

FANTASTIC Lifestyle Assessment: Part 5 Measuring Lifestyle in Family Practice

SUMMARY

Family physicians generally agree that they should play an active role in disease prevention and health promotion. However, until recently no valid and reliable tool was available to help physicians clinically assess patients' lifestyle. The authors have studied the validity and reliability of a new five point-scale version of the FANTASTIC Lifestyle Assessment, used in a family practice. Also, the authors polled their patients on their opinions of their doctor assessing lifestyle. They found that the FANTASTIC was a reliable instrument, which their patients thought was useful and appropriate for their physician to be using. (Can Fam Physician 1984; 30:2379-2383).

SOMMAIRE

Les médecins de famille s'entendent généralement pour dire qu'il devraient jouer un rôle actif dans la prévention de la maladie et la promotion de la santé. Toutefois, aucun outil valable et fiable n'a été disponible jusqu'à maintenant pour aider les médecins à évaluer cliniquement le mode de vie de leurs patients. Les auteurs ont étudié la validité et la fiabilité d'une nouvelle version de l'évaluation du mode de vie dite FANTASTIC, utilisée en médecine familiale, et comportant une échelle de cinq points. Les auteurs ont aussi fait un sondage auprès des patients pour connaître leurs opinions sur le médecin faisant l'évaluation du mode de vie. Ce sondage révèle que le mode d'évaluation FANTASTIC est un outil fiable, et les patients croient qu'il est utile et approprié.

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SINCE many lifestyle factors have been shown to directly affect health and disease, family physicians should assess patients' lifestyles as part of their focus on disease prevention, and general health promotion.^{1, 2}

Until recently, no valid and reliable tool was available to help physicians in clinical assessment of lifestyle or in lifestyle counselling. Wilson and an interdisciplinary team at McMaster University have developed the FANTASTIC lifestyle assessment.^{3, 4} a checklist designed to assess patients' lifestyle and to help health care workers who do lifestyle counseling. It

is also designed to increase patients' awareness of lifestyle factors considered important to health.

Wilson and associates devised a five-choice version of the FANTASTIC in 1983.⁴ Since previous tests of validity and reliability were done on the original three point version, we decided to do a prospective study on the use of the new five-point scale at the Family Practice Health Center of Women's College Hospital in Toronto.

Purpose of the Study

Three questions were posed:

1. Can the modified FANTASTIC format measure lifestyle reliability?
2. Is it a valid measure of lifestyle?
3. What did family practice patients think about their doctor's use of the FANTASTIC assessment form? Did it remind them about lifestyle factors? Did it teach them new concepts about their lifestyle? And finally, did they think their doctor should use this form to assess their lifestyle as part of their continuing care?

Study Method

We designed a prospective study to survey 100 patients, a convenience sample from the total patient population of the Family Practice Health Center of Women's College Hospital. Both males and females aged 18-65 were selected over a three week period, as they presented for their annual physical examination. The age limits are similar to those in the previous surveys.⁴

Patients were asked to do two ratings, one of lifestyle and the other of their general health, on a 10 cm Lickert scale ranging from excellent to poor. The patients then completed a FANTASTIC lifestyle checklist while waiting to see the doctor. The physicians then scored their own perception of the patient's lifestyle on a similar Lickert scale, without looking at the patient's FANTASTIC score, but having seen the patient's own assessment on the same form. Patients were then asked to return in 10-21 days.

On the second visit, the patients completed a second FANTASTIC as-

assessment, then answered the opinion poll's three questions:

1. Did you learn something new about lifestyle risk factors?
2. Did the form remind you of lifestyle factors you already knew?
3. Do you think your doctor should include this type of assessment in the continuing care of his /her patients?

The team nurse or doctor gave appropriate lifestyle counseling on the second visit.

A total of 136 patients were entered into the study, with 100 completing both stages—a completion rate of 73.5%. Table 1 summarizes the age-sex distribution of the study group. The high female:male ratio and the large number of 18-25 year old patients are representative of our patient population.

Test-retest reliability was analyzed by linear regression and correlation analysis for correlation coefficient (r) of total FANTASTIC scores and individual question scores recorded on both runs. Analysis of variance with p-values and degrees of freedom (DF) were calculated by the ANOVA test.⁵ Construct validity was determined by using the same method to correlate overall scores, individual question scores and patients' and doctors' assessments. Unfortunately, many patients did not use the Lickert scale correctly, thus making the interpretation of the validity of the results unreliable.

Results

Test-Retest Reliability

The overall correlation coefficient (r) between the scores of the first and second runs was 0.603 (p < 0.001, DF = 98). Table 2 lists individual responses to the items in the FANTASTIC form in rank order by their respective correlation coefficients. All results are statistically significant (p < 0.001 and DF 97.86). Highest correlations were found in questions

TABLE 1
Age and Sex Distribution of the Study Group (N = 100)

Age Group	M	F
18-25	3	26
26-35	5	18
36-45	4	8
46-55	6	17
55+	3	9
Totals	21	78

about ideal weight (r = 0.891, p < 0.001, DF = 89), tobacco use (r = 0.876, p < 0.001, DF = 87), and daily breakfast (r = 0.816, p < 0.001, DF = 94). Lowest correlations were found in questions about alcohol and driving (r = 0.367, p < 0.001, DF = 91), open and honest communications (r = 0.467, p < 0.001, DF = 96) and good interpersonal relationships (r = 0.519, p < 0.001, DF = 89).

The five first items showed an r-value over 0.75, indicating excellent correlation. Items ranked from six to 23 had r-values of 0.50-0.75, indicating moderate to good relationship. Only the two last items had r-values between 0.50 and 0.25, still showing a fair degree of relationship, according to Colton.⁶

Validity

Results of the validity testing are shown in Table 3. A fair degree of correlation was present between the physicians' assessment and actual FANTASTIC score as well as between the patients' own assessment and their respective FANTASTIC scores (r > 0.25). However, little or no correlation was found between patients'

and doctors' grading of patients' lifestyles. (r = 0.223, p < 0.001, DF = 97)

Patient Survey

The results of the patient survey showed that 55% of men and 44% of women felt they had learned something new about behavior and conditions in their lifestyle; 80% of both men and women were reminded of risk factors they already knew, and 79% of men and 80% of women considered FANTASTIC a useful tool for family physicians.

Discussion

Reliability

The reliability of the five-point-FANTASTIC form is moderately good, although individual item scores vary from high to very low reliability. The lowest scores were generally found in the psychosocial areas of interpersonal relations and affect. This is not surprising considering the possible impact of events immediately preceding the patient's completing the checklist. Some of the patients may not have understood the intention of some questions,³ especially since 25% of them were from Dr. Ylanko's predomi-

TABLE 2
Test-Retest Reliability of Individual Fantastic Items

RANK	ITEM	r	p <	DF
1	Ideal weight	0.891	0.001	89
2	Tobacco use	0.867	0.001	87
3	Breakfast daily	0.819	0.001	94
4	Abuse of drugs	0.815	0.001	93
5	Active exercise >30min/day	0.748	0.001	95
6	Frequency of seatbelt use	0.737	0.001	92
7	Sufficient sleep	0.736	0.001	96
8	Balanced meals	0.726	0.001	93
9	Depression	0.725	0.001	94
10	Feelings of anger & hostility	0.714	0.001	95
11	Job satisfaction	0.702	0.001	93
12	Anxiety, worry	0.696	0.001	91
13	Mutual affection	0.695	0.001	91
14	Coffee, tea and cola	0.678	0.001	95
15	Average weekly alcohol intake	0.661	0.001	88
16	Sense of time urgency	0.649	0.001	95
17	Relaxation and enjoyment	0.644	0.001	91
18	Competition and aggression	0.635	0.001	94
	Overall Correlation	0.603	0.001	98
19	Emotional support	0.588	0.001	95
20	Positive thinking	0.581	0.001	95
21	Major stressful events/year	0.550	0.001	89
22	Excess sugar, salt, junk food	0.547	0.001	90
23	Good interpersonal relations	0.519	0.001	89
24	Open and honest communications	0.467	0.001	96
25	Alcohol and driving	0.367	0.001	91

nantly Finnish practice and they completed the form in that language. Meanings can also differ, or be ambiguous, to people of different educational background. For example, the items "good interpersonal relationships" and "open and honest communications" ranked 23rd and 24th out of 25, while a very similar item, "Mutual affection", was ranked 13th.

Validity

Only slight positive correlations were found between the FANTASTIC scores and doctor's and patient's assessment of their lifestyle. The mechanics of the Lickert scale, which had only a few gradations, led to great difficulties in defining precisely the intended score. Some patients even used the line to write their own opinion of their lifestyle and health! Clearly, better training of the staff and clearer instructions to the patients is needed if a similar scale is to be used in the future.

However, the relatively low correlation between doctors' assessment of patients' lifestyle and the FANTASTIC scores seems to confirm Wilson's earlier observation in this series: doctors appear to have difficulties accurately estimating their patients' lifestyle on the basis of their knowledge alone.³ The correlation coefficient between patients' assessment and doctors' assessment was also low ($r = 0.445$).

Patient Survey

Finally, the patient opinion poll shows that patient acceptance of this type of survey is high. The patients in this practice appear to be well aware of some of the risk factors in their lifestyle and they were reminded of those while filling out the questionnaire.

It would have been interesting to compare patients' FANTASTIC scores with their scores on the opinion survey to determine whether those with poor lifestyles do *not* think their physician

should be assessing lifestyle, and those with good lifestyles considering this quite appropriate.

The second phase of this project will be to identify a general lifestyle profile for this practice.

Conclusions

The FANTASTIC lifestyle assessment is a fairly reliable tool, but no conclusions can be made on its validity from the parameters used. Further testing to determine other aspects of validity is recommended.

The FANTASTIC lifestyle checklist helps physicians assess their patients' lifestyles and direct lifestyle counseling appropriately. Patients clearly felt it is appropriate and beneficial for their family physicians to be assessing their lifestyle.

Obviously, however, more research is necessary in the whole area of lifestyle measurement and counseling. We are currently studying the lifestyle profile of our practice populations and the interrelationships of lifestyle factors in those populations.

Future study should determine which lifestyle factors, measured by this tool, correlate most with morbidity and mortality. Correlation of lifestyle factors with objective measurements, such as blood pressure, serum lipids, etc., should also be examined. An ambitious lifestyle assessment and intervention project has been initiated in the Halton region by the Halton District Health Council using the FANTASTIC survey version. Preliminary findings are reported in part 4 of this series.⁹

The outcome of different methods for inducing changes in patients' lifestyle, as described by Ciliska and Wilson earlier in this series, should be explored by prospective use of FANTASTIC in well-defined cohorts.⁷

Experience from Finland has shown that changes may be induced and that beneficial effects can be identified; however, their organizational and community-based resources were far superior to those realistically available in Canada;^{9, 10} it would be difficult to replicate their project.

One must, however, maintain a critical view on any lifestyle intervention. Wagner comments on the North Karelian project "Can we justify intervening on an improving patient?" any outcome study which involves lifestyle

assessment and intervention is fraught with multiple confounding factors.^{11, 12}

Changes in social milieu, pollution, population densities, etc., all have a profound effect on patients' general health and must be considered when conclusions are drawn and plans are made for lifestyle changes, even on an individual level.

In conclusion, the FANTASTIC lifestyle assessment is a good instrument to help family physicians assess and promote healthy lifestyles in their patients. It is also a valuable, albeit somewhat untested, tool for exploring lifestyle and health. ●

References

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TABLE 3
Results of Validity Testing

Parameters	r	p<	DF
Doctor scores vs FANTASTIC scores	0.456	0.001	97
Patient scores vs FANTASTIC scores	0.223	0.01	98
Patient scores vs doctor scores	0.445	0.001	97