



F8 Dentists' Qualifications Affect the Accuracy of Radiographic Identification

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This research indicates that high levels of training and experience in forensic odontology should be developed, maintained, and required of dentists who participate in a forensic team dealing with challenging identification cases.

This presentation will impact the forensic community and/or humanity by indicating the need for the AAFS membership to develop and support standards for both basic and advanced levels of forensic training and certification for odontologists in order to insure high quality forensic work.

Forensic odontologists differ significantly in their training and experience. However, the effects of these differences on the accuracy and reproducibility of odontologists' case judgments has not been assessed until now. The authors designed a Web-based experiment to assess this issue, and recruited 40 forensic participating odontologists from 19 countries. Each odontologist completed a Web-based survey of their training, experience, and practice affiliation. They then completed nine Web-based identification cases. Participants' training level was assessed by measuring fellowship training, advanced degrees, professional memberships, and continuing forensic education course attendance. Experience was assessed by participants' total years of forensic experience, annual case rate, mass disaster experience, and forensic team affiliation. Primary practice sector (academic, government, or private practice) was recorded. Training, Education, and Sector were analyzed as categorical independent variables. The nine cases featured antemortem bite-wing x-rays and panoramic postmortem films. Participants rated each case using the American Board of Forensic Odontology Categories and Terminology for Body Identification. The mean score on the nine cases formed a numeric dependent variable called participant Accuracy. The analysis utilized planned comparisons of means and analysis of variance. The results showed that mean participant Accuracy was significantly correlated with Training and work Sector, and borderline ($p = 0.058$) significantly correlated with Experience. The means were in the expected direction:

TABLE — Mean participant Accuracy ratings and standard deviations (SD) for Experience and Training levels and for Work Sector.

	<u>Experience</u>		<u>Training</u>		<u>Work Sector</u>	
	Mean Accuracy	SD	Mean Accuracy	SD	Mean Accuracy	SD
High	1.294	0.366	1.288	0.342	Academy	1.235 0.307
Medium	1.700	0.576	1.759	0.531	Government	1.579 0.536
Low	1.641	0.514	1.815	0.587	Private	1.914 0.451

These results indicate that forensic odontologists must acquire and maintain high-level training and experience in order to achieve their best possible performance. The profession should promote both basic and advanced certification standards and provide effective training courses and certification examinations.

Odontology, Identification, Accuracy