness, and engagement in activities consistent with personal values. Acceptance appears to be the key factor involved in therapeutic gains in terms of reducing the effect of painful experiences on emotional functions that predict one's performance in the future.

Table 2. Results of multivariate analysis of covariance

Name	Value	df (Hypothesis)	df (Error)	F	P	Eta-squared	Statistical power
Pillai's trace test	0.540	3	53	9.00	0.0001	0.54	0.98
Wilks's Lambda	0.460	3	53	9.00	0.0001	0.54	0.98
Hotelling's T-squared	1.17	3	53	9.00	0.0001	0.54	0.98
Roy's largest root	1.17	3	53	9.00	0.0001	0.54	0.98

df: Degree of freedom

Table 3. Results of one-way analysis of covariance

Variable	Source of change	MS	df	SS	F	P	Eta-squared	Statistical power
Pain intensity	Pretest	296.96	1	296.96	7.62	0.01	0.23	0.75
	Group	1099.54	1	1099.54	28.22	0.0001	0.53	0.99
	Error	974.06	55	38.96				
Perceived stress	Pretest	315.53	1	315.53	15.95	0.001	0.39	0.97
	Group	102.18	1	102.18	5.16	0.03	0.17	0.58
	Error	494.46	55	19.77				
Aggression	Pretest	593.03	1	593.03	2.99	0.09	0.10	0.38
	Group	1360.42	1	1360.42	6.86	0.01	0.21	0.71
	Error	4954.13	55	198.16				

df: Degree of freedom;

With regard to the effectiveness of ACT, Dahl, Wilson, and Nilsson (2004) showed the significant effect of a four-hour experience of this therapy, relative to other therapeutic approaches, on reducing the experience of pain in patients with MS. McCracken, Vowles, and Eccleston (2004) found that acceptance has two components (voluntary pain acceptance and engagement in activities). The first component concerns the extent to which pain is allowed to be experienced without trying to manage it or avoid it. The second component refers to maintaining everyday life activities along with the experience of pain. In addition, research studies have noted the importance of acceptance-based strategies in reducing pain and perceived stress symptoms in the presence of pain. The results of these studies show the important role of acceptance, especially in terms of psychological performance. Patients who report a higher tendency to experience negative psychological phenomena, including aggression and unpleasant emotional expressionless, thoughts, and memories show better social, physical, and emotional performance. Hayes (1993) also believes that, rather than focusing on removing harmful factors, ACT helps clients accept their controlled emotions and cognitions, relieve themselves from the control of verbal rules that have caused their problems and stop struggling with them. Acceptance and commitment are essentially process-entered, and clearly emphasize the improvement of the acceptance of psychological experiences and enhancement of commitment through increasing meaningful, flexible, and adaptive activities, irrespective of the content of psychological experiences; this is not the focus of cognitive behavioural therapy (CBT). In addition, the goal of ACT is not to increase realistic, effective, and logical thinking, or encourage emotions, but rather to reduce avoidance of psychological experiences and improve awareness of these experiences and focusing on the present moment, nonjudgmentally and without struggling.

The present study had some limitations, including time limitations that did not allow for a follow-up examination on the study results and a shortage of previous findings. We suggest that future studies on ACT use larger samples and longitudinal designs to find more evidence on the efficacy of this approach. Future studies can compare the effectiveness of this approach with that of other behavioural therapies.

Conclusion

ACT is an effective approach in reducing pain intensity, perceived stress, and aggression in patients with MS. Patients with MS and chronic pain who accept unpleasant psychological experiences without trying to control them report better daily functioning and less experience of pain. Therefore, it can be concluded that although medical and pharmacological treatments may be more effective than psychotherapy in reducing physical symptoms, physical complaints, and

aggression in patients with MS, acceptance and commitment can also have a significant effect on these variables.

Conflict of Interests

Authors have no conflict of interests.

Acknowledgments

The authors wish to thank all the study participants and those who supported us in this project.

References

Anvari, M. H., Ebrahimi, A., Neshatdoost, H. T, Afshar, H., & Abedi. A. (2014). The effectiveness of group-based acceptance and commitment therapy on pain-related anxiety, acceptance of pain and pain intensity in patients with chronic pain. *J Isfahan Med Sch*, 32(295): 11561-65.

Buss, A. H., & Perry, M. (1992). The aggression questionnaire. *J Pers Soc Psychol, 63*(3), 452-459. Retrieved from PM:1403624

Cohen, S., Kessler, R. C., & Gordon, L. U. (1997). *Measuring stress: A guide for health and social scientists*. Oxford, UK: Oxford University Press.

Dahl, J., Wilson, K. G., & Nilsson, A. (2004). Acceptance and commitment therapy and the treatment of persons at risk for long-term disability resulting from stress and pain symptoms: A preliminary randomized trial. *Behav Ther., 35*(4), 785-801.

Dousti, P., Gholami, S., & Torabian, S. (2016). The effectiveness of acceptance and commitment therapy on aggression among students with internet addiction. *Health and Care*, *18*(1), 63-72.

Dworkin, R. H., Turk, D. C., Revicki, D. A., Harding, G., Coyne, K. S., Peirce-Sandner, S. et al. (2009). Development and initial validation of an expanded and revised version of the Short-form McGill Pain Questionnaire (SF-MPQ-2). *Pain, 144*(1-2), 35-42. doi:S0304-3959(09)00125-0 [pii];10.1016/j.pain.2009.02.007 [doi]. Retrieved from PM:19356853

Farzin Rad, Y. (2010). *Effectiveness of stress management on dysfunctional attitudes and women under the efficacy of well-being in the city Behbahan [MSc Thesis]*. Ahvaz, Iran: Shahid Chamran University of Ahvaz.

Ghamari-Givi, H., Fathi, A., & Senobar, L. (2014). The effectiveness of the combination of mental imagination and massage therapy on anger in children with cancer. *Archives of Rehabilitation, 14*(4), 26-34.

Hayes, S. C., & Wilson, K. G. (1994). Acceptance and commitment therapy: Altering the verbal support for experiential avoidance. *Behav.Anal., 17*(2), 289-303. Retrieved from PM:22478193

Hayes, S. C., Luoma, J. B., Bond, F. W., Masuda, A., & Lillis, J. (2006). Acceptance and commitment therapy: model, processes and outcomes. *Behav.Res Ther, 44*(1), 1-25. doi:S0005-7967(05)00214-7 [pii];10.1016/j.brat.2005.06.006 [doi]. Retrieved from PM:16300724

Hayes, S. C. (1993). *Analytic goals and the varieties of scientific contextualism*. In S. C. Hayes, L. J. Hayes, H. W. Reese, & T. R. Sarbin (Eds.), *Varieties of scientific contextualism* (pp. 11-27). Reno, NV: Context Press.

Irandoost, F., Neshat-Doost, H. T., Nadi, M. A., & Safary, S. (2014). The Effectiveness of Acceptance and Commitment Therapy (ACT) on the Rate of Pain Intensity in Women with Chronic Low Back Pain. *Journal of Clinical Psychology, 6*(2), 75-84.

Kenner, M., Menon, U., & Elliott, D. G. (2007). Multiple sclerosis as a painful disease. *Int Rev.Neurobiol., 79*, 303-321. doi:S0074-7742(07)79013-X [pii];10.1016/S0074-7742(07)79013-X [doi]. Retrieved from PM:17531847

McCabe, M. P. (2005). Mood and self-esteem of persons with multiple sclerosis following an exacerbation. *J Psychosom.Res, 59*(3), 161-166. doi:S0022-3999(05)00105-4 [pii];10.1016/j.jpsychores.2005.04.010 [doi]. Retrieved from PM:16198189

McCracken, L. M., Vowles, K. E., & Eccleston, C. (2004). Acceptance of chronic pain: component analysis and a revised assessment method. *Pain, 107*(1-2), 159-166. doi:S0304395903004299 [pii]. Retrieved from PM:14715402

Mirzaei, F., Neshatdoost, H., Kalantari, M., Nematolahzade Mahani.K., Jabalameli, S., & Mehrollahi, T. (2012). The effect of cognitive-behavioral stress management on anxiety and somatic symptoms of women with premenstrual syndrome. *Knowledge & Research in Applied Psychology, 12*(4), 61-71.

Mo'tamedi, H., Rezaiemaram, P., & Tavallaie, A. (2012). The effectiveness of a group-based acceptance and commitment additive therapy on rehabilitation of female outpatients with chronic headache: preliminary findings reducing 3 dimensions of headache impact. *Headache., 52*(7), 1106-1119. doi:10.1111/j.1526-4610.2012.02192.x [doi]. Retrieved from PM:22712503

Rasova, K., Havrdova, E., Brandejsky, P., Zalisova, M., Foubikova, B., & Martinkova, P. (2006). Comparison of the influence of different rehabilitation programmes on clinical, spirometric and spiroergometric parameters in patients with multiple sclerosis. *Mult.Scler., 12*(2), 227-234. doi:10.1191/135248506ms1248oa [doi]. Retrieved from PM:16629428

Rickards, H. (2005). Depression in neurological disorders: Parkinson's disease, multiple sclerosis, and stroke. *J Neurol.Neurosurg.Psychiatry.*, 76 (Suppl 1),

i48-i52. doi:76/suppl_1/i48 [pii];10.1136/jnnp.2004.060426 [doi]. Retrieved from PM:15718222

Sehatnia, R. 2. (2010). *Effectiveness of stress management, emotional intelligence, and social and individual adaptation divorced women in Ahvaz [MSc Thesis]*. Ahvaz, Iran: Shahid Chamran University of Ahvaz.

Shekar Beigi, N. (2011). *Comparison of pain intensity and stress between men and women with heart problems [Thesis]*. Ahvaz, Iran: Payame Noor University of Ahvaz.

Tepavcevic, D. K., Kostic, J., Basuroski, I. D., Stojsavljevic, N., Pekmezovic, T., & Drulovic, J. (2008). The impact of sexual dysfunction on the quality of life measured by MSQoL-54 in patients with multiple sclerosis. *Mult.Scler., 14*(8), 1131-1136. doi:1352458508093619 [pii];10.1177/1352458508093619 [doi]. Retrieved from PM:18632783

Zahedifar, S., Najarian, J., & Shokrkon, H. (2000). Construction, and validation of a scale to measure aggression. *Journal of Education and Psychology, 7*(1-2), 73-102.

DOI: 10.22122/ijbmc.v6i1.139 Published by Vesnu Publications

International Journal of Body, Mind & Culture
Cross-Cultural, Interdisciplinary Health Studies

Comparison of Self-Perception and Perceived Social Support in Addicts Undergoing Maintenance Therapy and Abstinence Treatment

Saeid Alami[1], Ruhollah Latifian[2], Shiva Zandi[3]

[1] PhD Student, Department of Psychology, Islamic Azad University, Khalij Fars Branch, Khoramshahr, Iran
[2] PhD Student , Department of Psychology, Islamic Azad University, Karaj Branch, Alborz, Iran
[3] Master of General Psychology, Islamic Azad University, Zanjan Branch, Zanjan, Iran

Quantitative Study

Abstract

Background: The objective of this study was to compare addicts undergoing pharmacological treatment (maintenance therapy) with those undergoing non-pharmacological treatment (abstinence treatment) in terms of their self-perception and perceived social support.

Methods: The study population consisted of all addicts in Ghazvin City, Iran, who were undergoing either pharmaceutical or non-pharmacological treatment. Cluster sampling was used to select 100 participants, 50 for the pharmacological treatment group and 50 for the non-pharmacological treatment group. The Multidimensional Scale of Perceived Social Support (MSPSS) and Self-Perception Questionnaire (Townend) were used for data collection. Independent t-test and multivariate analysis were used for analyzing the data and comparing the two groups.

Results: The results show a significant difference between the two groups in terms of the 2 subscales of self-perception of aggression and manipulation ($P < 0.05$). Moreover, the two groups were significantly different in the 2 subscales of perceived social support of support by their family and friends ($P \leq 0.05$).

Conclusion: It appears that those addicts who are undergoing pharmaceutical treatment in a rehabilitation center receive more support from their friends and families. The results also indicate that they show less aggressive and manipulative behaviors.

Keywords: Self-perception, Perceived support, Pharmaceutical treatment, Non-pharmacological treatment

Citation: Alami S, Latifian R, Zandi S. **Comparison of Self-Perception and Perceived Social Support in Addicts Undergoing Maintenance Therapy and Abstinence Treatment.** Int J Body Mind Culture 2019; 6(1): 42-9.

Received: 25 Oct. 2018
Accepted: 15 Jan. 2019

Introduction

Addiction, as a physical and mental disease, has affected the quality of life (QOL) of many people all over the world. Drug abuse is one of the causes of mental problems, neurocognitive problems, marital dissatisfactions, depression, anxiety, and general health problems (Cole, Logan, & Walker, 2011; Beygi, A., Shirazi, & Pasandide, 2013). Addicts' self-threatening and self-destructive behavioral and thinking patterns

Corresponding Author:
Ruhollah Latifian
Email: drlatifian.rl@gmail.com

lead to the occurrence of problems in their QOL and functions (Lin, Wu, & Detels, 2011). Although the physiologic and chemical effects of drugs on the body are recognized, the affected person has to take responsibility for his/her addiction and its improvement. Addiction is a symptom not the original disorder. The problem lies in the affected individuals themselves not in the drug. Considering that addiction does not only involve a physical problem, but also a mental, social, and cultural one and many factors may have roles in its prevalence, its treatment is more complicated and includes dealing with different aspects of the addict's life. As a result, many studies have been performed on the subject to find treatment methods with more efficacy and reduced chance of addiction relapse. Due to the fact that biopsychosocial aspects play roles in addiction, relying on a single approach is not efficient for addiction recovery or treatment of substance-related disorders. The results reported by many studies indicate that, like many other mental disorders, the most efficient approach to substance-abuse reduction or recovery is a combination of psychological and physical methods. Many different treatment programs have been introduced for addiction recovery in recent years including pharmacological and non-pharmacological methods (Karimnejad, Maktabi, Vatankhah, Firoozy, & Rahimi, 2014). Addiction progression starts with the first stage of using narcotic drugs. With their continuined usage, stupor, weakness, problems in memory, and changes in appearance gradually happen (Sayed Alitabar, Falahatpisheh, Habibi Asgarabad, Arvin, & Sarvestani, 2016). With the progression of the disease, we witness depression, other psychiatric problems, and greater weakness in the patient (Farnam & Farhoudian, 2011).

One of the effective pharmaceutical treatments introduced in recent years is maintenance treatment program. With regard to the chronic process of addiction and possibility of relapse, the treatment of addiction may be long-term and multidimensional. Maintenance treatment is one of the main methods of treatment of addiction to narcotic substances (opium, heroin, opium residue, and crack). During this treatment, the patient receives a series of medical, pharmaceutical, and psychological interventions. Currently, two drugs, methadone and buprenorphine are used for maintenance treatment (Farnam & Farhoudian, 2011). Abstinence method involves non-pharmacological treatments planned as a local program in Iran and is classified as non-pharmacological treatment methods. In this method, the individual enters quasi-family groups and acquires the skills required for returning to life and gaining his/her sense of security. In this way, they prepare themselves to function in society. Therefore, abstinence method can be considered as a social model.

These two treatment methods have different effects on various aspects of addicts' personality and mind including self-perception, perceived social support, and mental health. Self-perception involves an individual's experience of himself/herself and his/her beliefs in terms of his/her physical, behavioral, and mental aspects. It is the reflection of the individual's experience of himself/herself. An individual's experience and his/her beliefs are independent of, but connected with that of others (Bahrami, Abolghasemi, & Narimani, 2013).

Perceived social support is the individual's assessment of his/her accessibility to support when needed. This concept implies an individual's cognitive assessment of his/her relationships. Researchers believe that the relationships one has with others are not counted as social support unless one assesses them as an available and suitable resource to satisfy his/her needs. Social support scales focus on one's cognitive assessment of one's environment and the confidence one has in the availability of the support when it is

needed (Asayesh, Hesam, Ghorbani, Shariati, & Nasiri, 2011).

Through increasing an individual's psychological health, perceived social support works as a guard against addiction relapse after recovery. In their study, Davis and Jason (2005) concluded that avoiding substance abuse is positively correlated with received social support. Perceived social support is also of significance in the primary stages of addiction treatment (HosseiniAlmadani, Ahadi, Karimi, Bahrami, & Moazedian, 2012).

The current study compared addicts undergoing the two treatment methods in terms of their self-perception and perceived social support.

HosseiniAlmadani et al. (2012) conducted a study to compare resilience, identity styles, spirituality, and perceived support among addicts, non-addicts, and recovered addicts. They concluded that participating in anonymous addicts groups, receiving social support, and taking part in the process of quitting a substance require increased resilience in addicts.

Descriptive results of the research done by Delpasand, Ayar, Khani, and Mohammadi (2012) concerning the relationship between social support and crime indicate that young non-criminals receive significantly more social support in all its aspects compared to young criminals. Data analysis using logistic regression analysis indicates that the theoretical construct of social support has high distinctive power to distinguish between non-criminals and criminals. In other words, increased social support diminishes the rate of crimes.

Brabadi, Younesi, and Taleghani (2009) studied the effect of treatment on addicted criminals. The objective of this study was the examination of the effect of integrative treatment on self-perception evolution of addicted criminals. Other objectives of the research were the investigation of the effect of integrative treatment on the self-conception and self-esteem of addicted criminals. Results of the pretest show slow evolution in the level of self-perception in addicted criminals, while integrative treatment is shown to be effective in enhancing the self-perception evolution, self-conception, and self-esteem of these people. These findings suggest that authorities have to develop counseling and psychotherapy centers in prisons and centers for criminals.

Methods

Method: The current study was a retrospective, causal-comparative research. The aim of a causal-comparative research design is to find possible causes of a behavioral pattern. Those with the behavior are compared with those who do not show such behavior. This method is often called retrospective study since it refers to causes that have taken place before and the study is conducted through the influence they have on another variable – that is the effect (Delavar, Ghoreyshi, Jahanshahi, & Nabian, 2014).

The study population consisted of all the addicts in Ghazvin City, Iran, who were undergoing either pharmaceutical treatment (maintenance treatment) or non-pharmacological treatment (abstinence treatment). Cluster sampling was used to select the study participants.

From among the three districts of Ghazvin city, district one was selected accidentally, and one drug rehabilitation center (Negin Addiction Treatment Center) and one residential addiction treatment center (Behesht Pakyar Ara) were selected. From the first center, 50 individuals who were undergoing maintenance treatment (methadone and buprenorphine) and 1 month of their treatment had passed were selected accidentally as the pharmaceutical group participants. The other 50 participants for the non-pharmacological treatment group were selected from the second center. Informed consent forms were obtained from all participants before participating in the research.

Table 1. Results of the comparison of the two groups in terms of subscales of MSPSS

Subscales of MSPSS	Pharmaceutical treatment		Non-pharmacological treatment	
	Mean ± SD	Variance	Mean ± SD	Variance
Family	14.68 ± 3.60	12.99	12.70 ± 5.098	35.80
Friends	11.66 ± 5.31	28.27	9.44 ± 4.67	21.88
Significant other	13.80 ± 4.84	23.42	13.04 ± 5.46	29.91

MSPSS: Multidimensional Scale of Perceived Social Support; SD: Standard deviation

The study inclusion criteria were men aged between 20 to 40 years and addicted to narcotics. In addition, those in the pharmaceutical group used methadone and buprenorphine and 1 month of their treatment had passed, and those in the other group resided in the residential center and received neither pharmaceutical nor psychological treatment and 1 month had passed since their acceptance into the center.

Material: Self-Perception Questionnaire developed by Townend (1999) was used to collect the data for the current study. This scale helps us understand what the individual thinks or feels about himself/herself and others and how he/she treats others. This questionnaire has 60 statements with the 4 subscales of passivity, aggression, assertiveness, and manipulation. The reliability of the questionnaire was reported to be 0.62 for passivity, 0.54 for aggression, 0.57 for assertiveness, and 0.66 for manipulation by Nikmanesh and Yari (2012) using Cronbach's alpha. Positive and negative answers are added separately to obtain the total score for each subscale.

The other scale used was the Multidimensional Scale of Perceived Social Support (MSPSS); it is one of the numerous scales that assesse social support. The MSPSS was developed by Zimet, Dahlem, Zimet, and Farley (1988) to evaluate the perceived social support provided by one's family, friends, and significant other. This scale comprises 12 statements scored on a scale ranging from 1 to 7, with 1 as "I very strongly disagree" and 7 as "very strongly agree". Using Cronbach's alpha, Bruwer, Emsley, Kidd, Lochner, and Seedat (2008) calculated the internal reliability of this tool and its subscales to be 86% and 86-90%, respectively, by examining a sample of 778 high school students. Karami, Hossini, Shahabi Majd, Ebrahimzadeh, and Alemy (2013) reported that the Cronbach's alpha of the 3 subscales of social support provided by family, friends, and the significant other are 89%, 86%, and 82%, respectively.

Results

To analyze the data descriptively, we have presented statistical indicators such as frequency, mean, variance, and standard deviation. In addition, to compare the variables under study, independent t-test and multivariate analysis were used. The results of descriptive analysis of the two groups in terms of the subscales of the MSPSS are presented in table 1. This table shows that the group undergoing pharmaceutical treatment receives more support from family and friends compared to the non-pharmaceutical group, and the support they receive from their significant others is also slightly more than the other group.

Considering the information presented in table 2, we can understand that addicts under pharmaceutical treatment show less passivity, aggression, and manipulative behaviors compared to the other group.

Table 2. Results of the comparison of the two groups in terms of subscales of the Self-Perception Questionnaire

Subscales of Self-Perception Questionnaire	Pharmaceutical treatment		Non-pharmacological treatment	
	Mean ± SD	Variance	Mean ± SD	Variance
Passivity	13.84 ± 3.35	11.23	14.96 ± 3.53	12.48
Aggression	9.26 ± 4.97	24.72	15.10 ± 4.49	20.17
Assertiveness	10.92 ± 4.75	22.60	12.14 ± 5.32	28.40
Manipulation	9.84 ± 4.02	16.17	11.50 ± 4.16	17.31

SD: Standard deviation

Table 3. Results of multivariate analysis to compare self-perception and perceived social support in two groups

Multivariate Indices	Value	F	df	Error df	P
Pillai's trace	0.45	6.98	6	93	< 001
Wilks' lambda	0.54	6.98	6	93	< 001
Hotelling's Trace	0.83	6.98	6	93	< 001
Roy's largest root	0.83	6.98	6	93	< 001

df: Degree of freedom

In order to compare the two groups in terms of self-perception and perceived social support, multivariate analysis was used.

As seen in table 3, Wilk's lambda value and its significance level are less than 0.05; therefore, it can be concluded that there is a significant difference between the groups. For a more detailed examination of the differences between the two groups, results of analysis of variance (ANOVA) are reported in table 4.

As shown in table 4, one-way multivariate analysis of variance (MANOVA) between the two groups was carried out to examine the differences between the two groups of addicts in terms of self-perception and perceived social support. The 4 dependent variables included family support, friends' support, aggression, and manipulation. The independent variables were the two groups of addicts. To investigate the normality of data, linearity, and univariate and multivariate outliers, homogeneity of the variance-covariance matrix, and multicollinearity were examined and no violations were observed. There was a significant difference between the two groups in terms of multiple dependent variables [Wilk's lambda = 0.54; P = 0.000; f(6,93) = 6.98].

When the results of dependent variables were considered separately, a significant difference at the level of 0.05 was observed in all dependent variables. Therefore, we can conclude that there was a significant difference between perceived social support and self-perception in the two groups. In order to examine the difference of self-perception in addicts in the two groups, independent t-test was implanted the results of which are given in table 5.

Regarding the homoscedasticity of variances for each of the subscales in the Self-Perception Questionnaire and compatibility of variances, T values show that the two groups are significantly different in terms of aggression and manipulative behaviors ($P \leq 0.05$). Therefore, we can conclude that there is a significant difference in the self-perception of the two groups.

In order to evaluate the difference in perceived social support in addicts under pharmacological and non-pharmacological treatment, independent sample t-test was used the results of which are shown in table 6.

As seen in table 6, the independent samples t-test was conducted to compare scores of perceived social support between the two groups.

Table 4. Summary of multivariate analysis of variance to compare perceived social support and self-perception in the two groups of addicts (df = 1)

Sources of variation	SS	df	MS	f	P
Family support among groups	98.01	1	98.01	0.04	0.04
Friends' support among groups	123.21	1	123.21	0.02	0.02
Aggression among groups	852.64	1	852.64	0.000	< 0.01
Manipulation among groups	68.89	1	68.89	0.04	0.04
Error of family support	2391.380	98	24.40		
Error of friends' support	24.57.54	98	25.07		
Error of aggression	2200.12	98	22.45		
Error of manipulation	1641.22	98	16.74		
Total family support	21231	100			
Total friends' support	13711	100			
Total aggression	17888	100			
Total manipulation	13095	100			

df: Degree of freedom

Table 5. The t-test results for comparison of the two groups in terms of self-perception

Subscale	Pharmaceutical treatment Mean ± SD	Non-pharmacological treatment Mean ± SD	Df	t	P
Passivity	13.84 ± 3.35	14.96 ± 3.53	98	1.62	0.10
Aggression	9.26 ± 4.97	15.10 ± 4.49	98	6.16	< 0.01
Assertiveness	10.92 ± 4.75	12.14 ± 5.32	98	1.20	0.23
Manipulation	9.84 ± 4.02	11.50 ± 4.16	98	20.02	0.04

SD: Standard deviation; df: Degree of freedom

Considering homoscedasticity of variances for each of the subscales of perceived social support and homogeneity of variances, t values revealed a significant difference between the two groups in terms of the support they receive from family and friends ($P \leq 0.05$). Therefore, there is a significant difference between these two groups in the subscales of perceived social support, except support received from significant others. The group undergoing pharmaceutical treatment received more support from their families and friends compared to the other group.

Discussion

One-way MANOVA between groups was carried out to examine the differences between the two groups of addicts undergoing pharmaceutical and non-pharmaceutical treatments in self-perception and perceived social support. The comparison showed a significant difference between the two groups ($P \leq 0.05$). These results are consistent with research findings of Roohani, Salarieh, Abedi, and Kheyrkhah (2012) who examined the effects of methadone on the QOL of addicts. Their findings showed that people who underwent methadone treatment had a significant improvement in their QOL. They concluded that pharmaceutical treatment and the use of methadone can be a suitable approach for treating drug-dependent people. Using methadone and buprenorphine is a pharmaceutical method that helps addicts control their dependence on drugs. These two drugs are recognized as effective intervention for drug-dependent people (Bray, Pemberton, Lane, Hourani, Mattiko, & Babeu, 2010), eliminate the difficulties of quitting drugs, and have a positive impact on various individual and social aspects of the addict's life. In developed countries, drug treatments like buprenorphine and methadone are used for opiate abuse. However, in many developing countries, pharmaceutical methods are not accepted. Rather, it is attempted to eliminate the problem of drug dependence by using non-pharmacological methods such as force, prison, etc. Despite government and authorities' aims to eliminate addiction, it seems that the non-pharmacological methods they employed in previous decades, have failed to meet their goals. In recent years, pharmaceutical treatments are used (Roohani et al., 2012).

The results of the present study showed that there is a significant difference between these two groups in all subscales of self-perception except passivity and assertiveness. The behavior one shows in different situations is directly affected by the image and concept one has of one's whole being.

If the individual has a negative feeling toward his/her appearance and physical and mental capabilities, this negative perception is reflected in a series of his/her actions and behaviors, and he/she cannot show the necessary adaptation needed in interaction with others or in deprivation.

Table 6. T-test results for comparison of the two groups in subscales of perceived social support

Subscale	Medicinal treatment Mean ± SD	Non-medicinal treatment Mean ± SD	df	t	P
Family support	14.68 ± 3.60	12.70 ± 5.98	98	2.01	0.04
Support by others friends	11.66 ± 5.31	9.44 ± 4.67	98	2.21	0.02
Support by others	13.80 ± 4.84	13.04 ± 5.46	98	0.73	0.46

SD: Standard deviation; df: Degree of freedom

Self-concept is a series of ideas, perceptions, and feelings one has about oneself. It is one of the most important aspects of social development and is gradually obtained through social experiences and in communication with others (Khalaji and Sadeghian, 2002). One of the causes of drug addiction or addiction relapse is the perception one has about one's capabilities and competencies. Negative perception increases the probability of return to drug use (Bavi & Borna, 2009). The 2 addiction treatments used in Iran consist of pharmaceutical and non-pharmaceutical treatments. In this research, abstinence treatment (in residential centers) and pharmaceutical treatment (in rehabilitation centers) such as using methadone and buprenorphine were compared. It seems that residential centers have achieved some successes by relying on 12 Step Programs for addiction recovery, strengthening addicts' spirituality, providing powerful and effective social support for members, and changing one's attitude to life problems. The other method for treating addicts is maintenance treatment that has become popular in recent years and its efficacy in abstinence and improving addicts' psychological states, health, and well-being has been proved. By using buprenorphine and methadone, maintenance treatment programs can be an effective treatment for opiate-addiction. Results showed that there is a significant difference between these two groups in all subscales of perceived social support except support from significant others; addicted men undergoing pharmaceutical treatment received more support from their family and friends compared to addicted men undergoing non-pharmaceutical treatment. Various studies have shown that addicts have less social support (Pourmohamadreza Tajrishi & Mirzamani Bafghi, 2007; Karimi Moghaddam Arani, Hashemi, & Bayrami, 2009). The findings of this study suggest that rejection of people from the family and lack of access to equal opportunities in society lead to drug addiction. This may also lead to escalation of drug use and relapse. Drug addicts who have less social support face multiple social deprivations. In other words, they experience less satisfaction in their life, experience more social alienation, and have less social contact and interaction with others. It seems that those people who are rejected by their families are more likely to join improper groups and their self-confidence decreases. Negative attitudes of people toward them lead them to the idea that they are defective and make them feel worthless. Moreover, the aggressive behavior of addicts may cause their rejection by their positive friends and peers who have reasonable responses in confronting life problems. This may lead to addicts' attraction toward improper groups, which in turn sets the scene for drug abuse. Based on the results of this study, methadone and buprenorphine programs can be efficient treatment methods for drug dependent patients. Thus, the use of medical and pharmaceutical treatment methods, especially methadone and buprenorphine, in Iran is suggested for treating drug dependent individuals.

Conflict of Interests

Authors have no conflict of interests.

Acknowledgments

We would like to thank the director of Negin Addiction Treatment Center and Behesht Pakyar Ara.

References

Asayesh, H., Hesam, M., Ghorbani, M., Shariati, A., & Nasiri, H. (2011). The relationship of perceived social support, mental health and life satisfaction in martyrs and veterans Students of State University in Gorgan. *Journal of Research Development in Nursing and Midwifery*, *8*(1), 34-41.

Bahrami, M., Abolghasemi, A., & Narimani, M. (2013). Comparing of self-perception and safety measures in students with social anxiety disorder symptoms and normal students. *Journal of School Psychology*, *2*(1), 62-79.

Bavi, S., & Borna, M. R. (2009). The Influence of rehabilitation course of psychological services in

addicts negative self concept, anxiety, depression and self-esteem in the rapeutic communing center of Ahwaz. *Knowledge and Research in Applied Psychology,* (39), 54-66.

Beygi, A., Shirazi, M., & Pasandide, M. (2013). The effectiveness of life skills training on enhancement of quality of life and coping styles in methadone maintenance therapy members. *Research on Addiction, 7*(26), 95-110.

Brabadi, H. A., Younesi, S., & Taleghani, N. (2009). Self and crime: Role of integration therapy on improvement of self understanding of addicted offenders. *Social Welfare, 9*(34), 321-349.

Bray, R. M., Pemberton, M. R., Lane, M. E., Hourani, L. L., Mattiko, M. J., & Babeu, L. A. (2010). Substance use and mental health trends among U.S. military active duty personnel: key findings from the 2008 DoD Health Behavior Survey. *Mil.Med, 175*(6), 390-399. Retrieved from PM:20572470

Bruwer, B., Emsley, R., Kidd, M., Lochner, C., & Seedat, S. (2008). Psychometric properties of the Multidimensional Scale of Perceived Social Support in youth. *Compr.Psychiatry., 49*(2), 195-201. doi:S0010-440X(07)00126-5 [pii];10.1016/j.comppsych.2007.09.002 [doi]. Retrieved from PM:18243894

Cole, J., Logan, T. K., & Walker, R. (2011). Social exclusion, personal control, self-regulation, and stress among substance abuse treatment clients. *Drug Alcohol.Depend., 113*(1), 13-20. doi:S0376-8716(10)00245-0 [pii];10.1016/j.drugalcdep.2010.06.018 [doi]. Retrieved from PM:20728289

Delavar, M., Ghoreyshi, A. A., Jahanshahi, M., & Nabian, N. (2014). Comparative experimental study of methane adsorption on multi-walled carbon nanotubes and granular activated carbons. *Journal of Experimental Nanoscience, 9*(3), 310-328. doi:doi: 10.1080/17458080.2012.661470.

Davis, M. I., & Jason, L. A. (2005). Sex differences in social support and self-efficacy within a recovery community. *Am.J Community Psychol, 36*(3-4), 259-274. doi:10.1007/s10464-005-8625-z [doi]. Retrieved from PM:16389499

Delpasand, k., Ayar, A., Khani, S., & Mohammadi, P. (2012). Social support and crime; the comparative study of criminal and non-criminal youth in Ilam. *Social Studies and Research in Iran, 1*(2), 89-120.

Farnam, R., & Farhoudian, A. (2011). *Family's guide to methadone and buprenorphine maintenance treatment* (1st ed.). Tehran, Iran: Tehran University of Medical sciences Press.

Ghane, M., Pourhashemi, S. J., Jafari, A., & Shekarchizadeh, H. (2016). Oral health behavior of in-treatment female drug addicts in Tehran. *J Dent Med Tehran Univ Med Sci, 29*(1), 60-69.

HosseiniAlmadani, S. A., Ahadi, H., Karimi, Y., Bahrami, H., & Moazedian, A. (2012). The comparison of resiliency, identity styles, spirituality and perceived social support in addicts, non-addicts, and recovered addicts. *Research on Addiction, 6*(21), 47-64.

Karami, M., Hossini, E., Shahabi Majd, N., Ebrahimzadeh, M. A., & Alemy, S. (2013). Pharmacological basis of opioids dependence (addiction) and its. *Clinical Excellence, 1*(2), 97-114.

Karimi Moghaddam Arani, H., Hashemi, T., & Bayrami, M. (2009). *Role of Irrational Beliefs, self-efficacy perceptions and social support in recurrent drug abuse disorder [MSc Thesis]*. Tabriz, Iran: School of Educational Science and Psychology, University of Tabriz.

Karimnejad, F., Maktabi, G., Vatankhah, M., Firoozy, A. A., & Rahimi, H. (2014). Comparison between agreeableness trait of personality and spiritual health of the addicts living in community treatment centers (TC) and under methadone treatment addicts in Ahvaz, Iran. *Hormozgan Med J, 18*(1), 75-83.

Karimzadeh, M., & Mohseni, N. (2005). The relationship between self concept and academic achievement among second year female high School Student of Tehran Majoring in math Physics and Human Sciences. *New Thoughts on Education, 1*(2-3), 23-38.

Khalaji, H., & Sadeghian, P. (2002). Self-concept, physical education and sports. *Development of Physical Education,* (9), 12-15.

Lin, C., Wu, Z., & Detels, R. (2011). Family support, quality of life and concurrent substance use among methadone maintenance therapy clients in China. *Public Health, 125*(5), 269-274. doi:S0033-3506(11)00029-1 [pii];10.1016/j.puhe.2011.01.009 [doi]. Retrieved from PM:21414646

Nikmanesh, Z., & Yari, S. (2012). Relationship between self-efficacy and self-perception with test anxiety of high school students. *Journal of Educational Psychology Studies, 8*(14), 127-147.

Pourmohamadreza-Tajrishi, M., & Mirzamani Bafghi S.M. (2007). The relationship between brain-behavioral systems, social support and depression. *Journal of Social Welfare, 7*(26), 223-246.

Roohani, S., Salarieh, I., Abedi, S., & Kheyrkhah, F. (2012). Impact of methadone maintenance treatment on the quality of life of opioid dependent patients in City of Babol. *J Mazandaran Univ Med Sci, 22*(87), 46-55.

Sayed Alitabar, S. H., Falahatpisheh, M., Habibi Asgarabad, M., Arvin, M., & Sarvestani, A. (2016). Psychometric properties of the problems assessment for substance using psychiatric patients. *Community Health, 3*(1), 11-20.

van den Brink, W. (2012). Evidence-based pharmacological treatment of substance use disorders and pathological gambling. *Curr.Drug Abuse Rev., 5*(1), 3-31. doi:BSP/CDAR/E-Pub/000056 [pii]. Retrieved from PM:22126708

Zimet, G. D., Dahlem, N. W., Zimet, S. G., & Farley, G. K. (1988). The Multidimensional Scale of Perceived Social Support. *Journal of Personality Assessment, 52*(1), 30-41.