

A Comparison of Face-To-Face and Remote Administration of the Hamilton Depression Rating Scale via Videoconferencing

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BACKGROUND

Use of remote, centralized raters in clinical trials who are well-trained and highly calibrated has the potential advantage of achieving a higher degree of inter-rater reliability than is attained by current methodology with large numbers of raters at diverse sites. They also afford the advantage of being blinded to study entrance requirements and visit number, thus minimizing these potential sources of rater bias. Before remote assessments can be utilized, it needs to be determined whether interviews conducted remotely using videoconferencing are equivalent to interviews conducted in the traditional face-to-face manner, i.e., whether mode of administration affects the psychometric properties of the scale.

METHOD

42 Subjects with a mood disorder were administered two HAMD interviews by two independent interviewers. In cohort 1 (n=21), each subject received one face-to-face and one remote (videoconference) HAMD. In cohort 2 (n=21), each subject received two face-to-face HAMDs. Order and cohorts were counterbalanced. Interviewers were blind to the results of the other rater's interview. All subjects had a mood disorder according to DSM-IV (major depression (n=28), minor depression (n=1), depression in partial remission (n=7), bipolar disorder-depressed (n=4), depression NOS (n=1), or bipolar disorder NOS (n=1)). Inclusion of all mood disorders enabled evaluation of equivalence across a wide range of severities in the program. The video sessions were run at a rate of 384 kb/s.

RESULTS

The mean scores obtained by HAMDs conducted remotely by videoconference and HAMDs conducted face-to-face were almost identical (18.38 vs 18.23 respectively, mean difference = 0.14 points), $t(20)=0.234$, $p = .817$. The inter-rater reliability (intra-class correlation; ICC) was $r=.88$, $p<.0001$, 95% C.I. .7372, .9503. Similarly, the ICC between the 20 pairs of interviews where both were conducted face-to-face was $r=.93$, $p<.0001$, 95% C.I. .8401, .9711. The inter-rater reliability (ICC) between face-to-face and remote interviews was not significantly different from two interviews done face-to-face, $z=0.85$, $p = .198$, 95% C.I. for the difference 0.7333, 0.3546. Similar levels of internal consistency (coefficient alpha) were found for both versions ($r = .74$ for videoconferencing, $r=.77$ for face-to-face). 67% of patients reported feeling fairly or very comfortable being interviewed remotely, 71% liked the experience a little or a lot, and 91% thought this was a useful way to receive a psychological evaluation. Only 33% agreed with the statement that the technology interfered with their ability to communicate with the interviewer.

CONCLUSIONS

Results support the psychometric equivalence of HAMD interviews conducted remotely via videoconferencing to those conducted face-to-face. Whether ratings conducted remotely by centralized blinded raters improve signal detection compared to traditional face-to-face ratings is yet to be determined. A pilot study comparing remotely conducted HAMDs to face-to-face administration in a clinical trial context is currently underway and will examine this issue.

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MEAN (SD) HAMD SCORES

	Mean	Range
Video	18.38 (5.28)	8-27
In-person	18.24 (5.99)	8-29
Diff	0.14	
p	.817	

INTRA-CLASS CORRELATIONS ON INDIVIDUAL HAMD ITEMS

	Video vs. Face-to-Face (N=21)	Face-to-Face vs. Face-to-Face (N=21)	All subjects combined (N=42)
1. Depressed Mood	.77**	.80**	.78***
2. Guilt	.68***	.07	.32*
3. Suicide	.87***	.99***	.94***
4. Initial Insomnia	.82***	.88***	.85***
5. Middle Insomnia	.88***	.94***	.90***
6. Terminal Insomnia	.48**	.63***	.54***
7. Work & Interests	.16	.70***	.48***
8. Psychomotor Retardation	.59**	.68***	.63***
9. Psychomotor Agitation	.20	.40*	.25*
10. Psychic Anxiety	.55**	.61**	.58***
11. Somatic Anxiety	.60**	.90***	.79***
12. Somatic, Gastrointestinal	.97***	.73***	.86***
13. Somatic, General	.69***	.58**	.63***
14. Sexual Interest	.69***	.97***	.85***
15. Hypochondriasis	.63***	.51**	.55***
16. Loss of Weight	.95***	.93***	.94***
17. Insight ¹	n/a	n/a	n/a
TOTAL	.88***	.93***	.91***
** = $p < .01$,			
*** = $p < .001$			