

# Periodic Research

## Hope and Humor as Predictors of Health among Elderly



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### Abstract

Ageing, a natural process, characterized by reduced physical mobility and multiple physical health problems may lead to mental health problems as well. However, the positive assets (Hope, Humor etc.) may help to promote physical as well as psychological health. The present study explores the relationship of hope and humor with physical health in elderly who attend the laughter group regularly. The sample of 60 (male - 30 and female - 30) elderly aged between 61-75 years, attending the laughter group regularly have been included in the study. The data has been analyzed using SPSS 20 package. The results reveal gender differences in physical health, hope and humor. Male elderly were found to be higher in all of these three variables than their female counterparts. In addition, humor and hope emerged as stronger predictor of good physical health among elderly females as compared to males. Moreover, the standardized regression coefficients reveal that humor is a stronger predictor of health of elderly males as compared to females, whereas hope is a stronger predictor of health for elderly females as compared to elderly males. These findings have implications for role of humor, laughter and hope for ensuring physical health of elderly.

**Keywords:** Health, Hope, Humor, Elderly.

### Introduction

Ageing is neither a divine crisis nor an accidental event. It is just a stage in developmental sequence. The theory of successful aging asserts that aging can be successfully managed by remaining physically, psychologically, and socially engaged in meaningful ways that are individually defined.

Health refers to the full and harmonious functioning of the total personality, which implies the presence of positive health i.e. physical, psychology, social and spiritual well being; Health system and practices in all societies are based on certain shared beliefs about the world, self and human existence. These cultural beliefs provide the necessary framework for defining health, understanding the causes of illness, and deciding the mode of treatment (*Singh, 2001*). Health in this sense is considered to be integral to the general well being of the person, where no clear cut distinctions are made between physical, spiritual and emotional health.

Elderly often suffer from several diseases simultaneously. These diseases may affect the function, quality of life and mental health. Emotional health encompasses mental health issues like depression, anxiety, bipolar disorder, addiction, and other conditions. But emotional health depends upon day-to-day issues like stress, making and keeping friendships, changing bad habits, and using creativity, all of which can have an impact on physical health. "Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity" (WHO, 1946). Whereas, later in 2010, WHO upgraded the definition of health and included mental health, "A state of well-being in which the individual realizes his or her abilities, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his or her community."

### Hope

According to Snyder, hope is associated with three components: 1) having goal-oriented thoughts; 2) developing strategies to achieve goals; and 3) being motivated to expend effort to achieve goals. Hope is defined as "a positive motivational state that is based on an interactively derived sense of successful (a) agency (goal-directed energy) and (b) pathways

(planning to meet goals)". This model involves three interrelated components—goals, agency, and pathways (Snyder et, al. 1991).

**Goals** It is generally assumed that human actions are goal directed. Goals are the targets of mental action sequences, and they provide the cognitive component (Snyder, 1994a). Pathway thoughts refer to the routes we take to achieve our desired goals and the individual's perceived ability to produce these routes (Snyder, 1994). In order to reach their goals people must view themselves as being capable of generating workable routes to those goals. Agency is the third component of hope that refers to the motivation that propels individuals to initiate and sustain movement towards their goals (Snyder, 1994).

#### **Humor**

The term 'Humor' has evolved from a physiological to a mental quality. Morris (1774) initiated humor as active term, including the ability to perceive and depict the comic. A genuine psychological prospect developed by Freud (1905/1960) labeled humor as the "most frugal of the types of the comic" and as the supreme defense mechanism in (re)gaining pleasure as he introduced the inclusion of humor and joke into psychotherapy.

Weisfeld (1993) defined humor appreciation as "a distinct pleasurable affect that often is accompanied by laughter". Ruch and Ekman (2001) defined laughter as a vocal expressive communicative signal and provided an overview of laughter in terms of respiration, vocalization, facial action, body movement, mechanisms and element definition. Humor is now seen as having multidimensional characteristics. Humor may also be viewed as a habitual pattern, ability, a temperament, an aesthetic response, an attitude, a coping strategy or a defense mechanism (Martin 2007).

#### **Review of Literature**

Rousseau (2000) in a study on 69 years old widows suffering from breast cancer and deserted by family found that after providing appropriate humane hope to meet family, they experienced less family discord, reduced pain and improved quality of life. Dockray & Steptoe (2010) found that positive affect and hope has been positively associated with appropriate cardiovascular function, heart rate, blood pressure and strong immune system. It has been found that positive expectation about future reduces vulnerability to mental disorders and physical illness (Conversano, Rotondo, Lensi, Vista et al. 2010). Herth (2000), in a study on a sample of 115 middle-aged people with a first recurrence of cancer, provided hope enhancing intervention on 3, 6 and 9 months interval and found intervention effectiveness to enhance and reduce pain. Cutcliffe (2001) in a sample of cognitively impaired older adults found that practice of instilling hope has positive relationship to sense of caring and getting help from nurses. Health care professionals can help the patient of strokes to understand the modes of relationship that promote coping and enhance sense of hope for future life (Soundy, Liles, Stubbs & Rosbell, 2014). Positive

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well-being has been found to be negatively associated with increased cortisol output which affect metabolism, immune system and hippocampus integrity (Steptoe, Wardle & Marmot, 2005; Steptoe, O'Donnell, Badrick, Kumari & Marmot, 2008); positively associated to reduced inflammatory and cardiovascular responses to mental stress (Steptoe, Demakakos, De oliveira & Wardle, 2012). Documentation of the effects of humor, exposure to a humor stimulus and laughter on various immune system components, on various health related outcomes is still in the infancy stages, and research documenting benefits in a clinical population (such as persons with cancer) is yet to be established, specifically in India.

Ko & Youn (2011) in a study on 109 elderly aged over 65 years, implemented laughter therapy four times over 1 month and found laughter therapy useful, cost-effective intervention, having positive effects on depression, insomnia and sleep. Laughter decreases stress hormones and act as an immunoenhancer (Brek, Tan, Napier & Evy (1989): Berk, Tan, Nehlsen, Napier, Lewis & Lee (1988). Low, goodenough & Fletcher (2014) in a study on 189 & 209 elderly living in nursing homes & homes respectively, who received humor therapy over 26 weeks found humor therapy to reduce agitation and enhance happiness among them. Laughter has been found beneficial for health, leading to improved immunological and endocrinological responses (Takahashi, Iwasa, Yamashita: Tatsumoto, Ue H, et al. 2001: Hayashi, hayashi, Imanaga, Kawai et al. 2003). Falkenberg, Buchkermer & Bartels (2011) found that humor therapy for 8 weeks in patients of depression, would positively influence mood & promote optimism. Kruse & Prazak (2006) done content analysis on what older adults found humorous and found two major categories contents most humorus (a) people or animals (b) situations represent children or jokes. These humorous contents also found an effective therapeutic tool. Konradt, Hirsch, Jonitz & Junglas (2013) conducted a study on older patients with depressive symptoms, 49 were receiving treatment and 50 were no treatment group. Humor intervention showed improvement for depression, suicidal tendency and cheerfulness. Laughter therapy was found to reduce depressive symptoms & stress, increase blood circulation and enhance immune system (Seaward, 2007). Shahidi et al. (2013) done a study on 60 community dwelling female geriatric patients and found laughter yoga lead to increased life satisfaction and reduced depression (Audrey & shaw, 2012; Rani, 2012; Melissa, Thomas & Robert, 2010). On sample of older adults living in old age home, the effectiveness of laughter therapy and group exercise therapy for decreasing depression was compared and found laughter therapy was more effective than exercise in increasing life satisfaction & reducing depression among elderly (Mojtahed, Modabbernia, 2009; Shahidi et al, 2013; Mahesh Kumar, 2015). Mickas, Walker, Parris, Mankoff & Chorstenfeld (2011) found that men were more humors as compared to women. Males were more

likely to produce humor to impress other and showed their intellectual superiority (Greer, 2009; Hitchness, 2007; Bressler, Martin & Balshine, 2006; Lewis, 2000).

#### **Method**

##### **Research Questions**

Aging is a natural and inevitable phenomenon. It is the reflection of psychological and behavioral resources the person had in earlier years affecting the state of health and quality of life. The present study have been planned to answer few research questions:

1. How hope is related with health among elderly?
2. How humor is related health among elderly?
3. How humor and hope are related with each others?
4. Can hope and humor predict physical health of elderly?

##### **Objectives of the Study**

1. Find out the relationship of hope and humor with physical health in male and female elderly.
2. To find out hope and humor as predictors of physical health in male and female elderly.

##### **Hypotheses:**

1. Hope will be positively related with physical health.
2. Humor will be positively related with physical health.
3. Hope will be positively related with humor.
4. Hope and humor will predict physical health.

##### **Nature of Study**

Ex-post facto study, co-relational in nature.

##### **Variables**

###### **Predictor Variable**

###### **Hope**

Hope is a goal directed thinking in which the person utilizes;

1. Pathways thinking
2. Agency thinking

###### **Humor**

Humor has been operationalised in terms of following dimensions;

1. Humor Production
2. Coping with Humor
3. Humor appreciation
4. Attitude towards Humor

###### **Criterion Variable**

###### **Physical Health**

Incorporates health problems related to eyes, ears, skin and various systems of the body. eg respiratory cardiovascular, digestive, musculoskeletal, Nervous etc.

###### **Sample**

The present study was conducted on 30 males and 30 females elderly people aged from 61 to 75 years. All the respondents were living with their families and were attending laughter group since past one year, for at least 5 days in a week. Their educational qualification of ranged from literate to high school. Only those elderly were selected for study who were not suffering from any chronic physical or mental illness.

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##### **Measures**

**Hope-** Adult trait Hope scales (*Snyder 1991*).

**Humor-** Humor was measured by Multidimensional sense of Humor scale by *Thorson, Powell & Brdar (1997)*.

**Health-** Physical health was measured by C.M.I. Questionnaire by *Wig, Prasad & Verma (1983)*.

Hope and humor scales were adapted in Hindi by the method of back translation in order to make it understandable and simple for Hindi speaking population.

##### **Method of Data Analysis**

The data was analyzed using SPSS version 20. Descriptive statistics, Correlation coefficient and linear regression analysis was carried out. t-test was applied to study gender differences.

##### **Results**

**Table 1: Showing the Mean Scores, SD and T-Value of Male and Female on Hope, Humor and Physical Health**

	<b>Male</b>		<b>Female</b>		<b>t</b>
	<b>Mean</b>	<b>SD</b>	<b>Mean</b>	<b>SD</b>	
Physical Health	30.96	1.88	22.56	2.37	15.27**
Humor	51.26	3.25	44.13	3.31	8.48**
Hope	51.60	2.73	34.33	5.60	15.28**

Table no. 1 shows mean and SD values across gender on physical health, hope and humor. The t- test has also been calculated to find out the significant difference among means of males and female. The mean values are 30.96 and 22.56 for male and female elderly respectively on physical health. The t-value is 15.27 which is significant at ( $p < 0.01$ ). This clearly indicates that male elderly had better physical health as compared to their female counterparts.

The gender difference is also clearly revealed in, the mean values of humor, i.e. 51.26 and 44.13 for male and female elderly respectively, the t-value is 8.48 which is significant ( $p < 0.01$ ). This indicates that male elderly have high sense of humor than their female counterparts. Similar findings have been reported by (Provine 2000, Kothoff 2006, Lweis 2000).

The gender difference has also been found in hope as mean values are 51.60 and 34.33 for males and female elderly respectively, the t-value is 15.28 which is significant ( $p < 0.01$ ). The male elderly were found to be high on hope as compared to their female elderly. Previous studies reveal in conclusive findings in this regard.

**Table 2: Showing Correlation among Males and Females between Hope, Humor and Physical Health**

<b>Gender</b>	<b>Variable</b>	<b>Hope</b>	<b>Humor</b>	<b>Physical Health</b>
Male	Hope	1		
	Humor	0.442**	1	
	Physical Health	0.552**	0.895**	1
Female	Hope	1		
	Humor	0.889**	1	
	Physical Health	0.960**	0.940**	1

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Table no. 2 reveals correlation coefficients among all the studied variables. Humor was found to be significantly correlated with hope for both males ( $r = 0.442$ ) and females ( $r = 0.889$ ) which indicates that those elderly having higher degree of humor will be more hopeful in life. Physical health was also found to be significantly correlated with humor. The correlation for males ( $r = 0.895$ ) and females ( $r = 0.552$ ) is significant ( $p < 0.01$ ).

In addition Physical health has also been found to be positively correlated with hope for both males ( $r = 0.889$ ) and females ( $r = 0.940$ ). This implies that humor is positively and significantly associated with hope and physical health of elderly.

**Table: 3 Showing Results of Regression Analysis**

Gender	R	R square	Adjusted R Square	Std. Error of the Estimate
Male	0.912	0.831	0.818	0.80300
Female	0.978	0.957	0.954	0.50826

It is clear from table no. 3 that the R square value for male elderly is 0.831 and for female it is 0.957. This reveals i.e. 83.1% variability in physical health of males whereas 95.7% variation or prediction can be attributed to hope and humor in the physical health of female elderly due to positive assets of hope and humor.

**Table 4: Showing Beta Coefficient and Significance Level**

Gender	Variables	Beta Coefficient	T	Sig. level
Male	Humor	0.808	9.164	0.000
	Hope	0.195	2.215	0.035
Female	Humor	0.412	4.735	0.000
	Hope	0.594	6.832	0.000

The table no. 4 shows the beta coefficient value for humor i.e. 0.808 among male elderly and 0.412 for female elderly. This indicates strong relationship between physical health and humor. It can be further validated by t-value which is less than 0.005 level of significance. So it can be said that humor emerged as strong predictor of physical health among male and female elderly. The t-value is 9.164 and 4.735 respectively for males and females and p-value is 0.00. The findings of present study gets empirical support from various other studies. Sense of humor has been found to be related to muscle relaxation, control of pain & discomfort (Kuiper, Rod & Kathryn, 1992; Labbot, Shelley, Mark & Randoll, 1990). Lockwood (2011) found that employing humor was associated with fewer physical complaints. Male elderly applied more evaluative, executive resources to humor while women appraise its emotional features to humor (Kohn, Kellermann, Gur, Schneider & Habel, 2011). However male adults were found less likely to use humor when in stressful situation while aging women use humor to coping with stressful events (Thorson & Powell, 1996).

The beta coefficient value of hope for male is 0.195 and 0.594 for female elderly. These values are significant at 0.035 ( $t = 2.215$ ) and 0.000 ( $t = 6.832$ ) level for females. This reveals that hope predicts physical health of females to a greater extent than

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males. Hence, hope emerged as a stronger predictor of physical health among female elderly. These findings can get support empirical validation. Males elderly were found less prefer to seek family or relative support rather found high sense of hope by going out for long walk (Husaini, Moore, & Cain, 2008). The high level of hope was found positively associated with grief resolution and good health among female elderly (Hearth, 1990).

Concluding the above mentioned results, it can be said that standardized regression coefficients reveal that humor is a stronger predictor of health of elderly males as compared to females, whereas hope is a stronger predictor of health for elderly females as compared to elderly males.

## Conclusion

This study examines the gender differences in the association between hope, humor and physical health. However, it explores the extent to which hope, humor predicts the physical health among elderly. As an exploratory study on the relationship of hope and humor with physical health among elderly, this study reports some interesting findings. The positive relationship was obtained between hope and humor with physical health for both genders it seems that having hope about future helps elderly to have pathway and agency thinking, leading them towards greater control over life, sense of satisfaction and gratification. Similarly humor can also build physical resources by strengthening their immune system; social resources by providing them to socialize and psychological resources by being stronger enough to solve their life problems. This is to be noted here that all of the participants of present study were joining the laughter clubs which helped them to develop a habit of laughing and greater socializing. Therefore hope & humor might have worked to enhance their positive emotions & thereby their physical health.

Above view is in line with Fredrickson's Broaden and Build theory (2004) which states that "... positive emotions – like joy, interest, contentment pride and love – although phenomenological distinct all share the ability to broaden people momentary thought action repertoires and build their enduring personal resources to social and psychological resources." It seems that humor, laughter and hope help the respondents of the present study to experience positive emotions which broaden their awareness and promote varied, novel and exploratory thoughts and actions. This broadened behavioural repertoire builds skills and resources over time which influence physical health positively.

While these relationships are consistent with other empirical findings. Bergeman & Bisconti (2004) found that older adult's widows with greater humor coping skills were having better health. Coping humor had an "enhancing" effect on females (Ho & chik, 2010; Carnes 2001; Lefcourt 2001). The results for hope and physical health relationship found validation by study conducted on women, concluding that humor along with optimism significantly moderated the relationship between emotional problem & physical illness (Fry 1995) and reported stress (Able, 2002).

### Implications

Findings of present study implies gender differences in hope and humor as predictors of physical health. Hope and humor are positive assets of human being that can be used to enhance physical health among elderly. Humor/laughter intervention can be used to promote health of aged people across gender. Moreover, Hope therapy can be more useful for physical health of elderly females whereas humour and laughter therapy may give more fruitful results for elderly males to a greater extent than females.

### Limitations

A study with large sample size and a control group can be done for better generalization. Respondents were attending the laughter club since past one year. For sustained effect of laughter therapy on their physical health, follow up study could not be conducted. In addition co-relational research designs as used in the present study cannot help us to draw causal inferences from the relationships among the variables concerned. Culture can be an important variable affecting physical health. To ascertain the positive effect of hope and humor on physical health, cross-cultural studies are required in future.

### References

1. Abel M.H., (2002). *Humor, stress, and coping strategies*. *Humor*, 15(4), 365-381.
2. Berk L, Tan S, Napier B, Ewy W (1989). *Eustress of mirthful laughter modifies natural killer cell activity*. *Clin Res.*, 37:115A.
3. Berk L, Tan S, Nehlsen-Cannarella S, Napier B, Lewis J, Lee J, et al. (1988). *Humor associated laughter decreases cortisol and increases spontaneous lymphocyte blastogenesis*. *Clin Res.*, 36: 435A.
4. Berk LS, Tan SA, Fry WF, et al. (1989). *Neuroendocrine and stress hormone changes during mirthful laughter*. *Am J Med Sci*, 298, 390-6.
5. Bressler, E. R., Martin, R.A., & Balshine, S. (2006). *Production and appreciation of humor as sexually selected traits*. *Evaluation and behaviour*, 27, 121-130.
6. Conversano C, Rotondo A, Lensi E, Vista O, Arpone F, Reda MA (2010). *Optimism and its impact on mental and physical well-being*. *Clin Pract Epidemiol Mental Health*, 6, 25-29.
7. Cutcliffe J. R. (2001). *Journal of psychiatric and mental health nursing. An international journal for researches and practitioners*, 8(5), 427-436.
8. Dockray S, Steptoe A. (2010). *Positive affect and psychobiological processes*. *Neurosci Biobehav Rev*, 35(1), 69-75.
9. Falkenberg I, Buchkremer G, Bartels M, Wild B (2011). *Implementation of a manual-based training of humor abilities in patients with depression: a pilot study*. *Psychiatry Res*, 186: 454.
10. Fredrickson B. L., (2004). *The broaden-and-build theory of emotions*. *Philosophical transactions of the Royal Society B: Biological Sciences*, (359(1449)), 1367.
11. Giltay EJ, Geleijnse JM, Zimtman FG, Hoekstra T, Schouten EG (2004). *Dispositional optimism and all-cause and cardiovascular mortality in a prospective cohort elderly dutch men and women*. *Arch Gen Psychiatry*, 61(11), 1126-35.
12. Greer, G. (2009). *Beaten to the Punchline*. *The Guardian*, Retrieved from [www.guardian.co.uk/Stage/2009/ma/02/germaine-greer-comedy-women](http://www.guardian.co.uk/Stage/2009/ma/02/germaine-greer-comedy-women).
13. Hayashi K, Hayashi T, Iwanaga S, Kawai K, Ishii H, Shoji S, Murakami K. (2003). *Laughter lowered the increase in postprandial blood glucose*. *Diabetes Care*, 26: 1651-2. 10.2337/diacare.26.5.1651.
14. Herth K (2000). *Enhancing hope in people with a first recurrence of cancer*. *J Adv Nurs*, 32(6), 1431-41.
15. Herth, K. (1990). *Relationship of hope, coping style, concurrent losses, and setting to grief resolution in the elderly widow*. *Research in nursing & health*; 13(2), 109-117.
16. Herth, K. (1993). *Hope in older adults in community and institutional settings*. *Issues in Mental Health Nursing*, 14(2), 139-156.
17. Hitchens, C. (2007). *Why women aren't funny. Vanity fair*, p. 54
18. Husaini, B. A., Moore S. T. & Cain V. A. (2008). *Psychiatric Symptoms & Help seeking Behaviour among Elderly*. *Journal of Gerontological social work*, 21(3-4), 177-196.
19. Ko HJ, Youn CH (2011). *Effects of laughter therapy on depression, cognition and sleep among the community-dwelling elderly*. *Geriatr Gerontol Int*, 11(3), 264-74.
20. Konradt B, Hirsch RD, Jonitz MF, Junglas K (2013). *Evaluation of a standardized humor group in a clinical setting: a feasibility study for older patients with depression*. *Int J Geriatr Psychiatry*, 28:850.
21. Kothoff, H. (2006). *Gender and Humor: the state of the art*. *Journal of pragmatics*, 28, 4-25.
22. Kruse BG, Prazak M (2006). *Humor and older adults: what makes them laugh?* *J Holist Nurs*, 24(3), 188-93.
23. Lewis, J. (2000, June 8). *Aspen's U.S. Comedy Arts Festival*. Aspen, CO.
24. Low LF, Goodenough B, Fletcher J, et al. (2014). *The effects of humor therapy on nursing home residents measured using observational methods: the SMILE cluster randomized trial*. *Journal of the American Medical Directors Association*, 15, 564-9.
25. Mickles L., Walker D.E., Parris J.L., Mankoff R., Christenfeld, (2012). *Who's funny: Gender stereotypes, humor production, and memory bias*. *Psychonomic Bulletin & Review*, 19(1), 108-112.
26. Newman MG, Stone AA, (1996). *Does humor moderate the effects of experimentally-induced stress?* *Ann Behav Med*, 18:101-9.
27. Personalis Provine, R. R. (2000). *Laughter: A scientific investigation*. New York: Viking.
28. Rousseau P. (2000). *Hope in the terminally ill*. *Western Journal of medicine*, 173(2), 117-118.

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29. Snyder, C. R. (1994). *The Psychology of hope: You can get there from here*. New York: Free Press.
30. Snyder, C. R. (2000). *Handbook of hope: Theory, measures, and applications*. San Diego, CA: Academic (Press).
31. Snyder, C. R., Harris, C., Anderson, J. R., Holleran, S. A., Irving, L. M., Sigmon, S. T., et al. (1991). The will and the ways: Development and validation of an individual-differences measure of hope. *Journal of Personality and Social Psychology*, 60, 570-585.
32. Soundy A, Liles C, Stubbs B, Roskell C (2014). Identifying a framework for hope in order to establish the importance of generalized hopes for individuals who have suffered a stroke. *Advances in medicine*, 10, 1155.
33. Steptoe A, Demakakos P, De Oliveira C, Wardle J (2012). Distinctive biological correlates of positive psychological well-being in older men and women. *Psychosom Med*. 74(5), 501-508.
34. Steptoe A, O'Donnell K, Badrick E, Kumari M, Marmot MG (2008). Neuroendocrine and inflammatory factors associated with positive affect in healthy men and women: Whitehall II study. *Am J Epidemiol*, 167, 96-102.
35. Steptoe A, Wardle J, Marmot M, (2005). Positive affect and health-related neuroendocrine, cardiovascular, and inflammatory process. *Proc Natl Acad Sci U S A*, 102, 6508-12.
36. Takahashi K, Iwase M, Yamashita K, Tatsumoto Y, Ue H, Kuratsune H, Shimizu A, Takeda M, (2001). The elevation of natural killer cell activity induced by laughter in a crossover designed study. *Int J Mol Med*, 8: 645-50.
37. Thorson, J. A., Brdar, I., & Powell, F. C. (1997). Factor-analytic study of sense of humor in Croatia and the USA. *Psychological Reports*, 81, 971-977.
38. World Health Organization (1946 & 2010). Medium Term Programme, Geneva: WHO

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