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Review Article

The Effect of Dignity Therapy on Terminally-Ill Adult Patients: A Systematic Review and Meta-Analysis

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Abstract

Background: We aimed to evaluate the effect of dignity therapy on the dignity, distress, and quality of life of terminally-ill adult patients.

Methods: All randomized controlled trials published prior to Jan 2021 were searched through database, including PubMed, Medline, OVID, Cochrane Library, CINAHL, Web of Science, Scopus, ProQuest Central, KMBASE, KoreaMed, NDSL, and RISS. The RoB 2 was used to assess risk of bias. Effect sizes, Hedge's g and Higgins I^2–statistics were used for meta-analysis.

Results: We finally identified 10 studies for a systematic review, and eight studies out of them were selected for a meta-analysis. Overall, 776 participants were included in the meta-analysis. There were significant differences between with and without dignity therapy groups in dignity and anxiety (SMD = -0.3805, Cl = -0.5606, -0.2004; SMD = -0.1932, Cl = -0.3774, -0.0090, respectively) while there was no significant difference in quality of life and depression (SMD=0.4678, Cl = -0.0989, 1.0345; SMD= -0.0513, Cl= -0.2461, 0.1434, respectively).

Conclusion: Dignity therapy may be effective for terminally ill patients on dignity and anxiety. We suggested further empirical studies with dignity therapy and repetitive meta-analysis in the future due to heterogeneity of the studies.

Keywords: Anxiety; Depression; Dignity; Quality of life; Terminally ill

Introduction

Human dignity must be preserved from birth to death. In terminal patients, loss of dignity is a major cause of distress, reduced quality of life, and a desire to accelerate death (1, 2). Palliative care supports quality of life (QOL) of patients with terminal illness and their families and helps them to maintain dignity until death. Almost 40 million need palliative care globally, but most of them do not currently receive it (3). Therefore, it is a critical health care task in the world to expand practical palliative care to improve QOL of terminally ill patients and their families and prepare for dignified death.

A good death in of end of life care policy is that the individual is treated with dignity and respect, has less pain and symptoms, and lives with family in a friendly environment (4). Thus, dignity-conserving care is one of most important ele-

ments in palliative care. Dignity therapy is a brief and individualized intervention developed in the 2000s for end-stage patients to alleviate psychological and existential distress. Dignity therapy includes interviews with patients on the memory related to the meaning of the patient's life or the most important issue of the patient's life. Generally, interviews take 2 to 3 sessions, 30 to 60 min per session (5, 6). A generativity (legacy) document is created based on the interviews and returned to the patient (5, 6). The patients with dignity therapy found new meanings and purpose of life as they prepare for death (6, 7). In addition, the families also reported that dignity therapy was helpful for them to support patients' end-of-life and recover from their grief of losing loved ones (8). Dignity therapy also increased patient-hospice staff liaison and their job satisfaction as hospice staffs in addition to the perspectives of beneficial effects on patients and their families (9).

Dignity therapy has been proved to be feasible and acceptable to the patients with various clinical status including cancer, motor neuron disease, and elderly were tested (7, 10, 11). Application of dignity therapy showed that the therapy had a significant effect on the subject's dignity, depression, anxiety, and quality of life (6, 12-15). However, there were studies that did not show a consistent effect (16, 17).

So far, two meta-analysis studies have been reported with dignity therapy. Oh and Shin (18) studied the effect of dignity therapy focusing on anxiety and depression, and spiritual well-being in terminally ill patients. They did not provide the effect size of anxiety, and spiritual well-being. However, the overall effects of dignity were not effective on depression, and heterogeneity of the studies were varied depending on whether the study was randomized controlled trial (RCT) or Non-RCT. Xiao, et al. (19) reported another meta-analysis study focusing on cancer population. They provided the meta-analysis results on dignity, depression, and anxiety. Moreover, the overall dignity results were not provided but two items in patient dignity inventory were significantly different between dignity therapy group and control group. However, they reported that dignity therapy did not improve depression and anxiety.

Since the research design of the studies included in the previous meta-analyses was variously included, such as single group study, quasi-experimental study, and RCT. In addition, the study design may have an impact in meta-analysis results of dignity therapy (18). With the recent increase in RCT studies for dignity therapy, we performed meta-analysis by selecting RCT design only to understand better of the effect of dignity therapy.

In this study, we aimed to identify the effects of dignity therapy on dignity, QOL, as well as depression and anxiety using systematic review and meta-analysis.

Methods

This systematic review with meta-analysis was conducted in accordance with the updated Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guideline (20, 21). The Institutional Review Board approved this study for exemption (IRB No. 1040647-202101-HR-002-03).

PICO Criteria

The PICOS (population, intervention, comparison, outcome, and study design) for this study was as follows: (a) participants: adults over 19-year-old with terminally ill conditions, (b) intervention: dignity therapy, (c) comparison: standard or routine care without dignity therapy (d) outcome: dignity, QOL, anxiety, and depression (e) study design: quantitative studies with randomized controlled study design.

Search Strategy

Reviewed articles for this study were searched through database, including PubMed, Medline (EBSCO platform), OVID, Cochrane Library, Cumulative Index to Nursing and Allied Health Literature (CINAHL on EBSCO platform), Web of Science, Scopus, ProQuest Central, KMBASE,

KoreaMed, National Digital Science Library (NDSL), and RISS.

The search terms used for database query were ((((((((((("Terminally Ill"[Mesh]) OR "Palliative Care"[Mesh]) OR "Hospice Care"[Mesh]) OR ("Hospice and Palliative Care Nursing"[Mesh])) OR "Terminal Care"[Mesh])) OR ((((((((("terminally ill"[Title/Abstract]) OR "terminal illness"[Title/Abstract]) OR "palliative care"[Title/Abstract]) OR "hospice care"[Title/Abstract]) OR "end of life"[Title/Abstract]) OR "end stage"[Title/Abstract]) OR dying[Title/Abstract])))) AND (((((((("dignity therapy"[Title/Abstract]) OR "dignity care"[Title/Abstract]) OR "dignity conserving care"[Title/Abstract]) OR "dignity intervention"[Title/Abstract]) OR "dignity psychotherapy"[Title/Abstract]) OR dignity[Title/Abstract]))) AND (((((((((("Quality of Life"[Mesh]) OR "Value of Life"[Mesh])) OR "Depression"[Mesh]) OR "Anxiety"[Mesh]) OR "Sadness"[Mesh])) OR ((((((((("quality of life"[Title/Abstract]) OR QOL[Title/Abstract]) OR "well-being"[Title/Abstract]) OR dignity[Title/Abstract]) OR ("good death"[Title/Abstract] OR "well dying"[Title/Abstract] OR "dying well"[Title/Abstract])) OR ("meaning of life"[Title/Abstract] OR "value of life"[Title/Abstract])) OR (comfort[Title/Abstract] OR solace[Title/Abstract])) OR (connect[Title/Abstract] OR connectedness[Title/Abstract] OR belonging[Title/Abstract])) OR autonomy[Title/Abstract]) OR (distress[Title/Abstract] OR depression[Title/Abstract] OR anxiety[Title/Abstract] OR sadness[Title/Abstract])))) in PubMed, for example. All studies satisfied the inclusion criteria above and published prior to Jan 2021 were searched. There were no language restrictions on search. This study set the eligibility criteria for the research based on PICO criteria. Grey literatures such as unpublished theses and dissertations were also searched using ProQuest Dissertations and Theses Full Text.

Study Selection

A librarian extracted data through electronic search based on the inclusion criteria. Two authors (YJ & JLL) independently screened the electronic search results. Duplicate papers were excluded by a reference management software (EndNote X9, Clarivate Analytics) at first, then by comparing the searched documents through the database, focusing on the title, publication year, and author name (Fig. 1). Disagreements between the authors were resolved by discussion. There was no restriction on language.

Quality Assessment of Included Studies

Quality assessment for systematic review was independently conducted by two authors (YJ & JLL) using the Ver. 2 of the Cochrane risk-of-bias tool for randomized trials (RoB 2). The RoB 2 (22) consists of overall bias as well as bias domains of randomization process, deviations from intended interventions, missing outcome data, measurement of the outcome, and selection of the reported result. Disagreements between the authors were resolved by discussion.

Data Synthesis and Analysis

This study aimed to identify the effects of dignity therapy on terminally ill patients. To test the impact, we conducted a meta-analysis by using R (ver. 4.0.2) and RStudio (version 1.3.1) with 'meta' packages. Effect sizes were calculated based on the means and standard deviations. All studies except one provided mean and standard deviation. Juliao, et al. (14) reported median and IQR instead of mean and standard deviation. The median and IQR were converted to mean and SD using the webpage (23) which provide calculation formula based on the publications by Luo, et al. (24) and Wan, et al. (25). Except QOL, Hedge's g and its variance and 95% confidence intervals were calculated using fixed effect model because the studies included in meta-analysis were conducted based on the same model of dignity therapy and the same questionnaires to measure outcomes.

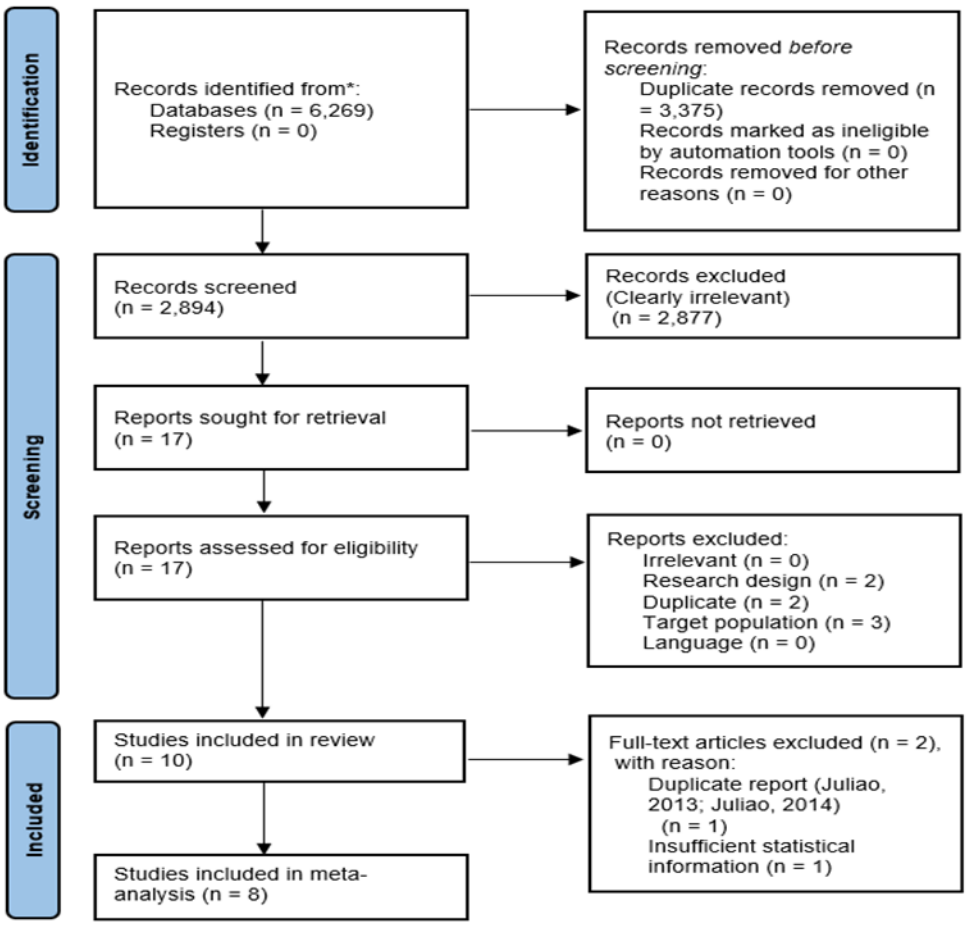

Fig. 1: Flow Diagram

The questionnaires utilized to measure QOL were different among the studies, thus random effect model was used. SMD differences were interpreted as small medium, and large effect sizes according to the guideline suggested (26). To check the consistency of study results, heterogeneity test was performed using Higgins I^2–statistics. I^2 values ≥ 75% means high heterogeneity. Publication bias was evaluated by the funnel plot (27) and Egger's regression test.

Results

We identified 6,269 records and finally 10 studies were selected for a systematic review based on our search strategy in the method section (Fig.1). Eight studies (80.0 %) out of these ten studies met the inclusion criteria for meta-analysis. The results of quality assessment are reported in Fig. 2 and the characteristics of the ten studies (12-17, 28-31) included in this systematic review are listed in Table 1.

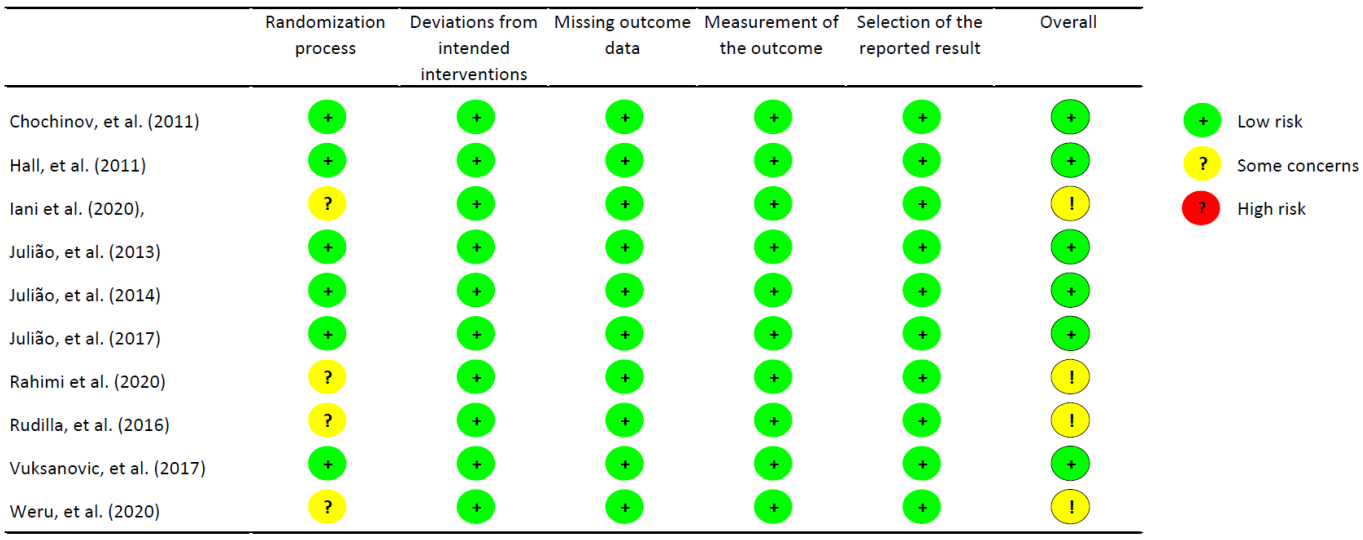

Fig. 2: Risk of Bias assessment using RoB2

Study Characteristics

The 10 articles analyzed in this study were published between 2011 and 2020. The locations of studies were Australia, Canada, Iran, Italy, Kenya, Portugal, Spain, the United Kingdom, and the United States (Table 1). The sample sizes vary between 35 and 165 (mean 86.75; median 77.5). The outcome variables were dignity, quality of life, anxiety, and depression.

Effect Sizes

Dignity

Six studies (13, 16, 17, 28-30) were included to compare the results of dignity between dignity therapy group and control group. All studies measured dignity using patient dignity inventory (PDI). A significant difference was found between the two groups with a medium effect size (SMD: -0.3805; 95% CI: -0.5606; -0.2004). However, high heterogeneity was observed in dignity (All I^2 = 85.9%, P<0.001; Fig. 3).

Quality of Life (QOL)

Four studies (15-17, 28) were included to compare the results of dignity between intervention group and control group. QOL was measured using EORTC Quality of Life C30 Questionnaire (EORTC–QLQ–C30) or EuroQOL (EQ-5D). No significant difference was found between the two groups. (SMD: 0.4678; 95% CI: -0.0989; 1.0345). However, high heterogeneity was observed in QOL (I^2 = 84.3%, P<0.001; Fig. 4).

Anxiety

Four studies (14, 16, 17, 28) were included to compare the results of dignity between dignity therapy group and control group. All studies measured anxiety using the Hospital Anxiety and Depression Scale (HADS). A significant difference was found between the two groups with a small effect size (SMD: -0.1932; 95% CI: -0.3774; -0.0090). However, high heterogeneity was observed in anxiety (I^2 =87.6%, P<0.001; Fig. 5).

Table 1: Results of individual studies (*N*=10)

Author (year), country	*Participants*			*Type of DT provided*	*Provider and training for DT*	*Total DT period, number of sessions, time per session*	*Time of measurement*	*Outcome variables (questionnaire)*	*Results*	*Inclusion in the meta-analysis*
	Characteristics	Mean survival time (days)	Number of participants							
Chochinov, et al. (2011), Australia, Canada, and USA	Terminally ill patients in a hospital or community setting (Cancer 95.4%)	110	DT: 108 SPC: 111	Chochinov's method	-Psychologist, psychiatrist or experienced palliative care nurse -3-day training workshop	7-10 d 3-4 sessions 30-60 min/session	Before DT and after completion of DT	Dignity (PDI), QOL (two-item QOL Scale), anxiety and depression (HADS)	No significant differences between DT and SPC groups in dignity, QOL, anxiety, and depression.	Yes
Hall, et al. (2011), UK	Advanced cancer patients in a hospital setting	218	DT: 22 SPC: 23	Chochinov's method	-Palliative care team -Being trained from Chochinov	Unclear 2 sessions 30-60 min/session	Before DT and 1 & 4 wk after completion of DT	Dignity (PDI), QOL (two-item QOL Scale, EQ-5D), anxiety and depression (HADS)	No significant differences between DT and SPC groups in dignity, QOL, anxiety, and depression.	Yes
Iani, et al. (2020), Italy	Terminally ill patients in a hospital and community setting (Cancer 94.3%)	Not described	DT: 15 SPC: 20	Chochinov's method	-Psycho-oncologist -being trained from supervisor	7-10 d 3-4 sessions 20-60 min/session	Before DT, 7-10 and 15-20 d after the baseline assessment	Dignity (PDI)	No significant differences between DT and SPC groups in dignity.	Yes
Julião, et al. (2013), Portugal	Terminally ill patients in a hospital setting (Cancer 93.5%)	26.8	DT: 29 SPC: 31	Chochinov's method	-Physician (Principal investigator) -International DT workshop	7-10 d 3-4 sessions 30-60 min/session	Before DT, on 4, 15 and 30 d after completion of DT	Anxiety and depression (HADS)	-Depression: SD on 4 and 15 d after the intervention -Anxiety: SD on 4 and 15 d after the intervention	No (Duplicate: preliminary report of Julião et al., 2014)
Julião, et al. (2014), Portugal	Terminally ill patients in a hospital setting (Cancer 90.2%)	25.4	DT: 39 SPC: 41	Chochinov's method	-Physician (Principal investigator) -International DT workshop	7-10 d 3-4 sessions 30-60 min/session	-Data collection before, on day 4, 15 and 30 after the intervention	Anxiety and depression (HADS)	-Depression: SD on 4, 15 and 30 d after the intervention -Anxiety: SD on 4, 15 and 30 d after the intervention	Yes

Table 1: Results of individual studies (Continued)

Author (year), country	*Participants*			*Type of DT provided*	*Provider and training for DT*	*Total DT period, number of sessions, time per session*	*Time of measurement*	*Outcome variables (questionnaire)*	*Results*	*Inclusion in the meta-analysis*
	Characteristics	Mean survival time (days)	Number of participants							
†Julião, et al. (2017), Portugal	Terminally ill patients in a hospital setting (Cancer 94.9%)	25.4	DT: 39 SPC: 41	Chochinov's method	-Physician (Principal investigator) -International DT workshop	7-10 d 3-4 sessions 30-60 min/session	Before DT and 4 d after completion of DT	Dignity (PDI)	Significant differences between DT and SPC groups in dignity (19 out of 25 items in PDI).	Yes (The same study as Julião et al., 2014, but the different outcome variables reported)
Rahimi, et al. (2020), Iran	Cancer patients in a hospital setting	Not described	DT: 38 RC: 38	Chochinov's method	-Nurse -Being trained for 70 h	Not described 3-4 sessions 30-45 min/session	Before DT and 4 wk after completion of DT	QOL (EORTC-QLQ-C30)	Significant differences between DT and RC groups in QOL	Yes
Rudilla, et al. (2016), Spain	Terminally ill patients in a hospital setting (Cancer 78.6%)	Not described	DT: 35 CT: 35	Chochinov's method	-Not described -Not described	7 d 3-4 sessions 30-60 min/session	Before DT and after completion of DT	Dignity (PDI) Quality of life (2 item of EORTC-QLQ-C30) Anxiety and depression (HADS)	No significant differences between DT and CT groups in dignity, QOL, and depression. Significant differences in anxiety	Yes
Vuksanovic, et al. (2017), Australia	Terminally ill patients in a hospital or home setting (Cancer 95.0%)	DT 87, RC 73 [median, not mean survival time]	DT: 23 RC: 24	Chochinov's method	-Clinical psychologist -3-day DT training workshop	7-10 d 4 sessions 58.05 min/session (mean)	Before DT, and after completion of DT	Dignity (PDI)	No significant differences between DT and RC groups in dignity.	Yes
Weru, et al. (2020), Kenya	Advanced cancer patients in a hospital setting	Not described	DT: 72 RC: 72	Chochinov's method	-Counsellors -Being trained for 3 months	Not clear Not clear (at least once) 30-60 min/session	Before DT and 6 wk after completion of DT	QOL (Edmonton symptom scale)	No significant differences between DT and RC groups in QOL	No (Insufficient statistical information)

Note. † The same study as Julião et al. (2014). Excluded in total number of participants in meta-analysis.
Abbreviations: CT, counselling; DT, dignity therapy; EORTC-QLQ-C30, European Organisation for Research and Treatment of Cancer-QOL of cancer patients; EQ-5D, EuroQol-5D; HADS, Hospital anxiety and depression; PDI, Patient Dignity Inventory; QOL, quality of life; RC, routine care; RCT, randomized controlled trial; SPC, standard palliative care

Depression

Four studies (14, 16, 17, 28) were included to compare the results of dignity between dignity therapy group and control group. All studies measured anxiety using the Hospital Anxiety and Depression Scale (HADS). No significant difference was found between the two groups. (SMD: -0.0513; 95% CI: -0.2461; 0.1434). However, high heterogeneity was observed in depression (I^2 = 88.3%, P<0.001; Fig. 6).

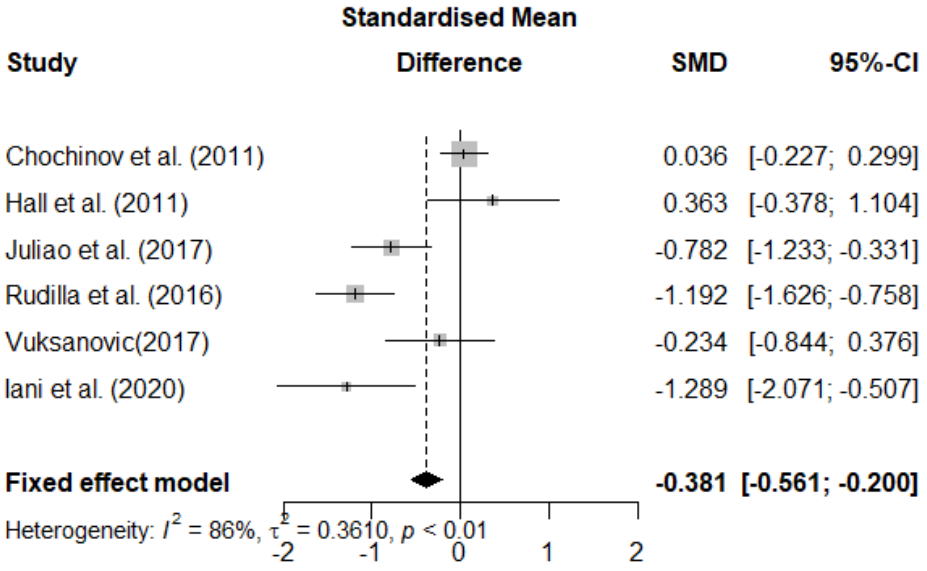

Fig. 3: Forest Plots (Dignity)

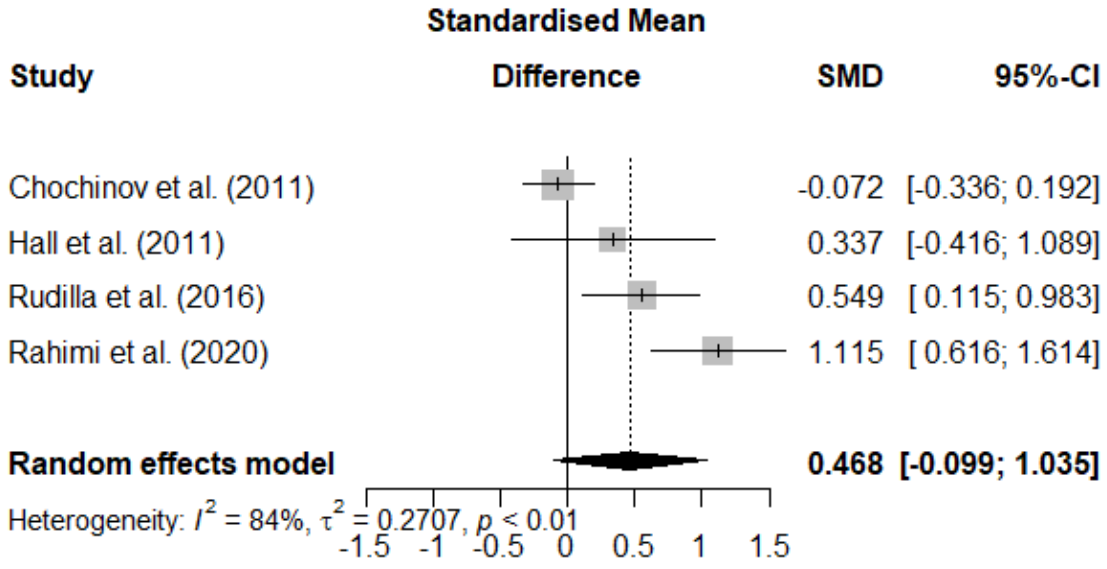

Fig. 4: Forest Plots (QOL)

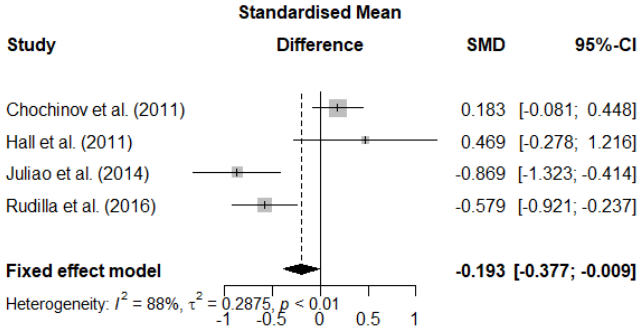

Fig. 5: Forest Plots (Anxiety)

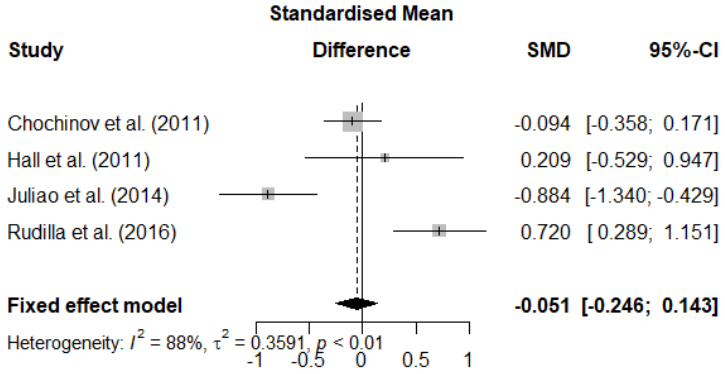

Fig. 6: Forest Plots (Depression)

Publication Bias

The funnel plot (Fig. 7) showed a low level of asymmetry based on visual assessment. According to the Egger's regression test, the funnel plot remained symmetrical and publication bias is not significant (Bias= -0.3520, *t*= -0.1897, *df* =16, *P*=0. 8519).

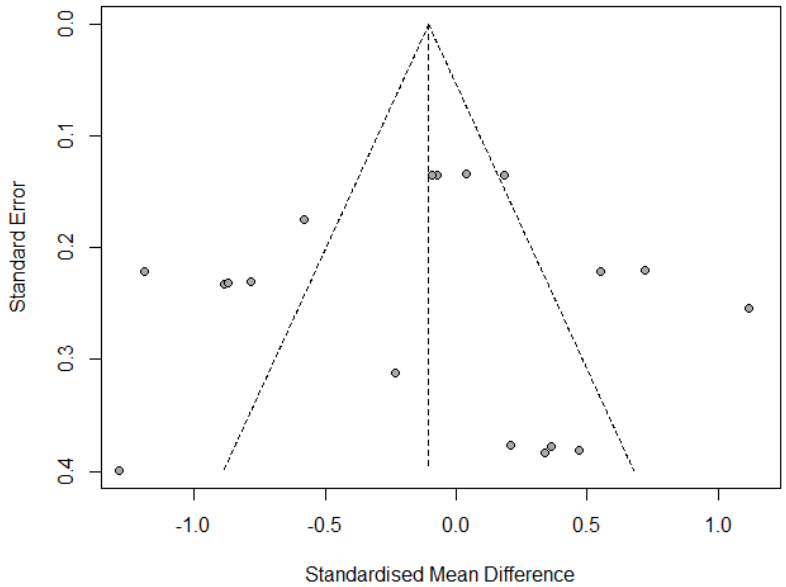

Fig. 7: Funnel Plot

Discussion

This study systematically reviewed ten RCT studies to evaluate the effect of dignity therapy on the dignity, distress, and quality of life of terminally ill patients, and meta-analysis was performed on 8 studies of them. All the studies adopted the same dignity therapy method that Chochinov suggested (6, 32). Ten studies were conducted in nine countries located in Africa, Asia, Europe, North America, and the study sites included hospitals and communities including home. There are three studies targeting cancer patients only, and seven studies targeting terminal patients. Even in seven studies on terminally ill patients, cancer patients accounted for more than 90% in six studies, and cancer patients accounted for 78.6% in a study. Therefore, dignity study was mainly conducted for cancer patients. Adults in need of palliative care had cardiovascular diseases, cancer, respiratory diseases, and other chronic disorders (3), dignity therapy has been applied to specific disease group, not conducted to the individuals with various chronic diseases yet.

The meta-analysis results based on six studies providing dignity therapy effects on dignity showed a significant effect size, but there is a limitation to suggest that the dignity therapy makes a recognizable impact on dignity due to heterogeneity of study. A meta-analysis study (19) provided only two items, "change of appearance" and "social support from friends and family", out of 25 items of PDI were significant. All six studies included in our study utilized PDI to measure dignity. However, we did not analyze based on items because provided data in five studies were different. Some studies provided the results data based on items, one study provided five domain data only, and one study provided only total scores. Reporting format of results should be more consistent in future studies applying PDI. Some studies conducting a post-dignity therapy survey on the matter of dignity in addition to PDI. Patients reported significant improvements in sense of dignity through dignity therapy (6, 16, 33). Dignity concept in terminally ill patients may be re-examined. In addition, it may need to re-evaluate measurement tools.

Four studies of the effect of dignity therapy on anxiety and depression in terminally ill patients (14, 16, 17, 28) were analyzed. In all four studies, anxiety and depression were measured using the hospital anxiety and depression scale (HADS). The therapy had a significant effect on anxiety but did not have a significant effect on depression. Although there is a limitation to evaluating effects due to heterogeneity, our results were consistent with other meta-analysis (18) that dignity therapy did not have an impact on depression. However, the results on anxiety and depression were inconsistent. Hall, et al. (28) reported no significant effects on both anxiety and depression, while both anxiety and depression were significantly improved on the days 4 and 15 post-dignity therapy in other studies (12, 14). There was an effect on anxiety, but no significant effect on depression in another study (17). These inconsistency may be somewhat related to the degree of anxiety and depression before intervention. The participants of Hall et al. (28)'s study had no anxiety and depression except for the anxiety in the control group, while the participants in other 3 studies were borderline cases, or anxious or depressed cases depending on the scores provided in their papers. This issue should be analyzed further, but there was insufficient number of studies to perform the analysis yet.

Four studies that reported the effects of dignity therapy on the quality of life of terminally ill patients (15-17, 28) were meta-analyzed, and the results showed dignity therapy did not have a significant effect on quality of life. Three of the four studies included in the analysis were measured using the 2-item QOL tool, one study measured by the Edmonton Symptom Assessment Scale (ESAS), and the other one assessed using the EORTC-QLQ-C30. The QOL of the participants in the studies included in the review shows a decrease over time due to the terminally ill condition regardless of dignity therapy. The study of

Rahimi, et al. (15) only reported dignity therapy has a significant effect on QOL. The different results may be derived from study location (Iran), questionnaires used to measure QOL (EORTC-QLQ-C30), or other factors. Further studies are needed to have more insights on this issue.

The studies included in this study were high in study quality, except for a few studies which did not describe details in the randomization process. However, there is some limitations in this research to provide solid evidence on the effects of dignity therapy on the dignity, QOL, and distress such as anxiety and depression of terminally ill patients. In order to provide the best evidence for dignity therapy, we suggest some considerations in future studies in perspectives of participants, interventions, and evaluation. First, the life expectancy of recruited participants were mostly less than six months because dignity therapy was provided to terminally ill patients. The dropout rate in the study was high when the life expectancy was low. This reflects the characteristics of terminal patients, and these characteristics can have a great influence on the evaluation of the effectiveness of dignity therapy. However, considering the characteristics of end-stage patients with short lifespan and persistent deterioration, studies on when to apply dignity therapy to be most effective should be conducted in the future.

Second, dignity therapy has been applied to mostly in western countries. Although death-related care should be carried out under a cultural background, care with dignity should be applied to terminally ill patients for the rest of their lives, regardless East or West. Therefore, it suggests to modify the contents of dignity therapy suitable for each cultural background, and to implement it in more countries.

Third, most outcome variables except QOL were measured same evaluation tools for each variable. It is also necessary to consider whether the measurement tool is the most appropriate for the subjects of dignity therapy (34). In addition, since dignity therapy is an intervention for not only the patient, but also the family, studies to assess the effect on the family should be included in the future.

The effects of dignity therapy on dignity, QOL, anxiety, and depression were all highly heterogeneous, which makes it difficult to determine the effect rigorously. Therefore, further studies with proper research design were needed to provide more accurate information. In addition, quantitative approaches may be limited in assessing the effectiveness of dignity therapy in palliative care subjects, we suggest qualitative studies or mixed methods studies on dignity therapy as well.

Conclusion

Dignity therapy may be effective for terminally ill patients on dignity and anxiety. Although the quality of studies included in the meta-analysis and high and no significant publication bias, the results of this study should be interpreted with caution due to heterogeneity. We suggested further empirical studies with dignity therapy and repetitive meta-analysis in the future due to heterogeneity of the studies.

Journalism Ethics considerations

Ethical issues (Including plagiarism, informed consent, misconduct, data fabrication and/or falsification, double publication and/or submission, redundancy, etc.) have been completely observed by the authors.

Acknowledgements

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Conflict of interest

The authors declare that there is no conflict of interests.

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