

Recent Studies on the Clinical Relevance and/or Effectiveness of Logotherapy and Existential Analysis (2015-2021) [Jan. 2021]

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Addad, M., & Himi, H. (2015). Logotherapy–theoretical aspects and field studies in Israel. *International Journal of Humanities and Social Science*, 5(4), 85-94.

The purpose of this article was to provide an overview of the literature on the interrelationships of the dimensions of human existence based on Logotherapy theory. The review of numerous studies that have tried to clarify the relationship between the meaning of life (the purpose-in-life score), the spiritual dimension, and other human existence dimensions focused on the meaning of life and military service at the IDF (Israel Defense Forces), the meaning of life and moral judgment, and the meaning of life and suicidal tendencies and drug abuse. The research findings regarding the meaning of life referred to different aspects of this variable in terms of Frankl's (1970) theory. The findings of the different studies were consistent in demonstrating the contribution of this variable to the qualities of moral judgment, strengthening of self-image, low neuroticism, a lower tendency to use drugs, and improved ability to adapt to change, transition, and crisis situations.

Alimujiang, A., Wiensch, A., Boss, J., Fleischer, N. L., Mondul, A. M., McLean, K., ... & Pearce, C. L. (2019). Association between life purpose and mortality among US adults older than 50 years. *JAMA network open*, 2(5), e194270-e194270.

Importance A growing body of literature suggests that having a strong sense of purpose in life leads to improvements in both physical and mental health and enhances overall quality of life. There are interventions available to influence life purpose; thus,

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understanding the association of life purpose with mortality is critical. **Objective** To evaluate whether an association exists between life purpose and all-cause or cause-specific mortality among older adults in the United States. **Design, Setting, and Participants** The Health and Retirement Study (HRS) is a national cohort study of US adults older than 50 years. Adults between the ages of 51 to 61 were enrolled in the HRS, and their spouses or partners were enrolled regardless of age. Initially, individuals born between 1931 and 1941 were enrolled starting in 1992, but subsequent cohort enrichment was carried out. The present prospective cohort study sample was drawn from 8419 HRS participants who were older than 50 years and who had filled out a psychological questionnaire during the HRS 2006 interview period. Of these, 1142 nonresponders with incomplete life purpose data, 163 respondents with missing sample weights, 81 participants lost to follow-up, 1 participant with an incorrect survival time, and 47 participants with missing information on covariates were excluded. The final sample for analysis was 6985 individuals. Data analyses were conducted between June 5, 2018, and April 22, 2019. **Exposures** Purpose in life was assessed for the 2006 interview period with a 7-item questionnaire from the modified Ryff and Keyes Scales of Psychological Well-being evaluation using a Likert scale ranging from 1 to 6, with higher scores indicating greater purpose in life; for all-cause and cause-specific mortality analyses, 5 categories of life purpose scores were used (1.00-2.99, 3.00-3.99, 4.00-4.99, 5.00-5.99, and 6.00). **Main Outcomes and Measures** All-cause and cause-specific mortality were assessed between 2006 and 2010. Weighted Cox proportional hazards models were used to evaluate life purpose and mortality. **Results** Of 6985 individuals included in the analysis, 4016 (57.5%) were women, the mean (SD) age of all participants was 68.6 (9.8) years, and the mean (SD) survival time for decedents was 31.21 (15.42) months (range, 1.00-71.00 months). Life purpose was significantly associated with all-cause mortality in the HRS (hazard ratio, 2.43; 95% CI, 1.57-3.75, comparing those in the lowest life purpose category with those in the highest life purpose category). Some significant cause-specific mortality associations with life purpose were also observed (heart, circulatory, and blood conditions: hazard ratio, 2.66; 95% CI, 1.62-4.38). **Conclusions and Relevance** This study's results indicated that stronger purpose in life was associated with decreased mortality. Purposeful living may have health benefits. Future research should focus on evaluating the association of life purpose interventions with health outcomes, including mortality. In addition, understanding potential biological mechanisms through which life purpose may influence health outcomes would be valuable.

Çevik, C., Ciğerci, Y., Kılıç, İ., & Uyar, S. (2020). Relationship between smartphone addiction and meaning and purpose of life in students of health sciences. *Perspectives in Psychiatric Care*.

Purpose In this study was aimed to examine the relationship between smartphone addiction (SA) and meaning and purpose of life (MPL) of university students. **Design and Methods** A cross-sectional study consisted of 677 students studying in students of Health Sciences. The data were collected by a questionnaire included the smartphone

addiction scale-short form and the meaning and purpose in life scale. **Findings** A significant and negative correlation was found between SA and the MPL levels. **Practice Implications** Individual coping programs with SA should be handled within the scope of school health nursing. Also these programs should include activities to help students find meaning and purpose in their lives.

Cohen, R., Bavishi, C., & Rozanski, A. (2016). Purpose in life and its relationship to all-cause mortality and cardiovascular events: a meta-analysis. *Psychosomatic medicine, 78(2), 122-133.*

Objective: To assess the net impact of purpose in life on all-cause mortality and cardiovascular events. **Methods:** The electronic databases PubMed, Embase, and PsycINFO were systematically searched through June 2015 to identify all studies investigating the relationship between purpose in life, mortality, and cardiovascular events. Articles were selected for inclusion if, a) they were prospective, b) evaluated the association between some measure of purpose in life and all-cause mortality and/or cardiovascular events, and c) unadjusted and/or adjusted risk estimates and confidence intervals (CIs) were reported. **Results:** Ten prospective studies with a total of 136,265 participants were included in the analysis. A significant association was observed between having a higher purpose in life and reduced all-cause mortality (adjusted pooled relative risk = 0.83 [CI = 0.75-0.91], $p < .001$) and cardiovascular events (adjusted pooled relative risk = 0.83 [CI = 0.75-0.92], $p = .001$). Subgroup analyses by study country of origin, questionnaire used to measure purpose in life, age, and whether or not participants with baseline cardiovascular disease were included in the study all yielded similar results. **Conclusions:** Possessing a high sense of purpose in life is associated with a reduced risk for all-cause mortality and cardiovascular events. Future research should focus on mechanisms linking purpose in life to health outcomes, as well as interventions to assist individuals identified as having a low sense of purpose in life.

Delavari, H., & Nasirian, M. (2014). Logotherapy effect on anxiety and depression in mothers of children with cancer. *Iranian journal of pediatric hematology and oncology, 4(2), 42.*

Background Cancer diagnosis among children can cause high stress and anxiety in parents, and they may lose their life expectancy. The present study investigated the effectiveness of Logo therapy on anxiety and depression among mothers of children with cancer. **Materials and Methods** This study was conducted by a semi-pilot method using pre-test and post-test with a control experimental group. Therapy sessions were held during 9 sessions of Logo therapy training for 90 minutes. The participants of this study were selected among 30 mothers of children with cancer and using sampling method in Yazd hospitals. The participants divided randomly into two groups: experimental and control. Participants in both experimental and control group

completed questionnaires on Beck Anxiety Inventory and Beck Depression Inventory before and after training. **Results** The results showed that the index of depression and anxiety in control and experimental groups are 32.3, 6.63, 7.4 and 6.75, respectively. So, the level among the experimental group has been decreased after intervention of Logotherapy training and a significant difference occurred in the pre-post test stages. The results showed that Logo Therapy has a significant effect in reducing anxiety and depression among mothers of children with cancer ($p < 0.05$). **Conclusion** Regarding the efficiency of this approach to reduce anxiety and depression among mothers, this treatment is recommended to be practiced beside other cancer therapies, so they can practice the treatment process with a better mood and mentality.

Elsherbiny, M. M. K., & Al Maamari, R. H. (2018). The effectiveness of logotherapy in mitigating the social isolation of neglected institutionalised older people. *British Journal of Social Work*, 48(4), 1090-1108.

There are various types of elder abuse; one of the most prevalent and most harmful abuses is neglect. Social isolation is one of the most common consequences of neglect, with an inability to find meaning in life closely associated with both these issues. One intervention that might be used with older people suffering from neglect and social isolation is Logotherapy—a meaning-based intervention. The aim of this study is to examine the effectiveness of Logotherapy in mitigating the social isolation of older people suffering from neglect. This study was developed using a quantitative research design, and with a purposive sample of forty-three socially isolated older individuals in a single institution for the elderly in Cairo, Egypt. The study follows a quasi-experimental study model. A social disconnectedness scale and a perceived isolation scale were used to assess both degrees of social isolation. The intervention lasted for twelve weeks, with two weeks of follow-up work. A significant difference emerged between the intervention and control groups. The results indicate that enabling older people to experience meaning in life by emphasising the value of social relationships and interactions has a positive effect on their social networks.

Fogelman, N., & Canli, T. (2015). 'Purpose in Life' as a psychosocial resource in healthy aging: an examination of cortisol baseline levels and response to the Trier Social Stress Test. *npj Aging and Mechanisms of Disease*, 1(1), 1-3.

'Purpose in Life' (*Purpose*) is associated with healthy aging, but it is unknown whether this association is causal. Conceptualizing *Purpose* as a form of psychosocial resource, one mechanism promoting health could be the regulation of stress hormones. To test this hypothesis, we recruited 44 older community-dwelling adults to examine the association between *Purpose* and cortisol at baseline, in response to, and recovery from, an acute social laboratory stressor. *Purpose* did not predict cortisol baseline or reactivity, but did predict a faster recovery to pre-stress baseline levels. The health

benefits of *Purpose* in aging may therefore reflect the combination of a normal stress response, which serves an adaptive benefit of allostasis, with an accelerated stress recovery, which reduces the burden of allostatic load. This model should be tested in future studies using larger samples, multiple related constructs, and longitudinal designs that include participants' health records.

Ghelbash, Z., Yektatalab, S., Momennasab, M., & Foruhi, Z. (2020). Effect of group-based logotherapy on imprisoned women's level of hope: a randomized controlled trial (RCT). *International Journal of Prisoner Health*.

Purpose Female prisoners are a vulnerable group in society, often exposed to emotional deprivation and violent experiences and in need of support and attention due to mental health problems. The purpose of this study is to find out whether logotherapy, as an existential approach that emphasizes finding the true meaning in life, can affect imprisoned women's level of hope, as well as investigating the relationship between participants' criminological and demographic factors. **Design/methodology/approach** This study comprised a clinical trial with pre-test and post-test, carried out in two groups of intervention and control. The research environment for the study was the Prison Training Center of Shiraz. In total, 90 imprisoned women participated in the study, with the intervention group attending 10 sessions of group logotherapy. Two questionnaires, the Miller Hope scale and demographic and criminological information questionnaires were used for assessment. Participants were evaluated in three periods before, immediately after and one month after the intervention. **Findings** The results showed that logotherapy had a significant effect on increasing the feeling of hopefulness ($p=0.001$). Therefore, using the logotherapy approach in other vulnerable groups is recommended.

Hill, P. L., & Turiano, N. A. (2014). Purpose in life as a predictor of mortality across adulthood. *Psychological science*, 25(7), 1482-1486.

Having a purpose in life has been nominated consistently as an indicator of healthy aging for several reasons including its potential for reducing mortality risk. The current study sought to extend these findings by examining whether purpose promotes longevity across the adult years, using data from the longitudinal MIDUS sample (mean age = 46.92 years, $SD = 12.94$). Proportional hazard models demonstrated that purposeful individuals lived longer than their counterparts during the 14 years after assessment, even when controlling for other markers of psychological and affective well-being. Moreover, these longevity benefits do not appear to be conditional on either the participants' age, how long they lived, or whether they had retired from the workforce. In other words, having a purpose appears to widely buffer against mortality risk across the adult years

Hosseinzadeh-Khezri, R., Rahbarian, M., Sarichloo, M. E., Lankarani, K. B., Jahanihashemi, H., & Rezaee, F. (2014). Evaluation effect of logotherapy group on mental health and hope to life of patients with colorectal cancer receiving chemotherapy. *Bull Env Pharmacol Life Sci*, 3, 164-9.

Background: Improving the patients' quality of life (QOL) after coronary artery bypass grafting (CABG) is one of the main concerns of the treatment team. Educational interventions may affect the aspects of QOL in various ways. The present study aimed to investigate the effect of education based on the main concepts of logotherapy approach on the CABG patients' quality of life. **Materials and Methods:** In this quasi-experimental study, a convenient sample of 67 patients who had undergone CABG in Isfahan Chamran hospital were randomly allocated to two groups of experimental ($n = 35$) and control ($n = 32$). While the control group received routine care, the experiment group benefitted from logotherapy-based education program (six 90-min sessions, twice a week). SF-36 questionnaire was completed by both two groups (before and 1 month after intervention). Descriptive and inferential statistical tests (consisting of independent t -test) were employed to analyze data in SPSS version 13. **Results:** The pre-test mean total score of SF-36 questionnaire and also the mean scores of its eight dimensions were not significantly different between the two groups. The post-test mean score change [Standard Error (SE)] in the intervention group was 24.95 (3) and in the control group was 9.27 (0.82). There were significant differences between the two groups ($P < 0.001$). Moreover, the mean scores of six dimensions of QOL (vitality, bodily pain, general health, emotional role, social functioning, and mental health) changed significantly in the intervention group. **Conclusions:** Our findings indicated that the intervention has improved the patients' QOL after CABG. Integration of such an intervention in these patients' rehabilitation programs is recommended.

Kang, K. A., Han, S. J., Lim, Y. S., & Kim, S. J. (2019). Meaning-centered interventions for patients with advanced or terminal cancer: a meta-analysis. *Cancer nursing*, 42(4), 332-340.

Background: For patients with advanced or terminal cancer undergoing hospice or palliative care, spiritual care based on meaning-centered intervention (MCI) has become an essential form of support. **Objective:** The aim of this study was to characterize MCI systematically and the effectiveness of hospice and palliative care for patients with advanced or terminal cancer. **Methods:** MEDLINE via PubMed, Cochrane Library CENTRAL, EMBASE, CINAHL, and several Korean electronic databases were searched from inception to May 2017. The RevMan 5.3 program of the Cochrane Library was used for data analysis. **Results:** A meta-analysis was conducted of 10 controlled trials (6 randomized and 4 nonrandomized) featuring 623 patients with cancer. Meaning-centered interventions were compared with usual care control groups or other psychosocial interventions. The weighted average effect sizes across studies were -0.96 ($P < .001$, $I = 7\%$) for meaning in life, -0.37 ($P = .002$, $I = 0\%$) for spiritual well-being, -0.48 ($P < .001$, $I = 0\%$) for quality of life, -0.28 ($P = .02$, $I = 0\%$) for anxiety, and -

0.31 ($P = .02$, $I = 17\%$) for physical symptoms. **Conclusion:** Spiritual care based on MCI may help to improve the physical, psychosocial, and spiritual well-being of patients with advanced or terminal cancer. **Implication for practice:** Meaning-centered interventions could be a valuable way to enhance quality of life at the end stage for patients with advanced or terminal cancer.

Kim, C., & Choi, H. (2020). The efficacy of group logotherapy on community-dwelling older adults with depressive symptoms: A mixed methods study. *Perspectives in Psychiatric Care*.

Purpose This mixed-methods study evaluated a group logotherapy program's efficacy on Korean older adults with depressive symptoms. **Design and Methods** An intervention group ($n=23$) participated in eight sessions of group logotherapy; a control group ($n=21$) received the usual care. Participants completed the pretest, posttest, and 4-week follow-up questionnaires. Ten participants also had focus group or individual interviews. **Findings** A linear mixed model showed significant differences between groups in terms of changes in purpose in life, depression, self-esteem, and quality of life over time. These quantitative findings were supported and enriched by qualitative data.

Kim, E. S., Hershner, S. D., & Strecher, V. J. (2015). Purpose in life and incidence of sleep disturbances. *Journal of behavioral medicine*, 38(3), 590-597.

Purpose in life has been linked with better mental health, physical health, and health behaviors, but the association between purpose and sleep is understudied. Sleep disturbances increase with age and as the number of older adults rapidly increases, it is ever more important to identify modifiable factors that are associated with reduced incidence of sleep disturbances. We used multiple logistic regression models and data from the Health and Retirement Study, a nationally representative panel study of American adults over the age of 50, to examine whether higher purpose was linked with a reduced incidence of sleep disturbances. Among 4144 respondents reporting minimal or no sleep disturbances at baseline, higher purpose was associated with a lower incidence of sleep disturbances over the 4-year follow-up. After adjusting for sociodemographic factors, each unit increase in purpose (on a six-point scale) was associated with a 16 % reduced odds of developing sleep disturbances (OR 0.84, 95 % CI 0.77–0.92). The association between purpose and sleep disturbances remained after adjusting for sociodemographic, behavioral, psychological, and health covariates. Should future research replicate our findings, this area of research may lead to innovative efforts that improve the quality of sleep in older adults.

Kim, E. S., Kawachi, I., Chen, Y., & Kubzansky, L. D. (2017). Association between purpose in life and objective measures of physical function in older adults. *JAMA psychiatry*, 74(10), 1039-1045.

Importance: Higher purpose in life is hypothesized to reduce the likelihood of developing weak grip strength and slow walking speed because purpose has been linked with a range of positive health behaviors and biological processes that are potentially protective against declining physical function. However, the association between purpose in life and objective physical function has not been examined. **Objective:** To assess whether higher purpose in life among adequately functioning older adults is associated with lower risk of developing weak grip strength and slow walking speed over time. **Design, setting, and participants:** Data for a longitudinal cohort study were collected in 2006 and again in 2010 from the Health and Retirement Study, a nationally representative study of US adults older than 50 years. Data analysis was conducted from November 23, 2016, to June 2, 2017. **Main outcomes and measures:** The risk of developing weak grip strength (assessed as a binary yes or no outcome) or slow walking speed (yes or no) during the 4-year follow-up period. Grip strength was assessed using Smedley spring-type hand dynamometers, and walking speed was assessed by asking respondents to walk 2.5 m at their normal walking pace. **Results:** In this study, 4486 adults had grip scores at baseline indicating adequate function (2665 women and 1821 men; mean [SD] age, 63.0 [8.2] years) and 1461 adults had walking scores at baseline indicating adequate function (801 women and 660 men; mean [SD] age, 70.8 [6.5] years). After controlling for sociodemographic factors, each 1-SD increase in purpose was associated with a 13% decreased risk (95% CI, 1%-23%) of developing weak grip strength and a 14% decreased risk (95% CI, 8%-20%) of developing slow walking speed. Associations with walking speed were maintained in all covariate models (fully adjusted model: risk ratio, 0.89; 95% CI, 0.83-0.95), but associations with grip strength did not reach conventional levels of statistical significance after additionally adjusting for relevant baseline health factors, depressive symptoms, and health behaviors (fully adjusted model: risk ratio, 0.91; 95% CI, 0.80-1.04). **Conclusions and relevance:** Purpose in life was prospectively associated with a decreased risk of developing weak grip strength and slow walking speed, although the findings were more robust for walking speed than for grip strength. These findings suggest that a sense of purpose in life, a modifiable factor, may play an important role in maintaining physical function among older adults.

Krentzman, A. R., Cranford, J. A., & Robinson, E. A. (2015). Long-term increases in purpose in life are associated with remission from alcohol dependence. *Alcoholism Treatment Quarterly*, 33(3), 252-269.

A sense of purpose in life has been positively associated with mental health and well-being and has been negatively associated with alcohol use in correlational and longitudinal studies, but has not been studied as a predictor of cocaine treatment outcome. This study examined pre-treatment purpose in life as a predictor of response to a 30-day residential substance use treatment program among 154 participants with

cocaine dependence. Purpose in life was unrelated to cocaine or alcohol use during the 6 months pretreatment. After controlling for age, baseline use, and depressive symptoms, purpose in life significantly ($p < .01$) predicted relapse to any use of cocaine and to alcohol, and the number of days cocaine or alcohol was used in the six months after treatment. Findings suggest that increasing purpose in life may be an important aspect of treatment among cocaine dependent patients.

Machell, K. A., Disabato, D. J., & Kashdan, T. B. (2016). Buffering the negative impact of poverty on youth: The power of purpose in life. *Social Indicators Research*, 126(2), 845-861.

Adolescent poverty is associated with increased antisocial and decreased prosocial behaviors. Attenuating these negative effects is relevant for both individual and societal well-being. Research exploring how youth in poverty can escape antisocial behaviors and move toward prosocial behaviors has been limited primarily to risk factors. From a strengths perspective, we sought to understand how a potential resiliency factor—purpose in life—could protect youngsters from the deleterious effects of poverty. We conceptualized purpose in life as a central, future-oriented, goal-organizing framework that provides adolescents reasons to resist antisocial behavior and engage in prosocial behaviors. In moderation analyses, purpose in life mitigated the effects of poverty on antisocial behavior (i.e., disobedience and bullying), but failed to boost prosocial traits and behaviors for youth in poverty. We emphasize the importance of developing a sense of purpose in economically disadvantaged youth for bettering their lives and communities.

Moein, L., & Houshyar, F. (2015). The effect of logotherapy on improving self-esteem and adjustment in physically disabled people. *Education Sciences & Psychology*, 37(5).

The present study aims at investigating the effect of logotherapy on improving self-esteem and adjustment in people with physical disability through a controlled quasiexperimental study. A total of 30 people with physical disability who were members to the Social Welfare Organization in Pasargad city in 2014 were selected randomly as control group and experiment group (15 people in each). To examine the sample, the researcher used the Adjustment Scale (Samani and Sohrabi, 2011) and an adult version of Coopersmith's Self-Esteem Inventory (1967). The analysis of Covariance (ANOVA) was conducted to analyze the results. Our results revealed that group logotherapy improves the overall adjustment scores in physical, social, personal, familial, occupation and education aspects. The experimental subjects were exposed to logotherapy group consulting sessions (90 minutes each) held twice a week. The results revealed that there was a significant difference between the control and experimental groups with regard to self-esteem. The research findings also show that group logotherapy has a positive effect on social, familial and general components of self-

esteem among people with physical disability. However, it found no significant effect on education. The exposure effect lasted after a month. Therefore, it could be concluded that group logotherapy improves adjustment and self-esteem among people with physical disability

Mohabbat-Bahar, S., Golzari, M., Moradi-Joo, M., & Akbari, M. E. (2014). Efficacy of group logotherapy on decreasing anxiety in women with breast cancer. *Iranian journal of cancer prevention, 7(3)*, 165.

Background: Breast cancer is the most incident cancer and the fifth cause of death due to malignancies among Iranian women. A strong breast cancer patients' sense of meaning and purpose in life appears to decrease anxiety in their life. The present study has investigated the effectiveness of group Logotherapy on the reduction of anxiety in women with breast cancer. **Methods:** The research was quasi-experimental with pre-test, post-test and control group. For this purpose, 30 patients with breast cancer were randomly divided into two experimental group and control group. Then, all patients completed the Beck Anxiety Inventory (BAI). The experimental group received Logotherapy-based group counseling for eight sessions; however, the control group did not receive any specific training. In the end, both groups were tested again. After collecting the questionnaires, data was analyzed by the statistic software SPSS version 18 and using analysis of covariance. **Results:** The research results showed that group Logotherapy was effective in reducing anxiety in women with breast cancer ($p < 0.005$). In other words, this intervention could reduce anxiety in the experimental group. **Conclusion:** The results suggest that in line with current medical treatment, psychosocial interventions can be used to reduce anxiety in the breast cancer patients.

Mohammadi, F., Fard, F. D., & Heidari, H. (2014). Effectiveness of logo therapy in hope of life in the women depression. *Procedia-Social and Behavioral Sciences, 159*, 643-646.

Background and Objectives: Hope plays an important role in coping with psychological and biological problem in different stages of life, especially in elderly stage. Therefore, the aim of current research is investigation of the efficacy of group logo-therapy in hope and sleep quality in elderlies. **Materials and Methods:** This research is a quasi-experimental study with pre and post- tests. The study population was Seoul Center and 30 elderlies were selected through the criteria. They were assigned randomly to the control and experimental groups. The experimental group received logo therapies for 10 treatment sessions (75 min for each session per week). Statistical analyses were conducted by t-dependent test and analysis of covariance. The research instruments were Pittsburgh Sleep Quality Index, Miller Hope Scale, and Mini Mental State examination. **Results:** There is significantly difference in life expectancy between

elderlies in pre and post test. There is not significantly difference between mean's scores of sleep quality's elderlies in pre and post-tests($p < 0.05$). **Conclusion:** The results indicated that logo-therapy has a significantly influence on increasing the hope in life among elderlies. So, it can be considered as a therapeutic intervention in psychological problems related to lack of meaning and hope in the life.

Musich, S., Wang, S. S., Kraemer, S., Hawkins, K., & Wicker, E. (2018). Purpose in life and positive health outcomes among older adults. *Population health management, 21(2)*, 139-147.

Purpose in life (PIL) is conceptualized as having goals, a sense of direction, and a feeling that there is meaning to present and past life. PIL has been associated with positive health outcomes among older adults, including fewer chronic conditions, less disability, and reduced mortality. The purpose of this study was to estimate the prevalence of PIL among AARP Medicare Supplement insureds, identify associated characteristics, and measure impact on selected health outcomes. In 2016, surveys were sent to a random stratified sample; PIL was measured using a 7-item scale with 5 responses. Scores were averaged across responses and categorized to PIL levels of low, medium, and high. Survey responses were weighted to adjust for nonresponse bias and to weight to a nationally representative population. Multivariate regression models, adjusting for confounding covariates, were utilized to determine characteristics associated with PIL levels and the impact on health care utilization and expenditures, preventive services compliance and quality of life (QOL). Among weighted survey respondents ($N = 15,680$), low, medium, and high PIL levels were 24.2%, 21.1%, and 54.7%, respectively. The strongest characteristics of medium and high PIL included social support, resilience, reliance on faith, high health literacy, and good health status. Individuals with medium and high PIL had significantly lower health care utilization and expenditures, increased preventive services compliance, and higher QOL. PIL is strongly associated with improved mental and physical health outcomes among older adults. Thus, interventions to improve and/or maintain higher levels of PIL over time may promote successful aging.

Palinggi, E., Zulkifli, A., Maidin, A., & Fitri, A. U. (2020). Effect of logotherapy to control depression of drug abuser in Kassi-Kassi and Jumpondang Baru health-center. *Enfermería Clínica, 30*, 423-426.

Objective This study aims to determine the effect of logotherapy to control depression in patients with drug abuse at Kassi Kassi and Jumpondang Baru Health Center. **Methods** Design of this study used a quasi-experimental method with a nonrandomized one group pretest posttest design. Samples taken by purposive sampling were 20 patients who were drug users, using a measuring tool Beck Depression Inventory, analyzed using dependent t-test. **Results** Characteristics of respondents were mostly in the early adult

age group (26-35) by 70%, male sex by 90%, secondary education level (High-School) 75%, productive work 60%, and married status of 60%. There was decrease in the depression score before and after the logotherapy intervention, where the mean±SD pre-test was 19.6±7.7 to 3.5±1.2, post-test p-value=0.001.

Park, C. L., Pustejovsky, J. E., Trevino, K., Sherman, A. C., Esposito, C., Berendsen, M., & Salsman, J. M. (2019). Effects of psychosocial interventions on meaning and purpose in adults with cancer: A systematic review and meta-analysis. *Cancer, 125*(14), 2383-2393.

Meaning and purpose in life are associated with the mental and physical health of patients with cancer and survivors and also constitute highly valued outcomes in themselves. Because meaning and purpose are often threatened by a cancer diagnosis and treatment, interventions have been developed to promote meaning and purpose. The present meta-analysis of randomized controlled trials (RCTs) evaluated effects of psychosocial interventions on meaning/purpose in adults with cancer and tested potential moderators of intervention effects. Six literature databases were systematically searched to identify RCTs of psychosocial interventions in which meaning or purpose was an outcome. Using Preferred Reporting Items for Systematic Reviews and Meta-Analyses guidelines, rater pairs extracted and evaluated data for quality. Findings were synthesized across studies with standard meta-analytic methods, including meta-regression with robust variance estimation and risk-of-bias sensitivity analysis. Twenty-nine RCTs were identified, and they encompassed 82 treatment effects among 2305 patients/survivors. Psychosocial interventions were associated with significant improvements in meaning/purpose ($g = 0.37$; 95% CI, 0.22-0.52; $P < .0001$). Interventions designed to enhance meaning/purpose ($g = 0.42$; 95% CI, 0.24-0.60) demonstrated significantly higher effect sizes than those targeting other primary outcomes ($g = 0.18$; 95% CI, 0.09-0.27; $P = .009$). Few other intervention, clinical, or demographic characteristics tested were significant moderators. In conclusion, the results suggest that psychosocial interventions are associated with small to medium effects in enhancing meaning/purpose among patients with cancer, and the benefits are comparable to those of interventions designed to reduce depression, pain, and fatigue in patients with cancer. Methodological concerns include small samples and ambiguity regarding allocation concealment. Future research should focus on explicitly meaning-centered interventions and identify optimal treatment or survivorship phases for implementation.

Pearson, M. R., Brown, D. B., Bravo, A. J., & Witkiewitz, K. (2015). Staying in the moment and finding purpose: The associations of trait mindfulness, decentering, and purpose in life with depressive symptoms, anxiety symptoms, and alcohol-related problems. *Mindfulness, 6*(3), 645-653.

The present study examined the associations between trait mindfulness and depressive symptoms, anxiety symptoms (i.e., worry), and alcohol-related problems via decentering and purpose in life. Using structural equation modeling in a large sample of college students ($N=1,277$), we found support for decentering and purpose in life as partial mediators of the associations between trait mindfulness and these outcomes. Although our findings should be viewed as preliminary given the cross-sectional study design and study population, our results are consistent with the notion that decentering and purpose in life may be mechanisms explaining the health beneficial effects of mindfulness. Future research studies with extensive assessments of potential mechanisms using experimental and longitudinal designs are needed to bolster confidence that decentering and purpose in life are important mechanisms explaining the health-promoting effects of mindfulness.

Polenick, C. A., Sherman, C. W., Birditt, K. S., Zarit, S. H., & Kales, H. C. (2019). Purpose in life among family care partners managing dementia: links to caregiving gains. *The Gerontologist*, 59(5), e424-e432.

Background and objectives: Purpose in life is associated with better health and has been found to minimize caregiving stress. Greater purpose may also promote caregiving gains (i.e., rewards or uplifts from providing care), yet the implications of purpose for positive aspects of the care role are largely unknown. The present study determined how perceptions of purpose in life among persons with dementia (PWDs) and their family caregivers are linked to caregiving gains. **Research design and methods:** This cross-sectional study examined 153 co-resident family caregivers drawn from the 2011 National Health and Aging Trends Study and National Study of Caregiving. Linear regressions were estimated to evaluate associations between caregivers' and PWDs' reports of their own purpose in life and caregivers' perceived caregiving gains, along with whether these associations vary by caregiver gender. Models controlled for caregivers' sociodemographic characteristics, relationship to the PWD, care tasks, role overload, negative caregiving relationship quality, and both care partners' chronic health conditions. **Results:** Caregivers' higher purpose in life was significantly linked to greater caregiving gains. Beyond this association, PWDs' higher purpose in life was significantly associated with greater caregiving gains for women but not for men. **Discussion and implications:** Purpose in life is a psychological resource that contributes to positive caregiving outcomes. Interventions to improve caregiver well-being could benefit from strategies that strengthen and maintain feelings of purpose among caregivers and PWDs.

Rahgozar, S., & Giménez-Llort, L. (2020). Foundations and Applications of Logotherapy to Improve Mental Health of Immigrant Populations in the Third Millennium. *Frontiers in Psychiatry*, 11.

Although migration is a natural phenomenon, a number of special conditions of this third millennium result in a rising number of populations exposed, worldwide, to the impact of risk factors for mental health associated to immigration and asylum. In this scenario, the vulnerability to distress and mental health problems such as depression, anxiety disorders and PTSD is increased in these immigrant populations due to the severity of traumatic experiences while struggling in their attempts to reach their destinations but also a poor capacity of immigrant/host to handle the situation once there. The risk for psychological and mental health problems worse with time, failure of expectancies, lack of knowledge of resources or lack of support, among other difficulties. Here, we analyzed the foundations and applications of logotherapy on immigrant mental health problems, showing the benefits that 'finding meaning and purpose in live' can have in these populations. Thus, among the interventions that urge to reduce depression and anxiety symptoms among older adult immigrants, we propose three logotherapy techniques, namely, paradoxical intention, dereflexion and Socratic dialogue. After development and adaptation to the specific scenarios (populations/destinations) these logotherapy techniques can have a huge potential to become effective therapeutic strategies improving the mental health of the current immigrant populations facing misfortune in the Third Millennium

Robotmili, S., Sohrabi, F., Shahrak, M. A., Talepasand, S., Nokani, M., & Hasani, M. (2015). The effect of group logotherapy on meaning in life and depression levels of Iranian students. *International Journal for the Advancement of Counselling*, 37(1), 54-62.

This paper identifies the effectiveness of group logotherapy in reducing depression and increasing meaning in life levels of university students in Iran. A randomized controlled trial was conducted with a pre- post- and follow-up test design. The instruments used were the *Purpose in Life* (PIL) test and the *Beck Depression Inventory* (BDI). Data were collected from 10 subjects in an experimental group and 10 in a control group. The experimental group participated in 10 sessions of group logotherapy, whilst the control group received no intervention. The mean scores for depression levels was significantly lower in the experimental group than in the control group and significantly higher in regard to meaning in life. Results suggest that group logotherapy has the potential to reduce depression levels and improve the meaning in life of university students.

Saffarinia, M., & Dortaj, A. (2018). Effect of group logotherapy on life expectancy and mental and social wellbeing of the female elderly residents of nursing homes in Dubai. *Iranian Journal of Ageing*, 12(4), 482-493.

Objectives The aim of the current research was to investigate the effectiveness of group logotherapy in improving life expectancy and mental and social wellbeing of female elderly residents of nursing homes in Dubai. **Methods & Materials** This study was a

quasi-experimental research conducted in the form of a pretest-posttest with control group design. Forty elderly women aged over 65 years and residing in nursing homes in Dubai were selected for the study by stratified random sampling. The participants were randomly assigned to experimental and control groups. The experimental group received the group logotherapy for 8 sessions, and each session lasted for 1 and a half hours. The control group was put on a waiting list. The participants completed the Snyder's Hope Scale, Ryff's Scales of Psychological Well-being, and the Social Well-Being Scale in the pre-test and post-test. The data were analyzed using multi-variable covariance analysis. **Results** The mean and standard deviation of participants' age in the experimental and control groups were 65.10±12.10 years and 67.12±11.80 years, respectively. The mean and standard deviation of total scores of psychological well-being (445.31±35.90), life expectancy (37.01±2.13) and social well-being (27.99±3.06) were assessed. The results showed that group logotherapy could increase mental wellbeing, the components of life expectancy such as pathways and agentic thinking as well as components of social wellbeing including social cohesion, social participation, social flourishing, social cohesion and social acceptance ($P < 0.001$) in female elderly residents of nursing homes in Dubai. **Conclusion** It was concluded that mental health professionals can use group logotherapy to improve life expectancy and mental and social wellbeing of female elderly residents of nursing homes. Also, it is suggested that future research should investigate the effectiveness of group logotherapy in improving other positive psychological constructs in female and male elderly residents of nursing homes.

Soetrisno, Sulistyowati, S., Ardianto, A., & Hadi, S. (2017). The effect of logotherapy on the expressions of cortisol, HSP70, Beck Depression Inventory (BDI), and pain scales in advanced cervical cancer patients. *Health care for women international*, 38(2), 91-99.

This study aims to analyze the effect of logotherapy on the expression of cortisol, HSP70, and the Beck Depression Inventory (BDI) and to conduct pain assessments in advanced cervical cancer patients. We carried out this research through pretest-posttest control-group design on the expression of cortisol, HSP70, the BDI, and pain scales after a patient receives logotherapy treatment. Based on a comparative test conducted with the two groups before the treatment, there is no significant difference ($p > .05$). There is a significant difference ($p < .05$) after the treatment, however, except for on HSP70. This study suggests that logotherapy affects the expression of cortisol, BDI, and pain scales in advanced cervical cancer patients, and that it does not affect the expression of HSP70.

Straus, E., Norman, S. B., Tripp, J. C., Pitts, M., & Pietrzak, R. H. (2019). Purpose in life and conscientiousness protect against the development of suicidal ideation in US military veterans with PTSD and MDD: results from the National Health and Resilience in Veterans Study. *Chronic Stress, 3*, 2470547019872172.

Background Although several studies have examined risk factors for suicidal ideation among veterans, little is known about risk and protective factors for suicidal ideation in high-risk veteran samples. Thus, this study examined a broad range of risk and protective factors associated with the development of suicidal ideation in a high-risk sample of U.S. veterans who screened positive for current posttraumatic stress disorder (PTSD) and/or major depressive disorder (MDD). **Methods** Data were analyzed from the National Health and Resilience in Veterans Study, a nationally representative, prospective cohort study of U.S. veterans. Veterans completed self-report measures to screen for PTSD and MDD and to assess for risk and protective factors. The sample included 222 veterans with PTSD and/or MDD who did not endorse suicidal ideation at baseline and completed at least one assessment over a seven-year follow-up period. A multivariable binary logistic regression analysis was conducted to examine baseline factors associated with incident suicidal ideation. **Results** Nearly one in three (27.1%) of veterans with PTSD and/or MDD developed suicidal ideation over the seven-year follow-up period. Non-Caucasian race and lower scores on measures of purpose in life, conscientiousness, and frequency of religious service attendance were independently associated with incident suicidal ideation. Lower purpose in life (52.3%) and conscientiousness (33.2%) explained the vast majority of variance in incident suicidal ideation. **Conclusion** Nearly 30% of veterans with PTSD and/or MDD who did not endorse suicidal ideation at baseline developed suicidal ideation over a seven-year period. Prevention and treatment efforts designed to bolster purpose in life and conscientiousness may help mitigate risk for suicidal ideation in this high-risk population.

Sun, F. K., Hung, C. M., Yao, Y., Fu, C. F., Tsai, P. J., & Chiang, C. Y. (2019). The effects of logotherapy on distress, depression, and demoralization in breast cancer and gynecological cancer patients: a preliminary study. *Cancer nursing, 44*(1), 53-61.

Background: Globally, cancer is the second leading cause of death. Breast cancer and gynecological cancer can damage patients' body image and lead to psychological distress, depression, and demoralization syndrome. No studies have explored the effect of logotherapy in gynecological cancer patients' psychological distress, depression, and demoralization. **Objective:** To evaluate the effects of logotherapy on distress, depression, and demoralization in breast cancer and gynecological cancer patients. **Methods:** A quasi-experimental design was used in this study, involving 61 breast cancer and gynecological cancer patients: 31 in the experimental group and 30 in the control group. Participants in the experimental group received logotherapy 4 to 6 times during the 12 weeks of intervention. Outcomes were measured by the (1) Distress Thermometer, (2) Patient Health Questionnaire, and (3) Demoralization Scale Mandarin

Version (DS-MV). **Results:** Distress Thermometer did not differ between groups, but significant differences in favor of the intervention group were noted in the Patient Health Questionnaire (U = 674.500, P = .002); the DS-MV subcategories of loss of meaning (U = 706.500, P = .000), dysphoria (U = 673.000, P = .002), disheartenment (U = 670.000, P = .003), helplessness (U = 621.000, P = .022), and sense of failure (U = 629.500, P = .016); and the total score of the DS-MV (U = 728.500, P = .000). **Conclusion:** Logotherapy was effective in the reduction of breast cancer and gynecological cancer patients' depression and demoralization. **Implications for practice:** Clinical professionals could add logotherapy to the treatment for breast cancer and gynecological cancer patients to reduce their depression and demoralization.

Suyanti, T. S., Keliat, B. A., & Daulima, N. H. C. (2018). Effect of logotherapy, acceptance, commitment therapy, family psychoeducation on self-stigma, and depression on housewives living with HIV/AIDS. *Enfermeria clinica*, 28, 98-101.

Objective: Self-stigma in people living with HIV/AIDS is a survival mechanism to protect themselves from external stigma. Stigma and discrimination in people living with HIV/AIDS can lead to inequality in social life. This inequality can cause inferiority complex, preoccupation, and denial of diagnosis, which correlates with the onset of depression. This study aims to determine the effect of logotherapy, commitment acceptance therapy, and family psychoeducation on self-stigma and depression on housewives living with HIV/AIDS. **Method:** This study used the quasi-experiment pretest–posttest design. The respondents were selected using the purposive sampling technique. The subjects were 60 housewives living with HIV/AIDS. Data were collected using Internalizes Stigma of AIDS Tools and analyzed using univariate and bivariate analyses. Equality analysis was conducted using the chi-square test and independent t test, and the effects were analyzed using paired t test. **Results:** The result showed a significant decrease in self-stigma and depression (p value < 0.05) in patients receiving logotherapy, commitment acceptance therapy, and family psychoeducation. **Conclusions:** A combination of logotherapy, commitment acceptance therapy, and family psychoeducation is recommended as a therapy package to overcome self-stigma and depression for people living with HIV/AIDS.

Wilson, R. S., Capuano, A. W., James, B. D., Amofa, P., Arvanitakis, Z., Shah, R., ... & Boyle, P. A. (2018). Purpose in life and hospitalization for ambulatory care-sensitive conditions in old age. *The American Journal of Geriatric Psychiatry*, 26(3), 364-374.

Objective: To test the hypothesis that higher level of purpose in life is associated with lower subsequent odds of hospitalization. **Design:** Longitudinal cohort study. **Setting:** Participants' residences in the Chicago metropolitan area. **Participants:** A total of 805 older persons who completed uniform annual clinical evaluations. **Measurements:** Participants annually completed a standard self-report measure of

purpose in life, a component of well-being. Hospitalization data were obtained from Part A Medicare claims records. Based on previous research, ICD-9 codes were used to identify ambulatory care-sensitive conditions (ACSCs) for which hospitalization is potentially preventable. The relation of purpose (baseline and follow-up) to hospitalization was assessed in proportional odds mixed models. **Results:** During a mean of 4.5 years of observation, there was a total of 2,043 hospitalizations (442 with a primary ACSC diagnosis; 1,322 with a secondary ACSC diagnosis; 279 with no ACSCs). In initial analyses, higher purpose at baseline and follow-up were each associated with lower odds of more hospitalizations involving ACSCs but not hospitalizations for non-ACSCs. Results were comparable when those with low cognitive function at baseline were excluded. Adjustment for chronic medical conditions and socioeconomic status reduced but did not eliminate the association of purpose with hospitalizations involving ACSCs. **Conclusions:** In old age, higher level of purpose in life is associated with lower odds of subsequent hospitalizations for ambulatory care-sensitive conditions.

Yu, L., Boyle, P. A., Wilson, R. S., Levine, S. R., Schneider, J. A., & Bennett, D. A. (2015). Purpose in life and cerebral infarcts in community-dwelling older people. *Stroke*, 46(4), 1071-1076.

Background and purpose: Purpose in life, the sense that life has meaning and direction, is associated with reduced risks of adverse health outcomes. However, it remains unknown whether purpose in life protects against the risk of cerebral infarcts among community-dwelling older people. We tested the hypothesis that greater purpose in life is associated with lower risk of cerebral infarcts. **Methods:** Participants came from the Rush Memory and Aging Project. Each participant completed a standard measure of purpose in life. Uniform neuropathologic examination identified macroscopic infarcts and microinfarcts, blinded to clinical information. Association of purpose in life with cerebral infarcts was examined in ordinal logistic regression models using a semiquantitative outcome. **Results:** Four hundred fifty-three participants were included in the analyses. The mean score on the measure of purpose was 3.5 (SD, 0.5; range, 2.1-5.0). Macroscopic infarcts were found in 154 (34.0%) people, and microinfarcts were found in 128 (28.3%) people. Greater purpose in life was associated with a lower odds of having more macroscopic infarcts (odds ratio, 0.535; 95% confidence interval, 0.346-0.826; $P=0.005$), but we did not find association with microinfarcts (odds ratio, 0.780; 95% confidence interval, 0.495-1.229; $P=0.283$). These results persisted after adjusting for vascular risk factors of body mass index, history of smoking, diabetes mellitus, and blood pressure, as well as measures of negative affect, physical activity, and clinical stroke. The association with macroscopic infarcts was driven by lacunar infarcts, and was independent of cerebral atherosclerosis and arteriolosclerosis. **Conclusions:** Purpose in life may affect risk for cerebral infarcts, specifically macroscopic lacunar infarcts.

Zanjiran, S., Borjali, A., & Kraskian, A. (2015). Effect of group Logotherapy education on quality of life and general health in women of sanatorium. *Razi Journal of Medical Sciences*, 21(127), 39-51.

Background:The elderly are one of increasing social groups in the present communities which has gained importance with respect to the age pyramid of our country. The study purpose was evaluating the effectiveness of group logotherapy education on quality of life and general health in women of sanatorium. **Methods:** The population included all elderlies living in private sanatorium in city of Shahriar. Sample selection was via convenience sampling. Subjects (n=24) were assigned to 2 groups. The control group (N=12) received the usual nursing care and experimental group (N=12) participated in the group training consisted of 10-day sessions for 5 weeks (every session, 2 hours). Effects were measured using questionnaire for quality of life in the elderly (Lipad) and general health (GHQ-28) analysis of covariance was used for analysis of data.

Results: Results indicated a significant difference between pretest and posttest of experimental group. **Conclusion:** The group logotherapy education is effective on increasing quality of life and general health

Zanjiran, S., Keyani, L., Zare, M., & Shayeghian, Z. (2015). The Effectiveness of Group Logotherapy on the Sense of Loneliness of Elderly Women Resident in Nursing Home. *JSR*, 16(3), 60-67.

Due to the rapid growth of the elderly population in the 21st century, especially in developing countries, it seems necessary to pay attention to fulfilling the elderly's physical and psychological needs. Hence, the present study aimed to investigate the effectiveness of group logo therapy on social adjustment, loneliness and general health in the elderly. The current research was a quasi-experimental of pretest-posttest and control group design. The statistical population included all the 60-80 years old elderly who resided in nursing homes in Tehran, Iran in 2018. Selected through convenience sampling method and inclusion criteria were 30 elderly assigned randomly in experimental (n=15) and control (n=15) groups. The control group did not receive any intervention. The experimental group received an interventional program of eight 90-minute sessions. Data were collected using Social Adjustment (Bell), Loneliness (Peplau & Curtona) and General Health (Russell, Goldberg & Hillier) Questionnaires. Having been undergone using mean, standard deviation, and multiple covariance analyze, the results indicated that there is a significant difference between experimental and control groups in the post-test phase in terms of adjustment, loneliness and general health ($P < 0.001$). Therefore, it can be concluded that logotherapy appears to be effective on improving social adjustment, reducing loneliness and enhancing general health in the elderly.

Zilioli, S., Slatcher, R. B., Ong, A. D., & Gruenewald, T. L. (2015). Purpose in life predicts allostatic load ten years later. *Journal of Psychosomatic Research*, 79(5), 451-457.

Objective Living a purposeful life is associated with better mental and physical health, including longevity. Accumulating evidence shows that these associations might be explained by the association between life purpose and regulation of physiological systems involved in the stress response. The aim of this study was to investigate the prospective associations between life purpose and allostatic load over a 10-year period. **Methods** Analyses were conducted using data from the Midlife in the United States (MIDUS) survey. Assessment of life purpose, psychological covariates and demographics were obtained at baseline, while biomarkers of allostatic load were assessed at the 10-year follow-up. **Results** We found that greater life purpose predicted lower levels of allostatic load at follow-up, even when controlling for other aspects of psychological well-being potentially associated with allostatic load. Further, life purpose was also a strong predictor of individual differences in self-health locus of control—i.e., beliefs about how much influence individuals can exert on their own health—which, in turn, partially mediated the association between purpose and allostatic load. Although life purpose was also negatively linked to other-health locus of control —i.e., the extent to which individuals believe their health is controlled by others/chance —this association did not mediate the impact of life purpose on allostatic load. **Conclusion** The current study provides the first empirical evidence for the long-term physiological correlates of life purpose and supports the hypothesis that self-health locus of control acts as one proximal psychological mechanism through which life purpose may be linked to positive biological outcomes.

Older research summaries:

Batthyány, A. & Guttmann, D. (2006). Empirical Research in Logotherapy and Meaning-Oriented Psychotherapy. Phoenix, AZ: Zeig, Tucker & Theisen [Introduction and annotated bibliography 1975-2005]

Batthyány, A. (2011). Over Thirty-Five Years Later: Research in Logotherapy since 1975. New Afterword to Frankl (2011) *Man's Search for Ultimate Meaning*. London: Rider [Discussion and annotated bibliography -2011]

Thir, M., & Batthyány, A. (2016). The state of empirical research on logotherapy and existential analysis. In *Logotherapy and Existential Analysis* (pp. 53-74). Springer, Cham. [Discussion and annotated bibliography of studies 2010-2015]