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Psychometric evaluation of the Italian version of Orbach & Mikulincer mental pain scale in a non-clinical sample

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## **Psychometric Evaluation of the Italian Version of Orbach & Mikulincer Mental Pain Scale in a Non-Clinical Sample**

### **Abstract**

The main goal of the study was to evaluate Orbach's multidimensional model of mental pain in Italy, while constructing a reliable and valid Italian version of the 40-item Orbach and Mikulincer Mental Pain scale (OMMP) in a non-clinical sample. The sample consisted of 544 Italian adults. Findings indicated that the original 8-factor structure of the OMMP scale was not validated in our Italian version of the scale. Exploratory factors analyses yielded a 31-item solution, with five main factors (Irreversibility, Lack of control and Freezing, Narcissistic wounds, Emotional flooding, Emptiness). Women scored higher than men in emotional flooding and lack of control, age was inversely related to the reported level of mental pain, and participants who were married or had a long, stable couple relationship showed lesser emotional suffering than singles.

Further studies are needed in order to better understand the link between aversive affective states and mental pain in the Italian culture. A socio-demographic profile of people affected by mental pain is also needed in order to screen at risk-individuals, promote wellbeing and prevent self-harm or suicidal behaviors. In addition, future studies should attempt to replicate our findings in clinical samples as well as in people who attempted suicide in the Italian context.

### **Keywords**

Mental pain; Orbach and Mikulincer Mental Pain scale (OMMP); Psychometrics; Scale validation.

## Introduction

Mental pain is a prominent painful experience among people who have experienced loss and trauma (e.g., Mee et al. 2006) and has been identified as one of the most important risk factors for suicidal behavior (e.g., Ducasse et al. 2017; Verrocchio et al. 2016). In its extreme form, mental pain is a core component of suicide ideation (e.g., Meerwijk and Weiss 2011) and as such is experienced by millions of people, including 5.6% in the general U.S. population and 53% in patients with severe mental illness (American Psychiatric Association 2003). In its mild form, it can be momentarily experienced by almost every person coping with life adversities and stressful events, and tend to include "a wide range of subjective experiences characterized as an awareness of negative changes in the self and in its functions accompanied by negative feelings" (Orbach et al. 2003b, p. 228). In attempting to operationalize this subjective experience, Orbach et al. (2003a, 2003b) constructed the Orbach and Mikulincer Mental Pain scale (OMMP) and found that more intense mental pain was associated with higher levels of depression, anxiety, hopelessness, and suicidality in both non-clinical community samples and psychiatric patients. In light of the many people who may suffer from mental pain, it is extremely important to translate the OMMP scale, which was originally constructed in Hebrew, to other languages so researchers and clinicians around the globe can have access to a reliable and valid tool for assessing this common but potentially destructive experience. The purpose of this article is to translate the OMMP scale into Italian and examine its psychometric properties in a large community sample of adults.

Although everyone can recall an episode where they felt mental pain, the systematic conceptualization and operationalization of this subjective experience has been carried out only during the last 25 years (e.g., Tossani 2013). In early psychoanalytic writings, Sandler (1962) referred to mental pain in terms of large discrepancies between a person's mental representations of his or her actual self and ideal self. Similarly, Baumeister (1990), in his

theory of suicidal behavior, claimed that mental pain results from the painful awareness of one's own failures and negative outcomes. However, Shneidman (1993) was the first to systematically define mental pain while coining the term "psychache." In his view, mental pain is an aversive state that encompasses a blend of aversive emotions and mental states, like shame, guilt, humiliation, loneliness, fear, angst dread, anguish, hopelessness, and rage, resulting from an intense experience of frustration due to the non-fulfilment of basic psychological needs. In this view, suicide is an escape from the experience of overwhelming, and unbearable mental pain (Shneidman 1993).

Following Shneidman's pioneering definition, scholars have attempted to refine this definition while adding other components to the construct of mental pain (e.g. Bolger 1999; Maltzberger 2004; Orbach et al. 2003b). For example, Maltzberger (2004) claimed that subjective aversive experience of mental pain also includes a sense of self-disintegration and sudden fears of losing one's mind. Fleming (2006) argued that an additional component of mental pain is that the suffering person has difficulties finding words to express his or her inner feelings and share them with others. In addition, mental pain cannot be relieved by sharing it with someone else (Fleming 2006). Bolger (1999) analyzed some reports written by people who had suffered traumatic experiences, and claimed that mental pain also includes a sense of "brokenness of the self", including loss of personal control, loss of self-identity, and a sense of woundedness.

In an attempt to integrate the various conceptualizations of mental pain, Orbach and colleagues (Orbach 2003; Orbach et al. 2003a; Orbach et al. 2003b) used grounded theory principles and qualitative content analysis to propose a comprehensive definition of this experience. In their view, mental pain is an irreversible hurtful experience, stemming from the perception of negative changes in the self, accompanied by intense negative emotions and cognitions (e.g., loss of inner control, emotional flooding, self-estrangement, emotional

freezing, cognitive confusion, emptiness). Some of these mental states are in line with Baumeister's, Bolger's, Maltzberger's, and Shneidman's definitions (e.g., self-estrangement) and others follow Frankl's (1966) definition of suffering (e.g., emptiness). Still, Orbach's definition includes other inner states that have not been proposed by other theorists (e.g., pain irreversibility, freezing, emotional flooding, and confusion).

Based on their comprehensive conceptualization, Orbach et al. (2003b) developed a self-report scale including the various cognitive and affective components of mental pain. First, the authors sampled 120 Israeli participants and asked them to write about their experience of mental pain in an open-end format. Their responses were content-analyzed and the resulting content units were incorporated into a 220-item self-report scale. The scale was then administered to another independent sample of 402 Israeli participants, and factor-analytic techniques were used to reduce the number of items. These techniques yielded the final version of the scale – the 44-item OMMP scale, which includes nine main factors: (1) irreversibility, (2) loss of control, (3) narcissist wounds, (4) emotional flooding, (5) freezing, (6) self-estrangement, (7) confusion, (8) social distancing and (9) emptiness. Internal consistency coefficients for the total scale and each of the nine factors were acceptable, with Cronbach alphas ranging from .74 to .95 (e.g., Gvion et al. 2014; Levi et al., 2008; Shelef et al. 2015). The total scale and its factors also showed acceptable test-retest reliability, and factors had significant but moderate correlations with depression (from .26 to .64) and anxiety (from .27 to .50), thereby supporting the scale's convergent and discriminant validity (Orbach et al. 2003a). A lack of reliable results moved Orbach to drop the social distancing items from the scale (Orbach, personal communication, February 17, 2010; Meerwijk et al. 2014), thereby shortening the OMMP scale to 40 items and eight main factors.

The OMMP scale has already proved to be particularly effective for assessing mental pain in several clinical samples (e.g., Meerwijk and Weiss 2011; Trent Haines et al. 2015) as

well as in community samples (e.g., Soumani et al. 2011). It was validated in Israel (Gvion et al. 2014; Levi et al. 2008; Orbach et al. 2003a, 2003b; Shelef et al. 2015) and Portugal (Guimarães et al. 2014). However, the OMMP scale has not been used in Italy yet. Due to the fact that episodes of mental pain in its mild form are common in the general population and elevations in the frequency and intensity of these episodes can put adolescents and adults at risk for psychopathology and suicide (e.g., Verrocchio et al. 2016), we want to create a reliable and valid Italian version of the OMMP scale. In this way, we would be able to offer Italian researchers and clinicians a tool to assess mental pain in community samples and use it as a possible indicator of risk for mental health problems. Therefore, the main goal of this study is to construct an Italian version of the OMMP scale and evaluate its psychometric properties in a large community sample of adults.

## **Material and Methods**

### **Participants and Procedure**

The sample consisted of 544 Italian adults (307 women and 237 men), ranging in age from 18 to 85 years ( $M = 34.27$ ,  $SD = 12.34$ ) who participated in the study without any monetary compensation. Participants were recruited via flyers, online announcements and community meetings and were asked to invite people who might be interested in participating in the study (snowball sampling).

The data were collected between May and October 2015. Participants had to meet the following inclusion criteria: being between 18 and 85 years old; understanding written Italian; not suffering from any brain damage, cognitive deficit, or psychotic state; and providing written informed consent. Institutional review boards approved the study.

All participants were Caucasians. Three-hundred fifty-three participants were single (64.9%), 170 were married or had a long, stable couple relationship (31.3%), and 21 were

separated/divorced or widowed (3.8%). Most of the participants (80.9%) had finished high school, college, or university.

The OMMP scale was translated from English into Italian and then independently back translated by two bilingual translators following an iterative translation method (Beaton et al., 2000). Any discrepancies between the two versions were resolved by joint agreement of both translators. The wording of the items and answer format were tested by administering the Italian OMMP scale to 15 adults with low education level (i.e., 8 years of formal schooling) and underwent a semi-structured interview about problems in understanding and answering. This pilot version was re-evaluated by a bilingual committee, composed by two clinical psychologists and the two original bilingual translators. No further modifications were required.

### **Measures**

Participants completed a socio-demographic form, which included items about gender, age, education, occupation, and ethnicity. They also completed the 40-item Italian version of the OMMP scale. Participants were asked to focus on their own experience of mental pain and to rate the extent to which each item was self-descriptive while experiencing this kind of pain, Ratings were made on a 5-point scale that ranges from 1 (*strongly disagree*) to 5 (*strongly disagree*). Higher scores indicated higher intensity of mental pain.

### **Statistical Analyses**

To confirm the factorial structure of the OMMP as developed by Orbach et al. (2003a), a confirmatory factorial analysis was performed using maximum likelihood on a covariance matrix. Model fit was assessed using the following test indices: Chi square, comparative fit index (CFI >0.90), and root mean square error of approximation (RMSEA <0.10). Since the interpretation of the Chi square fit test is affected by the size of the sample, the ratio of Chi square to degrees of freedom was calculated. The results of the



CFA suggested a moderate to poor fit between the eight-factor model of OMMP and the observed data:  $\chi^2(712) = 2929,4$ ,  $P < 0.001$ ;  $\chi^2 / df = 4.12$ ; CFI= 0.85; RMSEA= 0.076.

Refinement of the model, based on the examination of the modification indices, did not allow significant improvement of the fit of the model.

As the fit of the model was unsatisfactory, an exploratory factor analysis was conducted on the 40 OMMP items in order to examine Orbach et al. (2003a) theoretical model and to identify the factorial structure of the Italian version in a non-clinical sample. Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy test and Bartlett's test of sphericity were used to check whether the data were adequate to apply factor analysis. We used principal axis factoring with Promax rotation. Factors were extracted based on Kaiser's criterion (1960) of eigenvalue higher than 1. Items with loadings greater than .40 and cross loadings less than .10 were considered for inclusion in a factor. The internal consistency of the OMMP scores was estimated with Cronbach alpha coefficients. Associations between OMMP scores and categorical variables (gender, age, marital status, education) were analyzed with t-tests and multivariate analyses of variance (MANOVAs). A  $p$  value lower than .05 was considered to be statistically significant. All statistical analyses were performed using SPSS v25.0 software.

## **Results**

### **Factor Analysis and Reliability**

9 Items of the original OMMP did not comply with the criteria set for allocating an item to a specific factor and were excluded. The remaining 31 items were subjected to exploratory factor analysis using principal axis factoring and axis oblique rotation (PROMAX). Kaiser-Meyer-Olkin measure of sampling adequacy proved to be extremely good (KMO = 0.970; Hutcheson and Sofroniou 1999) and Bartlett's test of sphericity proved to be highly significant ( $p < .001$ ). According to Kaiser's criterion (1960), five factors had an

eigenvalue  $> 1$  and explained 57.26% of the variance. Table 1 shows items' loading for the 5-factor solution. Subsequently, 9 items were eliminated as they did not comply with the criteria set for allocating an item to a specific factor (items number 2, 9, 13, 17, 23, 24, 27, 28 and 36 were excluded; see Table 2). From the remaining 31 items, nine items load on the first factor, ten items on the second factor, six on the third factor, three items on the fourth factor and three items on the fifth factor.

The meanings and names of the four factors were determined by taking into consideration similarities to the original OMMP scale and the OMMP-24-P scale (Guimarães et al. 2014; Orbach et al. 2003a). The name chosen for the first factor was “Irreversibility”. The nine items composing this factor were the same as those that were found in the original version of OMMP scale (Orbach et al. 2003a). The second factor was labeled "Lack of control and Freezing" and included ten items. The third factor was named "Narcissist wounds" and included six items (five of them are the same of the original version). The fourth factor was labeled “Emotional flooding” and included three items. Finally, the fifth factor was labeled "Emptiness" and included three items. The five factors showed good reliability, with Cronbach Alphas ranging from .81 to .92 (see Table 1). On this basis, we computed five scores for each participant by calculating the mean of the items that belonged to each factor. In our sample, the “Emotional flooding” factor had the highest score ( $2.36 \pm 1.08$ ) followed by the “Lack of control and Freezing” ( $2.27 \pm 0.91$ ; see Table 1).

### **OMMP Scores and Sociodemographic Variables**

A Multivariate analysis of variance (MANOVA) showed a general significant difference between men and women in the OMMP's factors  $F_{(5, 538)} = 4.38, p < .01, \eta^2 = .04$ . Observing the univariate analyses it is possible to observe that significant differences were found only in the “Emotional flooding” and “Lack of control and Freezing” OMMP factors were women scored higher than man (see Table 3). A significant negative correlation was

found between age and “Lack of control and Freezing”, “Emotional flooding” and “Narcissist wounds”. The negative correlation indicates an increase of the factors’ scores with decreasing age; in other words, the results showed that younger adults had higher scores than older adults (see Table 3).

Multivariate analysis of variance (MANOVA) indicated that marital status had a significant effect on the OMMP factors,  $F_{(10,1074)} = 7.31, p < .01, \eta^2 = .64$ . Univariate analyses revealed that all the five factors were significantly affected by marital status (see Table 3). Multiple comparisons showed that single participants scored significantly higher in the mental pain factors than married/cohabitating participants in all the factors’ score and significantly higher than Separated/widowed in the “Lack of control and Freezing”, “Narcissist wounds” and “Emptiness” factors. An additional MANOVA showed significant association between education level and the five OMMP factors ( $F_{(5, 538)} = 4.10, p < .01, \eta^2 = .037$ ); in particular, participants with low-educational level reported higher score than participants with high-educational level in all five factors (see Table 3).

## Discussion

The main aim of the study was to evaluate Orbach et al.'s (2003a) multidimensional model of mental pain while constructing a reliable and valid Italian version of the OMMP scale. Findings clearly indicated that the original 8-factor structure was not validated in our Italian non-clinical sample. Exploratory factors analysis provided a 31-item solution, with only five main factors. However, the final factorial solution appears similar to the original version on many degrees.

The name chosen for the first factor was “Irreversibility” and the nine items composing this factor were the same as those that were found in the original version of OMMP scale (Orbach et al. 2003a). Irreversibility, one of the experiential dimensions

introduced by Orbach et al. (2003a), implies that when people are overwhelmed by mental pain they feel unable to bring about real changes in their identities and tend to adopt a pessimistic, hopeless stance with regard to their selves and the future.

The second factor was labeled “Lack of control and Freezing” and included ten items. This factor is the one that differ the most from the original scale and includes items originally allocated to different factors: five of the ten items were originally included in the original similar factor named “Loss of control” (items number 5, 6, 21, 31 and 33), while three items were originally included in the factor “Freezing” (items number 4, 11 and 19), one items in the factor “Confusion” (item number 20) and one in the factor “Emotional flooding” (item number 3). However, despite the fact that the second factor differs from the original version and is composed by items deriving from different factors in the original version of OMMP, it is important to highlight that 5 items originally allocated to the subscale “Loss of control” (composed by 10 items) have been eliminated on the bases of the exclusion criteria used in the factorial analysis (items number 2, 9, 13, 28 and 36) while all the items originally allocated in the subscale “Freezing” are now in our second factor. Item 20 was originally in the “Confusion” factor which was composed by three items but 2 of them are excluded in the Italian version (items number 24 and 27). The last item currently included in the second factor, item number 3, was previously part of the subscale “Emotional Flooding”. Therefore, the name chosen for the second factor "Lack of control and Freezing" takes into account that the items that compose it reflect feelings of uncontrollability, unpredictability, a sense of impossibility of reaction and ambiguity while experiencing mental pain. Here, the focus of concern is the future, which may be seen as a driver for change, flexibility, and creativity in the decision-making process. However, fear of the future might engender a paradoxical condition (Gelatt 1993): the desire to control one's future together with the fear of making choices that could negatively affect one's own life. In this way, people might think about the

future in a dysfunctional way, preventing them from acting and priming a sense of helplessness.

The third factor was named "Narcissist wounds" and included six items: five items are the same of the original version (items number 1, 7, 12, 16 and 18) while one item was previously included in the "Self-estrangement" scale (item number 15). The "Self-estrangement" scale was composed by three items but 2 of them are now excluded (items number 17 and 23). Items included in this factor reflect the experiential components of hurt-related feelings, such as vulnerability, rejection, and abandonment (Orbach et al. 2003a).

The fourth factor was labeled "Emotional flooding" and included three items (items number 8, 14 and 35). All the items now included in the fourth factor were previously in the original version-subscale named in the same way. Item number 3 now allocated in the "Lack of control and Freezing" subscale, was previously part of this scale. However, this item reflects a sense of turmoil and could be easily linked with an experience of loss of control and a sense of inconclusive internal unrest. This factor describes the experience of intense and overwhelming emotional states, the inability of coping with them, and the resulting confusion. Undoubtedly, this factor is a core component of mental pain, as it recurs in most theoretical formulations of this phenomenon. Formulations provided by Shneidman, Baumeister, Bolger, Orbach, and, more recently, by Meerwijk and Weiss (2011) emphasize the emotional flooding resulting from a negative, dysfunctional self-perception, which turns into mental pain only when chronic and sustained over time (Fertuck et al. 2016). Consequently, mental pain cannot be considered analogue of emotional suffering derived from transient negative emotions.

Finally, the fifth factor was labeled "Emptiness" and included three items (items number 38, 39 and 41) originating from the original "Emptiness" factor. These three items

tap into the construct of the loss of personal meaning produced by the experience of mental pain (Orbach et al. 2013).

In summary, the five OMMP factors are analogous to core negative mental states identified among clinical and general populations, and may help mental health professionals to identify what triggers mental pain or even suicidal behaviors (Guimarães et al. 2014; Trent et al. 2015).

The experience of mental pain appears to depend on several biological (genetic and physiological) and psychosocial factors and, in particular, it is important to consider the impact of gender (Barry et al. 2012). In this study, women scored significantly higher than men in the “Emotional flooding”, “Narcissist wounds” and “Lack of control and Freezing” factors. Although few studies focused on the gender-mental pain link, our findings can be explained by gender differences in the ways men and women respond to dysphoric states (Kuhl 1981, 1992). Nolen-Hoeksema (1987) found that men are more likely to engage in distracting behaviors when dealing with an emotionally negative situation, whereas women have a ruminative response style amplifying the effects of negative past experiences. This mental rumination might underlie women's higher scores in the OMMP scale.

Lack of control may be related to the unpredictability of modern social changes. The social theorist Zygmunt Bauman (2000, 2001) defines modern times as liquid modernity, a transitory reality where space and time risk to lose their genuine significance and value. In this study, women had higher ratings of lack of control than men. Future studies should address possible gender differences in social roles and workload, while considering women's ways of coping with physical and mental experiences.

As far as age is concerned, young people had the highest level of mental pain (significant correlations were found for the “Emotional flooding”, “Narcissist wounds” and “Lack of control and Freezing” factors. The results are in line with Ohana et al.'s (2014)

claim that the older the individual, the higher his or her psychological resilience (i.e., the ability to keep and even improve physical and psychological wellbeing after traumas or negative life experiences). According to Baltes (2003), older age means greater wisdom and emotional intelligence, thereby helping the individual to effectively regulate negative affective states. Moreover, there is evidence that as age increases, self-regulation improves and people tend to have a more harmonious and positive view of their lives (e.g., Carstensen et al. 2003; Scheibe and Blanchard-Fields 2009).

Findings also indicated that participants who were married or had a long couple relationship showed lesser levels of mental pain than singles. This result is consistent with accumulated evidence that married people tend to report more life satisfaction, more happiness, and less distress than singles (e.g., Diener et al. 2000). Barrett (2000) also highlighted that married people have less intense and less persistent depressive symptoms than singles. In addition, there is evidence that married people tend to live longer and in better physical and mental health than singles (e.g., de Vaus 2002; Marks and Lambert 1998; Smith 2006).

In sum, the theoretical definition of mental pain given by Orbach et al. (2003a) was validated in the 5-factor model of the Italian version of the OMMP scale that was identified in our non-clinical sample. Further studies are needed in order to better understand the connection between aversive affective states – such as depression, hopelessness, shame, guilt, humiliation, loneliness, etc. – and mental pain in the Italian context. A socio-demographic profile of people affected by mental pain is also needed in order to screen at risk-individual, promote wellbeing and prevent self-harm or suicidal behaviors. In addition, future studies should attempt to replicate our findings in clinical Italian samples as well as in people who attempted suicide.

## References

- American Psychiatric Association (2003). *Practice guideline for the assessment and treatment of patients with suicidal behaviors*. Arlington, VA: Author.
- Baltes, P. B. (2003). Extending longevity: Dignity gain - or dignity drain? *Max Planck Research*, 3, 14-19.
- Barrett, A. E. (2000). Marital trajectories and mental health. *Journal of Health and Social Behavior*, 41(4), 451-464.
- Barry, D. T., Pilver, C., Potenza, M. N. & Desai, R. A. (2012). Prevalence and psychiatric correlates of pain interference among men and women in the general population. *Journal of Psychiatric Research*, 46(1), 118-127.  
<https://doi-org.ezproxy.unibo.it/10.1016/j.jpsychires.2011.09.004>
- Bauman, Z. (2000) *Liquid Modernity*. Cambridge: Polity Press.
- Bauman, Z. (2001). *The individualized society*. Cambridge, UK: Polity.
- Baumeister, R. F (1990). Suicide as escape from self. *Psychological Review*, 97(1), 90-113.  
<https://doi.org/10.1037/0033-295X.97.1.90>
- Beaton, D. E., Bombardier, C., Guillemin, F., & Ferraz, M. B. (2000). Guidelines for the process of cross-cultural adaptation of self-report measures. *Spine*, 25(24), 3186-3191.  
<https://doi.org/10.1097/00007632-200012150-00014>
- Bolger, E. (1999). Grounded theory analysis of emotional pain. *Psychotherapy Research*, 9(3), 342-362.  
<https://doi.org/10.1080/10503309912331332801>
- Carstensen, L. L., Fung, H. H., & Charles, S. T. (2003). Socioemotional selectivity theory and the regulation of emotion in the second half of life. *Motivation and Emotion*, 27(2), 103-123.



<https://doi.org/10.1023/a:1024569803230>

de Vaus, D. A. (2002). Marriage and mental health. *Family Matters*, 62, 26-32.

Diener, E., Gohm, C. L., Suh, E., & Oishi, S. (2000). Similarity of the relations between marital status and subjective well-being across cultures. *Journal of Cross-Cultural Psychology*, 31(4), 419-436.

<https://doi.org/10.1177/0022022100031004001>

Ducasse, D., Holden, R. R., Boyer, L., Artéro, S., Calati, R., Guillaume, S., et al. (2017). Psychological pain in suicidality: A Meta-Analysis. *The Journal of Clinical Psychiatry*.

<https://doi.org/10.4088/JCP.16r10732>

Fertuck, E. A., Karan, E., & Stanley, B. (2016). The specificity of mental pain in borderline personality disorder compared to depressive disorders and healthy controls.

*Borderline Personality Disorder and Emotion Dysregulation*, 3(2), 1-8.

<https://doi.org/10.1186/s40479-016-0036-2>

Fleming, M. (2006). Distinction between mental pain and psychic suffering as separate entities in the patient's experience. *International Forum of Psychoanalysis*, 15(4), 195-200.

<https://doi.org/10.1080/08037060500522754>

Frankl, V. E. (1966). What is meant by meaning? *Journal of Existentialism*, 7(25), 21-28.

Gelatt, H. B. (1993). Future sense: Creating the future. *The Futurist*, 27(5), 9-13.

<https://doi.org/10.1037/0022-0167.50.2.165>

Guimarães, R., Fleming, M., & Cardoso, M. F. (2014). Validation of the Orbach & Mikulincer Mental Pain Scale (OMMP) on a drug addicted population. *Social Psychiatry and Psychiatric Epidemiology*, 49(3), 405-415.

<https://doi.org/10.1007/s00127-013-0751-6>

- Gvion, Y., Horesh, N., Levi-Belz, Y., Fischel, T., Treves, I., Weiser, M., et al., (2014). Aggression-impulsivity, mental pain, and communication difficulties in medically serious and medically non-serious suicide attempters. *Comprehensive Psychiatry*, 55(1), 40-50.  
<https://doi.org/10.1016/j.comppsy.2013.09.003>
- Hutcheson, G. D., & Sofroniou, N. (1999). *The multivariate social Scientist: Introductory statistics using generalized linear models*. London: Sage.
- Kaiser, H. F. (1960). The application of electronic computers to factor analysis. *Educational Psychological Measurement*, 20(1), 141-151.
- Kuhl, J. (1981). Motivational and functional helplessness: The moderating effect of state versus action orientation. *Journal of Personality and Social Psychology*, 40(1), 155-170.  
<https://doi.org/10.1037/0022-3514.40.1.155>
- Kuhl, J. (1992). A theory of self-regulation: Action versus state orientation self-discrimination and some applications. *Applied Psychology: An International Review*, 41(2), 97-129.  
<https://doi.org/10.1111/j.1464-0597.1992.tb00688.x>
- Levi, Y., Horesh, N., Fischel, T., Treves, I., Or, E., & Apter, A. (2008). Mental pain and its communication in medically serious suicide attempts: an “impossible situation”. *Journal of Affective Disorders*, 111(2-3), 244-250.  
<https://doi.org/10.1016/j.jad.2008.02.022>
- Maltsberger, J. T. (2004). The descent into suicide. *International Journal of Psychoanalysis*, 85(3), 653–668.  
<https://doi.org/10.1516/002075704774200799>

- Marks, N. F., & Lambert, J. D. (1998). Marital status continuity and change among young and midlife adults: longitudinal effects on psychological well-being. *Journal of Family Issues, 19*(6), 652-686.  
<https://doi.org/10.1177%2F019251398019006001>
- Mee, S., Bunney, B. G., Reist, C. Potkin, S. G., & Bunney, W. E. (2006). Psychological pain: A review of evidence. *Journal of Psychiatric Research, 40*(8), 680-690.  
<https://doi.org/10.1016/j.jpsychires.2006.03.003>
- Meerwijk, E. L., Chesla, C. A., & Weiss, S. J. (2014). Psychological pain and reduced resting state heart rate variability in adults with a history of depression. *Psychophysiology, 51*(3), 247-256.  
<https://doi.org/10.1111/psyp.12175>
- Meerwijk, E. L., & Weiss, S. J. (2011). Toward a unifying definition of psychological pain. *Journal of Loss and Trauma, 16*(5), 402-412.  
<https://doi.org/10.1080/15325024.2011.572044>
- Nolen-Hoeksema, S. (1987). Sex differences in unipolar depression: Evidence and theory. *Psychological Bulletin, 101*, 259-282.
- Ohana, I., Golander, H., & Barak, Y. (2014). Balancing psychache and resilience in aging Holocaust survivors. *International Psychogeriatrics, 26*, 929-934.
- Orbach, I. (2003). Mental pain and suicide. *The Israel Journal of Psychiatry and Related Sciences, 40*(3), 191-201.
- Orbach, I., Mikulincer, M., Gilboa-Schechtman, E., & Sirota, P. (2003a). Mental pain and its relationship to suicidality and life meaning. *Suicide and Life-Threatening Behavior, 33*(3), 231-241.  
<https://doi.org/10.1521/suli.33.3.231.23213>

- Orbach, I., Mikulincer, M., Sirota, P., & Gilboa-Schechtman, E. (2003b). Mental pain: a multidimensional operationalization and definition. *Suicide and Life-Threatening Behavior*, *33*(3), 219-230.  
<https://doi.org/10.1521/suli.33.3.219.23219>
- Sandler, J. (1962). Psychology and psychoanalysis. *British Journal of Medical Psychology*, *35*, 91-100.  
<https://doi.org/10.1111/j.2044-8341.1962.tb00507.x>
- Scheibe, S., & Blanchard-Fields, F. (2009). Effects of regulating emotions on cognitive performance: what is costly for young adults is not so costly for older adults. *Psychology and Aging*, *24*(1), 217.  
<https://doi.org/10.1037/a0013807>
- Shelef, L., Fruchter, E., Hassidim, A., & Zalsman, G. (2015). Emotional regulation of mental pain as moderator of suicidal ideation in military settings. *European Psychiatry*, *30*(6), 765-769.  
<https://doi.org/10.1016/j.eurpsy.2014.12.004>
- Shneidman, E. S. (1993). *Suicide as psychache: A clinical approach to self-destructive behaviour*. Northvale, NJ: Jason Aronson.
- Smith, M. E. (2006). Marriage and mental health. *South African Journal of Psychiatry*, *12*, 3.
- Soumani, A., Damigos, D., Oulis, P., Masdrakis, V., Ploumpidis, D., Mavreas, V., et al. (2011). Mental pain and suicide risk: application of the greek version of the Mental Pain and the Tolerance of Mental Pain scale. *Psychiatriki*, *22*(4), 330-340.
- Tossani, E. (2013). The concept of mental pain. *Psychotherapy and Psychosomatics*, *82*, 67-73.  
<https://doi.org/10.1159/000343003>

Trent Haines, R., Jackson, A. D., & Thomas, E. L. (2015). Evaluating the Orbach Mikulincer mental pain scale among late adolescent and early adult African Americans: A Rasch analysis. *Issues in Mental Health Nursing*, 36(10), 761-772.

<https://doi.org/10.3109/01612840.2015.1028118>

Verrocchio, M. C., Carrozzino, D., Marchetti, D., Andreasson, K., Fulcheri, M., & Bech, P. (2016). Mental Pain and Suicide: A Systematic Review of the Literature. *Frontiers in Psychiatry*, 7(108).

<https://doi.org/10.3389/fpsy.2016.00108>