Is It Trending? Assessing Accuracy of Feigning Mental Illness in Online Study Settings

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Abstract

Telehealth is an increasingly common healthcare practice, in large part because of the demands placed on healthcare by COVID-19.

While convenient, telehealth is unique in some way from in person services because of the environment of the service.

Some research is emerging contrasting treatment effectiveness in telehealth settings; however, research on psychological testing is absent from the literature.

Research on treatment similarity has generally suggested that services are similar in effectiveness.

There are guidelines about how to conduct remote, telehealth assessments, but the impact of these practices are not yet known. As such, psychological assessment (relative to psychotherapy treatment) is under studied in this area.

This study compares one component of psychology assessment in telehealth practice to in-person procedures.

Specifically, we compare validity scale effectiveness on the most recent version of the widely used personality assessment inventory (MMPI-3). Data for this study is drawn from published studies.

Methods

- We used data from a total of 1138 college aged participants, with 313 participating in-person and 825 online (Morris, et al., 2021; Reeves, et al., 2022).
- Participants were given the Minnesota Multiphasic Personality Inventory 3 measure (MMPI-3) which contains five over-reporting validity scales: Infrequent Responses (F), Infrequent Psychopathology Responses (Fp), Infrequent Somatic Responses (Fs), Symptom Validity Scale (FBS), and Response Bias Scale (RBS).
- There were four study conditions:
  - Honest, In Person (Morris et al., 2021)
  - Honest, Virtual (Morris et al., 2021)
  - Feign, In Person (Reeves et al., 2022)
  - Feign, Virtual (Reeves et al., 2022)
- All groups were then compared using Cohen's d effect sizes to interpret meaningful differences.
- Effect differences were interpreted as small (.2 to .5), medium (.5 to .8), large (.8 to 1.3), or very large (≥1.3).

Acknowledgements:

Introduction

Due to the pervasive dangers of COVID-19, many doctors are unable to physically meet with their clients, leading to the emergence of telehealth practices. However, despite the emergence of virtual health assessment and test distribution, there is a startling lack of research in this area. The published "best practice" checklist is invaluable to remote test administration and HIPAA compliance, yet current research has not ascertained how reliable measures are compared to in-person testing (Corey & Ben-Porath, 2020). Additionally, majority of current research utilize student populations, who usually act differently compared to clinical populations (Ingram & Ternes, 2016). According to a 2022 study performed by Reeves, Brown, & Sellbom, (2022), student groups tended to overreport symptoms compared to patient groups, scoring higher on several scales, further suggesting that student responses were exaggerated. The MMPI-3 Validity Scales are effective in determining differences between underreporting and overreporting, however this study utilized only a student sample (Whitman, Tylicki, & Ben-Porath, 2021).

Current Study

For this study, we planned to collect data from Undergraduate West Texas students to control for cultural and social differences. Due to COVID-19 causing research delays, we are using data previously acquired in-person (Morris et al, 2021) and comparing results to database gathered virtually (Reeves et al., 2022). We use these data to assess if student participants produce similar findings using online "best practice" guidelines compared to in-person assessments.

Table 1.
In-Person Honest and Feigning Student Groups Differences

	G1 N = 84			G2 N = 229	
	F	M	SD	M	SD
F	91.47*	54.55	15.28[a]	86.91	30.58
Fp	75.07*	56.42	15.43[a]	86.98	30.93
Fs	109.98*	54.32	13.22[a]	86.61	27.03
FBS	100.99*	52.92	10.58[a]	70.58	14.77
RBS	106.17*	53.07	11.7[a]	80.87	24.45

*p<.001
SD^a=Feigning conditions produced significantly greater mean scores than that of the control group.
F=Infrequent Responses; Fp=Infrequent Psychopathology Responses; Fs=Infrequent Somatic Responses Scale; FBS=Symptom Validity Scale; RBS=Response Bias Scale.
G1=In-person honest group (N=84); G2=In-person feigning group (N=229).

Table 2.
Virtual Honest and Feigning Student Groups Differences

	G3 N = 657			G4 N = 168	
	F	M	SD	M	SD
F	385.96**	51.72[b]	13.57	89.54[c]	22
Fp	282.77**	53.89[b]	12.85	87.69[c]	25.31
Fs	342.49**	52.5[b]	11.57	84.64[c]	20.13
FBS	317.42**	54.7[b]	9.83	73.37[c]	13.04
RBS	363.48**	53.11[b]	11.38	82.68[c]	16.27

**p<.001
SD^b & SD^c=Means with differing superscripts show significant difference at p<.01.
F=Infrequent Responses; Fp=Infrequent Psychopathology Responses; Fs=Infrequent Somatic Responses Scale; FBS=Symptom Validity Scale; RBS=Response Bias Scale.
G3=Virtual honest (N=657); G4=Virtual feigning group (N=168).

Table 3.
Cohen's d Effect Sizes Between all groups, across each MMPI-3 over-reporting scale

Cohen's d Effect Sizes	G1 vs G2	G1 vs G3	G1 vs G4	G2 vsG3	G2 vs G4	G3 vs G4
F	**1.3387**	0.1958	**1.8474**	**1.4875**	0.0987	**2.0692**
Fp	**1.2503**	0.1782	**1.4919**	**1.3549**	0.0251	**1.6839**
Fs	**1.5176**	0.1465	**1.7805**	**1.6407**	0.0827	**1.9576**
FBS	**1.3746**	0.1743	**1.7223**	**1.2658**	**0.2003**	**1.6169**
RBS	**1.4505**	0.0035	**2.0896**	**1.4557**	0.0872	**2.1062**

0.20=Small effect size, 0.50=Medium effect size, 0.8=Large effect size, 1.30=Very large effect size.
Bold=Small or greater effect size between groups.

Take Home Message
Virtual and In-person telehealth assessments have similar effectivenesses for MMPI-3 validity scales.

Conclusions

- Using the MMPI-3 Measure following virtual "best practice" guidelines are comparable to in-person assessment.
- In both in-person and virtual administration, effect sizes are very large between honest participant and feigning participant scores (G1 vs G2 and G3 vs G4). Thus, it is likely that online study designs will produce similar results and can be considered similar.
- Consistent with the similarity between online and virtual administrations, honest groups (G1 vs G3) and feigning (G2 vs G4) groups were like their counterparts in the other study administration type. Between the virtual and in-person feigning participants, only the FBS score showed a small effect (Cohen's d: .20).
- Thus, the findings of this study suggest:
  (1) Both methods of psychological assessment are viable and effective (i.e., those feigning mental illnesses are likely detectable in both telehealth and in person administrations)
  (2) There are no differences in effectiveness across these two administration types (in person or telehealth)

Limitations

The data referenced from both referenced studies utilized student participants, which have been shown to respond differently than clinical populations (Ingram & Ternes, 2016). It would be beneficial to run similar studies in clinical settings with diverse population to increase generalizability.

References:

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