Running title: Psychological impact of violence

Article type: Regular articles

Title: **Psychological impact of verbal abuse and violence by patients on nurses working in psychiatric departments**

Makoto Inoue,[1] Ken Tsukano,[2] Mitsutaro Muraoka,[3] Fumiko Kaneko,[1] Hitoshi Okamura,[1]

1: Graduate School of Health Sciences, Hiroshima University, Hiroshima, Japan
2: Department of Psychiatry, Takehara Hospital, Takehara, Japan
3: Department of Psychiatry, Mihara Hospital, Mihara, Japan

Number of words in the manuscript: words
Number of tables: 5 tables

Corresponding Author:
Hitoshi Okamura, MD
Graduate School of Health Sciences, Hiroshima University,
1-2-3 Kasumi, Minami-ku, Hiroshima 734-8551, Japan
TEL: +81-82-257-5450 FAX: +81-82-257-5454
E-mail address: hokamura@hiroshima-u.ac.jp

Abstract

Aim: To assess the psychological impact of verbal abuse or violence by patients on nurses working in psychiatry departments and to identify factors related to their impact.

Methods: Survey sheets were distributed to a total of 266 nurses working at two hospitals, and replies were obtained from 232 of them. Because 3 of them had less than one month of experience working in the psychiatry department and 4 of them failed to answer all the questions, valid replies were obtained from 225 nurses. Among the 225 whose replies were valid, 141 nurses who replied that they had experienced verbal abuse or violence that left an impression on them remained as the subjects of the final analysis. The Impact of Event Scale-Revised (IES-R) was used to evaluate psychological impact.

Results: Of the nurses who had been exposed to verbal abuse or violence that left an impression, 21% had scores that exceeded the IES-R cutoff point (24 / 25), and low satisfaction with family support, and neuroticism on the Eysenck Personality Questionnaire-Revised were shown to have contributed to the psychological impact.

Conclusions: Nurses working in psychiatry departments were shown to experience a severe psychological impact when exposed to verbal abuse or violence. These results suggest the need for mental care approaches for nurses working in psychiatry departments.

Keywords: mental health, nurse, psychological impact, verbal abuse, violence

Introduction

Nurses are often exposed to verbal abuse or violence by patients in clinical settings. The fact that patients' freedom is limited in the hospital, an environment where their lifestyle is completely different from before, and that they have not recovered from their illness as they had hoped has been pointed out as the background underlying this state of affairs.[1] Because nurses, on the other hand, are often viewed as being "people who will listen to anything" and "people who will accept anything", patients' anger appears to become manifested in the form of verbal abuse or violence directed at nurses.[2]

This tendency is said to be particularly strong in the psychiatric area. The reason for this is thought to be the existence of many factors that cause patients to become irritated, such as constantly being forced to adjust to hospital life and having to share their lives with other patients with whom they lack rapport, and that even trivial matters tend to trigger aggressive behavior. Reasons related to treatment include the fact that special environments that are never used in other fields, for example, isolation rooms and closed wards, are sometimes used in psychiatry departments,[3] and aggressive and violent behaviors are often by-products of psychiatric illness itself, or of the medications utilized.[4]

Exposure of nurses to verbal abuse or violence by patients presumably has a deleterious effect on the mental health of the nurses themselves. When the mental health of nurses is not protected and stress builds up in their minds, they may care for their patients with a sense of despair, and that may adversely affect the subsequent quality of the care they provide to their patients.[5, 6] However, there have not been many reports on the psychological aspects of nurses who have been exposed to verbal abuse or violence.[7 - 9] Those that have been published have described intrusion symptoms, a tendency to be pessimistic, and increased anxiety and

depression as psychological reactions that occur after exposure to verbal abuse or violence, but many of the papers have been based on case reports, and few have used objective indicators to investigate the psychological impact.

Accordingly, in the present study we assessed how nurses working in psychiatry departments psychologically cope with verbal abuse or violence by patients, the magnitude of the psychological impact that they feel, and the factors related to the psychological impact. If this study succeeds in elucidating the psychological aspects of nurses in relation to verbal abuse or violence by patients, it should contribute to protecting the mental health of nurses and serve as basic information for considering high-quality patient care.

Materials and methods

Subjects

The subjects were nurses at two hospitals with over 100 beds each whose services mainly center on their psychiatry departments and which agreed to cooperate in the survey. The hospitals have both acute treatment and chronic treatment wards, and approximately 80% of the patients in the wards are schizophrenic patients. There were 91 nurses working at Hospital A and 175 at Hospital B. Nurses with less than one month experience as a nurse in a psychiatric department were excluded.

Definitions of verbal abuse and violence

The Guidelines on Coping with Violence in the Workplace of the International Council of Nurses (ICN) classify violence into three categories:[10] abuse, sexual harassment, and violence. There are articles in the literature, on the other hand, that define four categories:[11]

verbal aggression, physical aggression, aggressive intentions, and attempted aggression, and thus there are no established definitions. In this study we conducted a survey in which we defined “verbal aggression” and “physical aggression” as verbal abuse and violence, using the latter definitions for reference, and explained the definition to the subjects when we asked them about the presence of verbal abuse and violence.

Measures

1) Socio-demographic data

The socio-demographic factors that were evaluated were age, gender, number of years of nursing experience, number of years working in the psychiatry department, number of persons in the household, presence or absence of a spouse, presence or absence of social support and degree of satisfaction with it, and presence or absence of experience of verbal abuse or violence that left an impression. When the answer to the question about having experienced verbal abuse or violence was “yes”, then information was gathered on the interval between the time of exposure to the verbal abuse or violence and the present. In regard to social support, the number of people providing support (nobody at all~many people), degree of satisfaction with support by family (not satisfied at all~very satisfied), and degree of satisfaction with support by acquaintances and friends (not satisfied at all~very satisfied) were evaluated by means of a 4-step Likert scale.

2) Impact of Event Scale-Revised (IES-R)

The IES-R is a self-rating scale composed of 22 items designed to evaluate the effect of psychological trauma. It was devised by Weiss[12] as a revised version of the Impact of Event Scale drawn up by Horowitz.[13] The IES-R enables measurement of 3 subscales: Intrusion,

Avoidance, and Hyperarousal. The reliability and validity of the Japanese version have been assessed.[14] The cutoff point in the Japanese version is set at 24 / 25, and a total score equal to or above the cutoff point suggests posttraumatic stress disorder (PTSD).

3) Eysenck Personality Questionnaire-Revised (EPQ-R)

The EPQ-R developed by Eysenck et al.[15] is a self-rating scale that evaluates personality characteristics. It consists of 48 questions with dichotomized responses (yes or no), and there are 12 questions for each of four personality subscales (extraversion, neuroticism, psychoticism, and lie). Scores on each subscale range from 0 to 12, with higher scores indicating a greater tendency to possess the personality trait represented by each subscale. The reliability and validity of the Japanese version have been assessed.[16]

Statistical analysis

To assess factors related to degree of psychological impact, first, a univariate analysis with the ISE-R total scores as dependent variables was performed using Spearman's rank correlation coefficients, the Mann-Whitney *U*-test, or the Kruskal-Wallis test, and a multiple regression analysis was then performed using the factors for which a significant difference was found as independent variables (forced input analysis). In addition, after dividing the subjects according to their IES-R total scores into a high-score group and a low-score group at the cutoff point, related factors were assessed by performing logistic regression analysis using the factors for which significant differences had been found by the chi-square test or the Mann-Whitney *U*-test in the univariate analysis as the independent variables.

The results for social support were analyzed by dividing the subjects into 2 groups: a group supported by few people (no one at all, a few people) and a group supported by many

people (quite a few people, many people), and into 2 groups according to degree of satisfaction with support by family and by friends and acquaintances: a dissatisfied group (not satisfied at all, not very satisfied) and a satisfied group (fairly satisfied, very satisfied).

All p values were two-sided, and p values < 0.05 were considered indicative of significance. Statistical Package for the Social Sciences (SPSS) 11.5J software was used to perform all of the statistical analyses.

Ethics considerations

After receiving the approval of the Institutional Review Board and the Ethics Committee of each of the hospitals, the objective and content of the study were explained to the nursing staff based on the written document requesting cooperation, and written consent to participate was obtained. The fact that there would be no disadvantage to those who did not consent to participate, that it was possible to refuse to continue to participate in the survey even after it had started, that the replies would be anonymous, and that because the replies obtained would be processed statistically, no individuals would be identified was clearly written in the disclosure document and was adequately explained.

Results

Subjects' participation, and whether they had experienced verbal abuse or violence

Survey sheets were distributed to 266 nurses, and replies were obtained from 232 (87.2%) of them. Because 3 of them had less than one month of experience working in the psychiatry department and 4 of them failed to answer all the questions, valid replies were obtained from 225 nurses. Among the 225 whose replies were valid, 84 (37.8%) answered

“no” to the question, “Have you ever been exposed to verbal abuse or violence in psychiatric nursing that left an impression even now”, on the survey sheet, and after excluding them, 141 nurses remained as the subjects of the final analysis.

Subjects’ characteristics

Background data of the 141 subjects are shown in Table 1. The mean number of persons who provided social support was 2.7, and the mean degree of satisfaction with both support by family and support by acquaintances was 3.2, indicating a fair degree of satisfaction. Of the 141 subjects, 30 (21.3%) had a total IES-R at or above the cutoff point of 25 (Figure 1).

Factors related to psychological impact

1) Factors related to total IES-R score

The results of the univariate analysis showed that low age, long interval since the verbal abuse or violence, low satisfaction with family support, and neuroticism on the EPQ-R were significantly related to the height of the total IES-R score (Table 2). Next, the results of the multiple regression analysis using the total IES-R score as the dependent variable and the above 4 items found to be significantly related in the single regression analysis as independent variables identified degree of satisfaction with family support and neuroticism as significant factors related to total IES-R score (Table 3).

2) Factors related to IES-R high score / low score

The results of the univariate analysis showed that low degree of satisfaction with family support and neuroticism on the EPQ-R were significantly related to the group with a high ISE-R score (Table 4). The results of the subsequent logistic regression analysis with the

above two items as independent variables identified degree of satisfaction with family support and neuroticism as significant factors related to IES-R high score/low score, the same as the factors related to total IES-R score (Table 5).

Discussion

Among the 225 subjects who made valid replies, 141 (61.8%) answered “yes” to the question about having been exposed to verbal abuse or violence, and 38.2% answered “no”. A previous study reported that 82.6% of subjects answered “yes” in regard to whether they had ever been exposed to aggressive language or behavior by inpatients,[11] and more subjects in the present study than expected answered that they had not been exposed to verbal abuse or violence. The first reason that can be offered to explain the discrepancy is that the concepts of verbal abuse and violence have not been clarified,[1, 11] and the definitions of “verbal abuse” and “violence” were not even clear in this survey. The claim that nurses perceive problems in their own way of treating patients as being responsible for patient aggression and therefore tend to report less aggression than they actually experience is also suspected of having had an influence.[11, 17]

Among those who replied “yes” to the question asking whether they had been exposed to verbal abuse or violence, 21.3% had total IES-R scores equal to or above the cutoff point, and thus may have experienced posttraumatic stress symptoms. In previous studies, staff exposure to aggressive behavior by patients has been shown to have long-term psychological effects on its victims, including staff burnout, [18, 19] resulting in diminished job satisfaction. [20, 21] Based on these findings, while nurses are in a position in which they must provide mental health care to their patients, it seems important for them to direct attention to their own mental health and to

actively care for themselves and their coworkers.

The first factor that was identified as related to IES-R scores was degree of satisfaction with family support. This can be said to show how important family support is in relieving the psychological impact of being exposed to verbal abuse or violence by patients. Although this is the first study to examine the relation between the psychological impact and social support of nurses, there have been several reports on the contribution of social support in relation to the psychological impact in cancer[22] or arthritis[23] patients, and many of the results have shown that patients' psychological distress increases if they do not receive psychological support from their family as well as from their health care providers. The results of the present study seem to support the findings in those studies.

Neuroticism on the EPQ-R was also identified as a factor related to psychological impact. Neuroticism is described as a personality trait characterized by emotional instability and anxiousness.[24] The psychological impact of verbal abuse or violence by patients is suspected of being greater because of being susceptible and reacting overly sensitively as a result of having this personality trait,[25] and to persist as well. Because neuroticism has also been reported to be a personality trait that increases susceptibility to psychological trauma,[26] it seems valid to conclude that personality tendencies are a major factor in increasing psychological distress. This suggests that nurses' personality tendencies should be identified in advance, and that some form of psychological support should be provided immediately whenever nurses who tend to have a nervous personality have been exposed to verbal abuse or violence.

Long interval between the time of exposure to the verbal abuse or violence and the present was related to high IES-R score in the univariate analysis. However, no significant relationship was found in the multivariate analysis, and in the previous report[27] it was shown

that the period since psychological trauma was not correlated with the severity of psychological disturbance. Further study is needed.

The fact that verbal abuse and violence were not clearly defined can be cited as the first limitation of this study. Because of the lack of clear definitions, there were individual differences in perception as to whether there had been exposure to verbal abuse or violence, and judgments may have been vague. Because knowing how to perceive verbal abuse or violence by patients is part of the ethical basis for performing nursing work, there is additional room for assessment of the definition and expression of these terms. The second limitation is that a questionnaire was used in this study, and it seems that in the future a more detailed evaluation of the psychological impact on those subjected to verbal abuse or violence by patients will require the conduct of a survey from a more precise standpoint, for example, by using interviews as the method of evaluation. The third limitation that can be pointed out is that it was impossible to conduct a detailed assessment in terms of the circumstances, sites, and time of the exposure to verbal abuse or violence in this study. Since such items may also be factors related to its psychological impact, it seems necessary to identify the actual facts and investigate exactly how they contributed to the psychological impact. Fourth, the fact that this study was conducted on the psychiatric units of two institutions can be described as a limitation, and because of this the results cannot be generalized to nurses working in psychiatric departments. Finally, it is impossible to say whether the personality tendencies in themselves influenced the psychological impact, or the psychological impact due to verbal abuse or violence changed the subjects' personality tendencies.

Conclusion

The results of this study showed that when nurses working in psychiatry departments were exposed to verbal abuse or violence by patients, they often experienced a severe psychological impact. The results also showed that degree of satisfaction with family support and personality tendencies contributed to the psychological impact. Patient-centered nursing is currently being heralded, but the results of this study suggest that it is important to improve the mental health of nurses themselves.

References

1. Roth L (edt). Clinical treatment of the violent person. Guilford Press, New York, 1987.

2. Lanza ML. Nurses as patient assault victims: an update, synthesis, and recommendations. *Arch Psychiatr Nurs* 1992; 6: 163-71.

3. Patton D. How reality orientation may impact upon violence and aggression within acute psychiatric care. *Int J Psychiatr Nurs Res* 2003; 8: 972-84.

4. Whittington R, Wykes T. Aversive stimulation by staff and violence by psychiatric patients. *Br J Clin Psychol* 1996; 35: 11-20.

5. Felton JS. Burnout as a clinical entity - its importance in health care workers. *Occup Med* 1998; 48: 237-50.

6. Melchior MEW, Van Den Berg AA, Aalfens H, Gassman P. Burnout and the work environment of nurses in psychiatric long-stay care settings. *Soc Psychiatr Psychiatr Epidemiol* 1997; 32: 158-64.

7. Fagin L, Brown D, Bartlett H, Leary J, Carson J. The Claybury community psychiatric nurse stress study: is it more stressful to work in hospital or the community? *J Adv Nurs* 1995; 22: 347-58.

8. Apel D, Bar-Tai Y. Nursing staff responses to violent events in closed psychiatric wards: a comparison between attributional and cognitive-neo-associationistic analyses. *Br J Soc Psychol* 1996; 35: 509-21.

9. Atawneh FA, Zahid MA, Al-Sahlawi KS, Shahid AA, Al-Farrah MH. Violence against nurses in hospitals: prevalence and effects. *Br J Nurs* 2003; 12: 102-7.

10. International Council of Nurses. Guidelines on coping with violence in the workplace, 1999.

11. Aoki M, Kume K. Violence in hospitalized psychiatric patients no. 2. Y*amagata J Health Sci* 2003; 6: 25-32 (in Japanese).

12. Weiss DS, Marmer CR. The Impact of Event Scale-Revised. In: Wilson JP, Keane TM, (eds.) *Assessing psychological trauma and PTSD*. Guilford Press, New York, 1997; 399-411.

13. Horovitz M. Impact of Event Scale: A measure of subjective stress. *Psychosom Med* 1979; 41: 209-18.

14. Asukai N, Kato H, Kawamura N, et al. Reliability and validity of the Japanese-language version of the Impact of Event Scale-Revised (IES-R-J): four studies of different traumatic events. *J Nerv Ment Dis* 2002; 190: 175-82.

15. Eysenck SBG, Eysenck HJ, Barrett P. A revised version of the psychoticism scale. *Person Individ Diff* 1985; 6: 21-9.

16. Hosokawa T, Ohyama M. Reliability and validity of a Japanese version of the short-form Eysenck personality questionnaire-revised. *Psychol Rep* 1993; 72: 823-32.

17. Miyata R, Sasaki S, Naito S, et al. Violence in hospitalized psychiatric patients. *Kokoro no Rinsho, a ra karuto* 1994; 13: 157-62 (in Japanese).

18. Prosser D, Johnson S, Kuipers E, Szmukler G, Bebbington P, Thornicroft G. Perceived sources of work stress and satisfaction among hospital and community mental health staff, and their relation to mental health, burnout and job satisfaction. *J Psychosom Re*s 1997; 43: 51-9.

19. Leiter MP, Harvie PL. Burnout among mental health workers: a review and a research agenda. *Int J Soc Psychiatry* 1996; 42: 90-101.

20.Stamm BH. Work-related secondary traumatic stress. *PTSD Res Q* 1997; 8: 1-6

21. Dougherty LM, Bolger JP, Preston DG, Jones SS, Payne HC. Effects of exposure to aggressive behavior on job satisfaction of health care staff. *J Appl Gerontol* 1992; 11: 160-72.

22. Devine D, Parker PA, Fouladi RT, Cohen L. The association between social support, intrusive thoughts, avoidance, and adjustment following an experimental cancer treatment. *Psychooncology* 2003; 12: 453-62.

23. Abraido-Lanza AF. Social support and psychological adjustment among Latinas with arthritis: a test of a theoretical model. *Ann Behav Med* 2004; 27: 162-71.

24. Eysenck HJ, Eysenck SB. Manual of the Eysenck Personality Scales. (EPS Adult). Hodder & Stoughton, London, 1991.

25. Lanza ML, Kayne HL, Hicks C, Milner J. Nursing staff characteristics related to patient assault. *Issues Ment Health Nurs* 1991; 12: 253-65.

26. Lawrence JW, Fauerbach JA. Personality, coping, chronic stress, social support and RTSD symptoms among adult burn survivors: a path analysis. *J Burn Care Rehabil* 2003; 24: 63-72.

27. Rollstin AO, Kern JM: Correlates of battered women's psychological distress: severity of abuse and duration of the postabuse period. *Psychol Rep* 1998; 82: 387-94.

Figure legends

Figure 1. Distribution of the IES-R scores.

Table 1. Subjects' characteristics

		N	Average	Standard deviation
Age (years)			40.1	12.3
Gender	Male	28		
	Female	113		
Length of nursing experience (months)			175.3	122.1
Length of work in the psychiatry department (months)			127.8	103.8
Number of persons who provided social support			2.7	0.7
Degree of satisfaction with support by family			3.2	0.7
Degree of satisfaction with support by acquaintances			3.2	0.6
Interval between the time of exposure to the verbal abuse or violence and the present (months)			60.1	84.6

Table 2. Factors related to total IES-R score – univariate analysis -

Variable		Correlation coefficient	P value*
Age		−0.17	*0.04*
Length of nursing experience		−0.14	0.10
Length of work in the psychiatry department		−0.13	0.12
Interval between the time of exposure to the verbal abuse or violence and the present		−0.20	*0.01*
EPQ-R	Extraversion	−0.06	0.50
	Neuroticism	0.45	< *0.001*
	Psychoticism	−0.19	0.25
	Lie	0.03	0.77

		N	Mean rank	P value**
Gender				0.99
	Male	28	70.91	
	Female	113	70.02	
Number of persons in the household				0.38
	1	19	78.58	
	≧ 2	122	69.82	
Spouse				0.48
	Presence	104	69.54	
	Absence	37	75.09	
Number of persons who provided social support				0.11
	Many	83	66.39	
	Few	53	77.59	
Degree of satisfaction with support by family				*0.008*
	Satisfied	124	67.62	
	Dissatisfied	17	95.68	
Degree of satisfaction with support by acquaintances				0.60
	Satisfied	131	70.45	
	Dissatisfied	10	77.45	

*Spearman's rank correlation coefficient, **Mann-Whitney *U*-test

Table 3. Factors related to total IES-R score – multiple regression analysis -

Variable	Coefficient	Standardized coefficient	t	P value
Age	−0.12	0.09	−1.58	0.11
Interval between the time of exposure to the verbal abuse or violence and the present	0.02	0.01	0.30	0.76
Degree of satisfaction with support by family*	−0.21	3.30	−2.89	*0.004*
EPQ-R Neuroticism	0.46	0.37	6.36	< *0.001*

$R = 0.56$, Adjusted $R^2 = 0.29$

* Coded as 0 = Dissatisfied, 1 = Satisfied

Table 4. Factors related to IES-R high score/low score – univariate analysis -

Variable		≦ 24 (N=111)	≧ 25 (N=30)	P value*
Age				0.61
	Male	21	7	
	Female	90	23	
Number of persons in the household				0.24
	1	13	6	
	≧ 2	98	24	
Spouse				0.35
	Presence	84	20	
	Absence	27	10	
Number of persons who provided social support				0.15
	Many	69	14	
	Few	42	16	
Degree of satisfaction with support by family				*0.01*
	Satisfied	102	22	
	Dissatisfied	9	8	
Degree of satisfaction with support by acquaintances				0.36
	Satisfied	104	27	
	Dissatisfied	7	3	

		≦ 24 (N=111)	≧ 25 (N=30)	P value**
		Mean rank		
Age		74.32	58.73	0.06
Length of nursing experience		73.75	60.82	0.12
Length of work in the psychiatry department		73.98	59.97	0.10
Interval between the time of exposure to the verbal abuse or violence and the present		74.10	59.52	0.08
EPQ-R	Extraversion	70.48	72.92	0.77

Neuroticism	61.57	105.9	< *0.001*
Psychoticism	73.25	62.68	0.20
Lie	68.29	81.02	0.13

*chi-square test, **Mann-Whitney *U*-test

Table 5. Factors related to IES-R high score/low score – Logistic regression analysis -

Valuable		beta	Standard error	Odds ratio	95% confidence interval	P value
Degree of satisfaction with support by family						
		−1.30	0.63	0.27	0.08−0.93	*0.04*
EPQ-R	Neuroticism					
		0.52	0.11	1.68	1.35−2.09	*< 0.001*

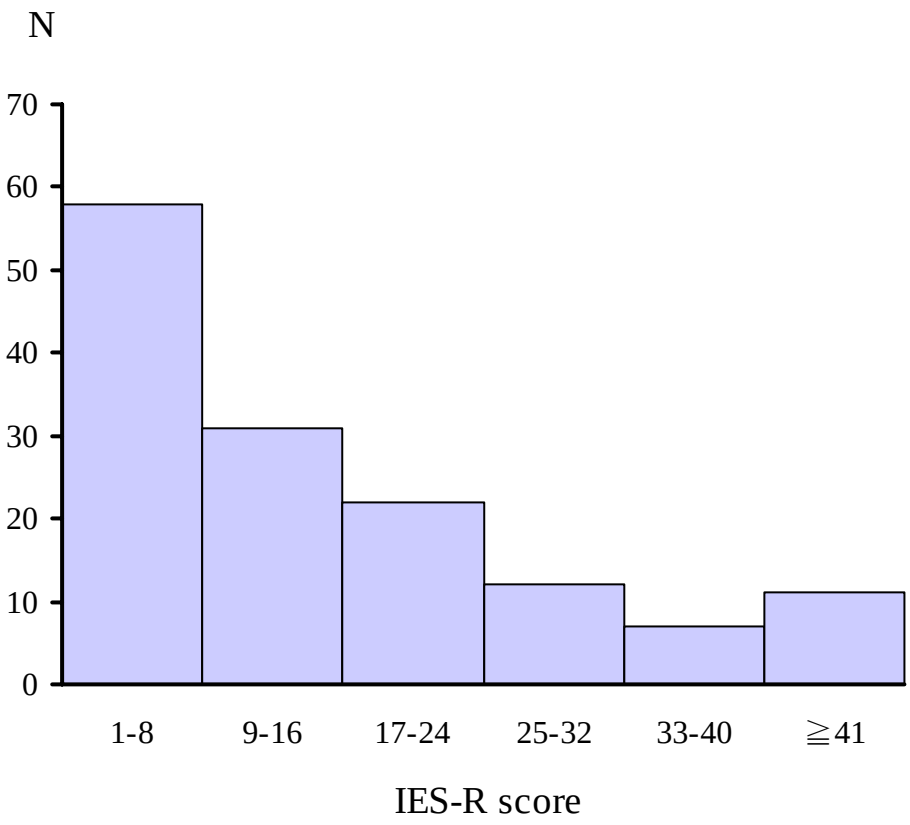

Figure 1