

## Crossvalidation Sample

We selected a matched sample of 70 examination, 35 confirmed truthful and 35 confirmed deceptive, from the DACA confirmed case archive. Selection criteria was independent of the original field examiner's decision, and based only on the confirmed status of each selected case. Gender, race, and age, were not part of the selection criteria. The only strict requirements for our selection was that the examinations must include artifact-free or interpretable presentations of at least two relevant questions, and at least three charts. Our selection included criminal suspects only; subjects indexed as crime witnesses or crime victim's were not included in the selection.

Tables 1 and 2 depict the ages and gender of the subjects in the crossvalidation sample, which included 54 males and 14 females. Gender information was not available for two of the cases selected from the archive, but it is assumed the subjects were either male or female. Subject ages ranged from a minimum of 17 years to a maximum of 50 years, with an average age level of 28 years and a median of 25 years.

Table 1. Gender.

Males	54
Females	14
Unknown	2

Table 2. Age.

Max Age	50
Min Age	17
Median	25

Table 3 displays information about the medications and health concerns for the subjects in the crossvalidation sample. Four examinees disclosed to their examiners that they had consumed alcohol within 24 hours of the examination. Four subjects reported taking medications for high blood pressure, and another four reported being diagnosed with high-blood pressure though they were not taking medications. Five examinees reported taking over-the-counter medications for allergies or cold symptoms, and one examinee reported having cold symptoms but denied taking any medications. Two examinees were taking prescription antibiotics. One examinee disclosed taking a prescription medication for migraines. Another was taking birth-control pills, and one more reported taking over the counter medications for foot pain. One examinee disclosed taking antiviral medications for HIV.

Table 3. Medications/Health

N=70

High Blood Pressure with meds	4
High Blood Pressure without meds	4
Allergy/Cold meds (OTC)	5
Cold symptoms wo meds	1
Antibiotics	1
Migraine	1
Birth Control	1
Pain OTC	1
Antiviral	1

none 51

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Table 4. provides information about the purpose of the examinations in the crossvalidation sample. Thirty-six of the examinations were conducted during the investigation of property-crimes, 25 involved crimes against persons. Five examinations conducted as part of investigations of drug crimes and 4 were conducted in response to concerns about integrity, including security violations, false reporting, and false statements to investigator.

Table 4. Crimes under investigation.

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N=70	
Property crimes	36
Crimes against persons	25
Drug crimes	5
Integrity	4

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Table 5 shows the confirmation status of the cases in the crossvalidation sample. Confirmation of the examinations was available through corroborating evidence for 32 of the selected examinations, and through the confessions or statements of others for 9 subjects. Twenty-nine examinations included confirmation through the subject's confession and 9 of those cases included corroborating evidence.

Table 5. Confirmation Status

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N=70	
Corroborating evidence	32
29 Confession only	29
Other's confession	9

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Table 6. lists the type of examination techniques in the crossvalidation sample. Twenty-eight of the examinations in the crossvalidation sample employed three question ZCT techniques, while 5 examinations used the two-question U-Phase or BiZone variant of that method. Twenty three of the crossvalidation cases were conducted using the Army MGQT technique, and another 12 exams utilized the Air Force variant of the MGQT. One examination in the crossvalidation sample employed the Navy MGQT, and one more was conducted using the USSS variant of the MGQT.

Table 6. Examination Techniques

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N=70	
ZCT	28
BiZone/U-Phase	5
Army MGQT	23
USAF MGQT	12

Navy MGQT	1
USSS MGQT	1

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Table 7. provides information about the number of test charts. Sixty-seven of the examination included three charts, and three examinations included a fourth test chart. Thirty-six examinations include three target questions, 26 exams used four target, and seven examinations included 2 relevant question targets.

Table 7. Number of test charts

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N=70

Three charts	67
Four charts	3

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