Written emotional disclosure for asthma (Protocol)

Article (Unspecified)

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Written emotional disclosure for asthma

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ABSTRACT

This is the protocol for a review and there is no abstract. The objectives are as follows:

The review aims to determine the effectiveness of written emotional disclosure for people with asthma.

1. To assess the overall efficacy of emotional disclosure compared to emotionally neutral writing in people with asthma on self reported quality of life.

2. To assess the overall efficacy of emotional disclosure compared to emotionally neutral writing in people with asthma on objective measures of health outcome.

3. To assess the comparative efficacy of different types of emotional disclosure for people with asthma.

BACKGROUND

The burden of asthma

Asthma is a chronic inflammatory disease of the airways that is associated with heightened irritability of the airways and reversible, episodic airway obstruction (Beasley 2004). Estimates indicate that asthma currently affects 300 million people worldwide and that rates of asthma are likely to increase as more communities become urbanised (Beasley 2004). This continued growth will generate an additional treatment and diagnostic burden for health care systems. Unfortunately, even if the disease is well controlled, patients continue to experience residual symptoms that affect their quality of life. Interventions that are both cheap and complementary to routine care are therefore needed.

Emotional Disclosure

The emotional disclosure intervention (also known as expressive writing) was originally developed by Pennebaker and Beall in 1986 (Pennebaker 1986). This is based on the idea that being unable to share experiences and inhibiting emotions following a stressful or traumatic event is associated with poorer psychological and physical health (Pennebaker 1986a). The emotional disclosure intervention asks people to disclose traumatic or stressful experiences through writing. It has been proposed that emotional disclosure can have positive effects on both physical and psychological health. This may occur through the release of inhibition (cathartic effect) (Pennebaker 1986a; Pennebaker 1993), creation of a coherent narrative (Pennebaker 1993) or through eliciting a stronger sense of emotional self-regulation (Lepore 2002). Emotional disclosure can also be conducted orally, however this type of emotional disclosure may be influenced by different psychological processes and will be the subject of a separate systematic review. If effective, written emotional disclosure would provide a cheap and safe adjunct to pharmacotherapy in routine care.

Existing research syntheses

Several research syntheses have been conducted in the field of expressive writing (emotional disclosure) with variable results. This may be because the reviews have either focused specifically on healthy participants or have compared studies across widely disparate patient groups. The conflicting findings may therefore be due to the difficulties in comparing the results between studies conducted across diverse populations.

In a review of 13 studies conducted with healthy participants, Smyth 1998 revealed that expressive writing significantly enhanced physical health, psychological well-being, physiological functioning and general functioning. A positive effect on physical health outcomes was also observed in a meta-analysis of nine studies conducted in people diagnosed with physical or psychiatric disorders (Frisina 2004a). In contrast Meads 2005 included 60 studies on both healthy participants as well as those with pre-existing morbidity, and found no significant difference in health centre visits between treatment groups. However, Meads 2005 did not calculate effect sizes if they were not reported in the original articles, which may have affected the statistical power of the analysis. Frattaroli 2006 used a comprehensive definition of expressive writing and included 146 trials of healthy participants, trials including patients with a diverse range of health conditions and trials in patients who had experienced traumatic events such as sexual assault. In contrast to earlier meta-analyses (Smyth 1998; Frisina 2004a), Frattaroli 2006 calculated composite effect sizes drawn from data extracted from a number of different rating scales relating to psychological and physical health, and found statistically significant differences favouring disclosure.

All previous published reviews have explored the effect of written emotional disclosure on wide populations. The contrasting results from previous reviews may be due to the different populations included in the reviews. For example, the clinical populations include patients with a wide variety of illnesses. As different illnesses can place different stressors on a person (e.g. the invasiveness of medical treatment or prognosis). The effects of written emotional disclosure may be disease specific. The effects of written emotional disclosure in patients with asthma remains unclear.

Stress is associated with the exacerbation of asthma symptoms (such as reduced lung function and increased hospital admissions). The written emotional disclosire intervention aims to reduce the stress created by inihibiting stressful or traumatic experiences and may help to help to reduce residual or exacerbations of symptoms for people with asthma. Two Cochrane systematic reviews (Yorke 2005; Yorke 2006) have focused on the use of psychological interventions for asthma (one focusing on adults, one focusing on children) but neither incorporated the expressive writing paradigm as a psychological intervention. The psychological approaches in the 15 studies included in the above reviews consisted of therapies delivered by a trained therapist such as cognitive behavioural therapy, relaxation techniques and counselling. As expressive writing is not delivered by a therapist, the expressive writing paradigm was not included within the scope of these published reviews. This review will complement existing Cochrane reviews by exploring the efficacy of expressive writing for people with asthma.

In summary, the existing published reviews of written emotional disclosure either focus on expressive writing in healthy participants or across a diverse range of physical and psychological health conditions. This proposal aims to be more specific with regard to both intervention and outcome by conducting a systematic review on the effect of emotional disclosure (expressive writing) in asthma.

OBJECTIVES

The review aims to determine the effectiveness of written emotional disclosure for people with asthma.

1. To assess the overall efficacy of emotional disclosure compared to emotionally neutral writing in people with asthma on self reported quality of life.

2. To assess the overall efficacy of emotional disclosure compared to emotionally neutral writing in people with asthma on objective measures of health outcome.

3. To assess the comparative efficacy of different types of emotional disclosure for people with asthma.

METHODS

Criteria for considering studies for this review

Types of studies

Randomised controlled trials assessing the effects of an emotional writing intervention in subjects with asthma will be included in the review. Studies including a group of participants randomised to receive either an emotional disclosure intervention or a control writing (emotionally neutral) intervention will be reviewed. Only studies with a neutral writing control group will be included to ensure that any observed treatment effects are due to the written emotional disclosure intervention rather than the possibility that spending time to oneself and writing may in itself be therapeutic Studies may be published in any language. Quasi-randomised trials will be excluded to minimise bias.

Types of participants

Persons diagnosed with asthma by a general practitioner or consultant or standard guidelines for diagnosis (e.g. British Thoracic Society, American Thoracic Society). Participants will be both male and female and of any age. Studies conducted in all settings (including hospitals, family practice and in the community) will be considered to assess the generalisbility of study findings across a range of situations.

Types of interventions

Emotional disclosure (expressive writing) interventions based on the protocol developed by Pennebaker et al (Pennebaker 1986) or the guided disclosure intervention developed by Gidron et al (Gidron 2002) will be included. The protocol incorporated by each study will be identified in the study description table included in the review and considered in the statistical analysis. Studies including a control group who receive a non-emotional writing intervention (such as time management) will be included in the review. Studies including a non-writing control group will be excluded to control for the potential effect of the writing process itself on outcomes. The methodological quality of the studies included in the review will be independently assessed by 2 reviewers. Attempts will be made to contact the authors of studies for information required for the review that is not included in the original article.

Types of outcome measures

For the purpose of this review the primary outcome measure will be lung function, as measured by forced expiratory volume in 1 second (FEV1), peak expiratory flow (PEF) and forced vital capacity (FVC).

Primary Outcome Measure

1. The primary outcome will be physiological measure of lung function (e.g. FEV1) as this is used as a clinical measure for asthma severity.

Secondary Outcome Measures

2. Self reported quality of life using validated questionnaires
3. Self reported symptom scores (e.g. asthma symptom scale)
4. Medication use (e.g. use of bronchodilator)
5. Scheduled or unscheduled health care utilisation (e.g. visits to hospital, GP practice)
6. Psychological well-being (e.g. depression, anxiety and/or distress)

Sensitivity analysis

The meta-analaysis will be re-calculated excluding poorer quality studies and any studies that appear to be outliers from the analysis to ensure the review results are robust to the method used.

Search methods for identification of studies

Electronic Searches

Trials will be identified from the Cochrane Airways Group Specialised Register of trials; MEDLINE 1950-present; EMBASE 1974-present; CINAHL 1982-present; AMED 1985-present; and PsycINFO 1806-present

The search strategies will be based on the following MeSH and textwords:

1. exp Asthma/
2. asthma$.mp.
3. (antiasthma$ or anti-asthma$).mp.
4. Respiratory Sounds/
5. wheez$.mp.
6. Bronchial Spasm/
7. bronchospas$.mp.
8. (bronch$ adj3 spasm$).mp.
9. bronchoconstrict$.mp.
10. exp Bronchoconstriction/
11. (bronch$ adj3 constrict$).mp.
12. Bronchial Hyperreactivity/
13. Respiratory Hypersensitivity/
14. ((bronchial$ or respiratory or airway$ or lung$) adj3 (hypersensitiv$ or hyperreactiv$ or allerg$ or insufficiency)).mp.

15. (atopic$ or atopy).mp.
16. or/1-15
17. ((express$ or emotion$) and writ$).mp.
18. Writing/
19. Emotions/
20. Self Disclosure/
21. Truth Disclosure/
22. ((guid$ or experiment$) adj3 disclos$).mp.
23. or/17-22
24. 16 and 23
This search will be adapted for each database as necessary.

Other sources

Reference lists of all primary studies and review articles will be reviewed for additional references. Authors of identified trials will be contacted and asked to identify other published and unpublished studies. Experts in the field will also be contacted. The search will attempt to idenitfy all relevant studies irrespective of language. Non-English papers will be translated.

Data collection and analysis

Study Selection

Two reviewers (AT and JY) will independently assess the relevance of abstracts identified by the search against the inclusion criteria. Full text articles will be obtained for studies potentially fulfilling the inclusion crieria. The same two review authors will independently assess each study against the inclusion criteria using a study selection form. Any disagreement will be resolved through discussion to reach a consensus decision. Contact with the original study investigators will be made if necessary to clarify eligibility. The reasons for inclusion/exclusion will be recorded on the form for future reference.

Data Extraction

Data from each study included in the review will be extracted using a specifically designed form. Data extraction will be completed independently by two review authors (AT and JY). On completion the results will be compared and any inconsistencies resolved by discussison. The review authors will not be blinded to the authors or the publishing journal of each paper. Aspects of the study design, participant characteristics, interventions and outcomes will be described and entered into RevMan 5.

Assessment of the Risk of Bias

To facilitate the assessment of possible risk of bias for each study. Information will be collected using the Cochrane Collaboration tool for assessing the risk of bias (Table 8.5.a in the Cochrane Handbook for Systematic Reviews of Interventions 5.0.0). For each domain on the tool the procedures undertaken for each study will be described including verbatim quotes. A judgement as to the possible risk of bias on each of the six domains will be made from the extracted infromation with the answer 'yes' indiating a low risk of bias and the answer 'no' indicating a high risk of bias. If there is insufficient detail reported in the study a judgement 'unclear' will be made and the original study investigators will be contacted for more information. These judgement will be based on the criteria for judging the risk of bias (Table 8.5.c in the Cochrane Handbook for Systematic Reviews of Interventions 5.0.0). Graphic representations of potential bias within and across studies will be computed using RevMan 5. Funnel plots will be used to assess possible publication bias.

Data Synthesis

Extracted data from each study will be entered into a summary table to enable comparison of study characteristics, quality and results. Analysis will be performed using RevMan 5 Analyses software.

For continuous data, end point FEV1 scores will be expressed as weighted mean differences with their associated 95% confidence intervals. The weighted mean difference will be reported for end point scores on self reported asthma quality of life outcome measures (such as the Asthma Quality of Life Questionnaire by Juniper et al (Juniper 1992) and the Asthma Quality of Life Questionnaire by Marks (Marks 1992). Symptom scores and psychological wellbeing scores will be reported using the standardised mean difference to combine data from different self report scales.

For dichotomous data, the number of participants with each outcome event will be entered into a 2x2 contingency table and the fixed effect odds ratio (OR) with 95% confidence intervals will be reported.

Heterogeneity of the trials will be assessed by visual inspection of forest plots and assessed by calculation of the Q statistic and Cochrane's $I^{2.}$ If heterogeniety is found potential resasons for the heterogeniety will be explored. If a high degree of heterogeniety is found the review will be completed without statsitical meta-analysis of the results

The following subgroup analyses are proposed:

1. Comparison between severity of asthma (as defined by FEV1 baseline reading). To explore if the effectiveness of the written emtional intervention is affected by severity of asthma.
2. Comparison between children (aged under 16) and adults. To explore if the effectiveness of the written emtional intervention is affected by length of life and writing experience..
3. Self reported quality of life at 1 month, 3 month and 6 month intervals. This will be conducted to see if treament effects change over time.

ACKNOWLEDGEMENTS

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REFERENCES

Additional references

Beasley 2004

Beasley R. The Global Burden of Asthma Report, Global Initiative for Asthma (GINA). http://www.ginasthma.org 2004.

Frattaroli 2006

Frattaroli J. Experimental disclosure and its moderators: a meta-analysis. *Psychological Bulletin* 2006;**132**(6):823–65.

Frisina 2004a

Frisina PG, Borod JC, Lepore SJ. A meta-analysis of the effects of written emotional disclosure on the health outcomes of clinical populations. *Journal of Nervous and Mental Disease* 2004;**192**(9):629–34.

Gidron 2002

Gidron Y, Duncan E, Lazar A, Biderman A, Tandeter H, Shvartzman P. Effects of guided written disclosure of stressful experiences on clinic visits and symptoms in frequent clinic attenders. *Family Practice* 2002;**19**(2):161–6.

Juniper 1992

Juniper EF, Guyatt GH, Epstein RS, Ferrie PJ, Jaeschke R, Hiller TK. Evaluation of impairment of health-related quality of life in asthma: development of a questionnaire for use in clinical trials. *Thorax* 1992; **47**:76–83.

Lepore 2002

Lepore SJ, Greenberg MA, Bruno M, Smyth JM. Expressive Writing and Health: Self-Regulation of Emotion-Related Experience, Physiology, and Behavior. In: Lepore SJ, Smyth JM editor(s). *The Writing Cure: How Expressive Writing Promotoes Health and Emotional Well-Being*. American Psychological Association, Washington DC, 2002: 99–117.

Marks 1992

Marks GB, Dunn SM, Woolcock AJ. A scale for the measurement of quality of life in adults with asthma. *Journal of Clinical Epidemiology* 1992;**45**:461–72.

Meads 2005

Meads C, Nouwen A. Does emotional disclosure have any effects? A systematic review of the literature with meta-analyses. *International Journal of Technology Assessment in Health Care* 2005;**21**(2):153–64.

Pennebaker 1986

Pennebaker JW, Beall SK. Confronting a traumatic event: toward an understanding of inhibition and disease. *Journal of Abnormal Psychology* 1986;**95**(3):274–81.

Pennebaker 1986a

Pennebaker JW, Hoover C. Inhibition and cognition: toward an understanding of trauma and disease. In: Davidson RJ, Schwartz DW, Shapiro D editor(s). *Conciousness and self regulation*. New York: Plenum, 1986:107–36.

Pennebaker 1993

Pennebaker JW. Putting stress into words: health, linguistic, and therapeutic implications. *Behaviour Research Therapy* 1993;**31**(6): 539–48.

Smyth 1998

Smyth JM. Written emotional expression: effect sizes, outcome types, and moderating variables. *Journal of Consulting and Clinical Psychology* 1998;**66**(1):174–84.

Yorke 2005

Yorke J, Fleming S, Shuldham C. Psychological interventions for children with asthma. *Cochrane Database of Systematic Reviews* 2005, Issue 4. [DOI: 10.1002/14651858.CD003272.pub2.]

Yorke 2006

Yorke J, Fleming SL, Shuldham CM. Psychological interventions for adults with asthma. *Cochrane Database of Systematic Reviews* 2006, Issue 1. [DOI: 10.1002/14651858.CD002982.pub3]

* *Indicates the major publication for the study*

WHAT'S NEW

Last assessed as up-to-date: 1 September 2008.

5 September 2008	Amended	Response to comments

HISTORY

Protocol first published: Issue 2, 2009

CONTRIBUTIONS OF AUTHORS

Ms Alice Theadom - Alice is responsible for conducting a randomised controlled trial into written emotional disclosure in patients with asthma and has previous experience of conducting systematic reviews, has coordinated the development of the protocol.

Professor Helen Smith - Helen is actively involved in a research programme focusing on asthma and atopic disorders. Helen has bought content and methodological expertise to the review team and has been significantly involved in the development of the protocol.

Dr Janelle Yorke - Janelle is experienced in conducting Cochrane systematic reviews including 2 reviews on psychological interventions in asthma. Janelle has brough methodological expertise to the review team and has offered feedback on drafts of the protocol.

Mr Matthew Hankins - Matthew is a statistician with a special interest in the methodological quality of research. Matthew has brought statistical and methodological expertise to the review team and has provided advice on the statistical analysis for the review.

Mr Christian Apfelbacher - Christian is conducting a programme of work focusing on the analysis of quality of life outcome measures and their use in clinical trials. Christian has contributed his expertise to the identification of suitable outcome measures for this review.

Ms Christina Jones - Christina has provided administrative and research support to the review team.

Professor Robert Horne - Rob has contributed his expertise on the written emotional disclosure paradigm and the relationship between language and health to the development of this protocol.

Dr Richard Bowskill - As a Consultant Psychiatrist, Richard has contributed his medical expertise to the development of this protocol.

Professor Anthony Frew - Tony is a Consultant in Respiratory Medicine and has contributed his medical expertise to the development of this protocol.

DECLARATIONS OF INTEREST

Some of the review authors are involved in conducting a randomised controlled trial of written emotional disclosure for asthma.

SOURCES OF SUPPORT

Internal sources

- No sources of support supplied

External sources

- Asthma UK, Not specified.