

Author's Reply

Thank you for giving us the opportunity to defend our work. We shall confine ourselves to Dr Lim's scientific commentary on our work. Dr Lim asserts that our statement that the sample we obtained was "broadly representative" of the elderly population is false. In our view, to achieve representation of all major ethnic groups in a large sample derived from a community setting (rather than hospital clinics) is reasonably described as broadly representative. The elderly population of Kuala Langat are not separately described in census statistics and we are not surprised that there were more Malays among the elderly population than among the total population of all ages.

In field epidemiology, attempts to obtain randomly selected samples are often thwarted by the desire of those not selected to attend, problems of physical and mental disability making attendance at a survey site impossible, and inevitably a proportion of people simply choose not to attend. Dr Lim suggests that a statistician would be able to correct for the selection bias introduced by non-response and non-coverage. Unfortunately this is not so. No amount of statistical manipulation of data can deal with people who are simply not represented in the

survey data. If our purpose was to measure the prevalence of disease, it is obviously important to have a high response rate and to avoid selection effects. But this was not our purpose as is made clear in the introduction. Hence Dr Lim's statement that the research is flawed is not true. The study design and data are adequate for the purposes to which we put them. We would also wish to state that our study was a general epidemiological survey that also looked into the many variables of cardiovascular risk example hypertension, diabetes etc. in the study population and was not only a "health screening related to airway disease" as asserted by Dr Lim.

Dr Lim then goes on to complain that our analysis was wrongly conducted because we did not use log transformed PEFr as the dependent variable. We examined the distribution of PEFr and log-transformed PEFr and found that the skewness in the data was greater with log-transformed than untransformed PEFr. (See table) The degree of skewness is trivial and multivariate regression methods are fairly robust in the need for normality of data. We found that a greater proportion of variance was explained using a model with untransformed data and as our purpose was to predict

Table
Comparison of Skewness and Kurtosis of Peak Expiratory Flow Rate (PEFR)
in Elderly Malaysians

	Men			Women		
	Mean (SD)	Skewness (SE)	Kurtosis (SE)	Mean (SD)	Skewness (SE)	Kurtosis (SE)
Untransformed PEFR	359.3 (128.7)	-0.495 (0.09)	-0.383 (0.18)	280.1 (93.5)	-0.227 (0.10)	-0.487 (0.19)
Log transformed PEFR	2.52 (0.21)	-1.35 (0.09)	0.97 (0.18)	2.42 (0.17)	-1.02 (0.10)	0.38 (0.19)

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PEFR this is more useful than using a model which explains less variation. We published the equations in the hope that other investigators would use them in their own data in an attempt to replicate them.

Finally, we thank Dr Lim for drawing attention to these important methodological points that deserve wider understanding among clinicians who have little

grasp of the practicalities of field epidemiology and analysis of data.

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References

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