

The satisfaction of physiotherapists and emergency nurse practitioners with plain image radiological reports

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Background

Professional bodies within radiology recommend that all imaging procedures have a written report attached to them^{1,2}. Demand for radiographic imaging and reporting has increased over the last four decades due to its important role in clinical decision making³ and, as a result of increasing pressures on radiology departments, there has been growth in the numbers of reporting radiographers.

With expanding roles of allied health professionals, such as reporting radiographers, referring physiotherapists and emergency nurse practitioners (ENPs), multidisciplinary working has increased as a means of ensuring the maintenance of high standards of patient care within the health service. It is envisaged that as this continues the image interpretation needs of physiotherapists and ENPs will be predominantly met by reporting radiographers. Consequently it is important that the referrer's preferences and expectations from plain image radiological reports are understood by reporters to ensure satisfaction or service.

Question and aim

This study aimed to establish the degree of satisfaction of physiotherapists and ENPs with plain film reports by asking:

1. Are Physiotherapists and ENPs satisfied with the report they have received?
2. Has the clinical question been answered?
3. What style of report is preferred?

Method

Qualified extended scope physiotherapists and ENPs employed at a medium sized hospital within the health board (NHSGGC) were invited to participate. A total of 10 ENPs and 4 physiotherapists participated. A questionnaire was employed to gather quantitative data alongside the viewing of 30 plain radiographs; 10 knee, 10 hand and 10 shoulder examinations.

Each image had 3 styles of report appended; free text paragraph (style A), bullet pointed list (style B) and simple normal or abnormal (style C) with reports generated by three reporting radiographers and three radiologists. Participants were requested to indicate their satisfaction with the report received via the questionnaire that collected information through a 5 point likert response scale. Data generated was analysed using SPSS v21 statistical analysis computer program.

Acknowledgements

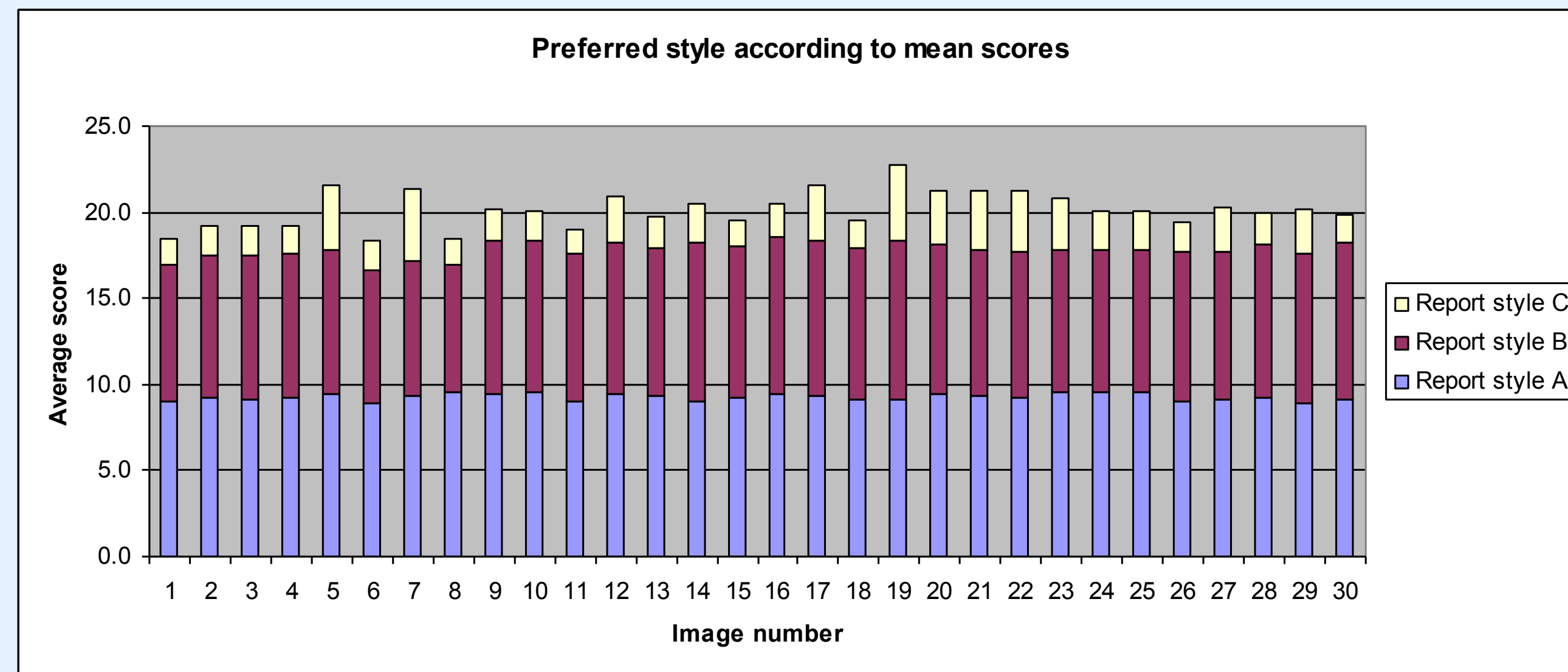
With thanks to NHSGGC Reporting Radiography Team, participating ENPs, Physiotherapists and radiologists.

Results

Of the target population invited to join the study 71% (n=10) of the total ENPs and 40% (n=4) of the enhanced scope physiotherapists chose to participate. The overall response rate was 58% (n=14).

Report satisfaction

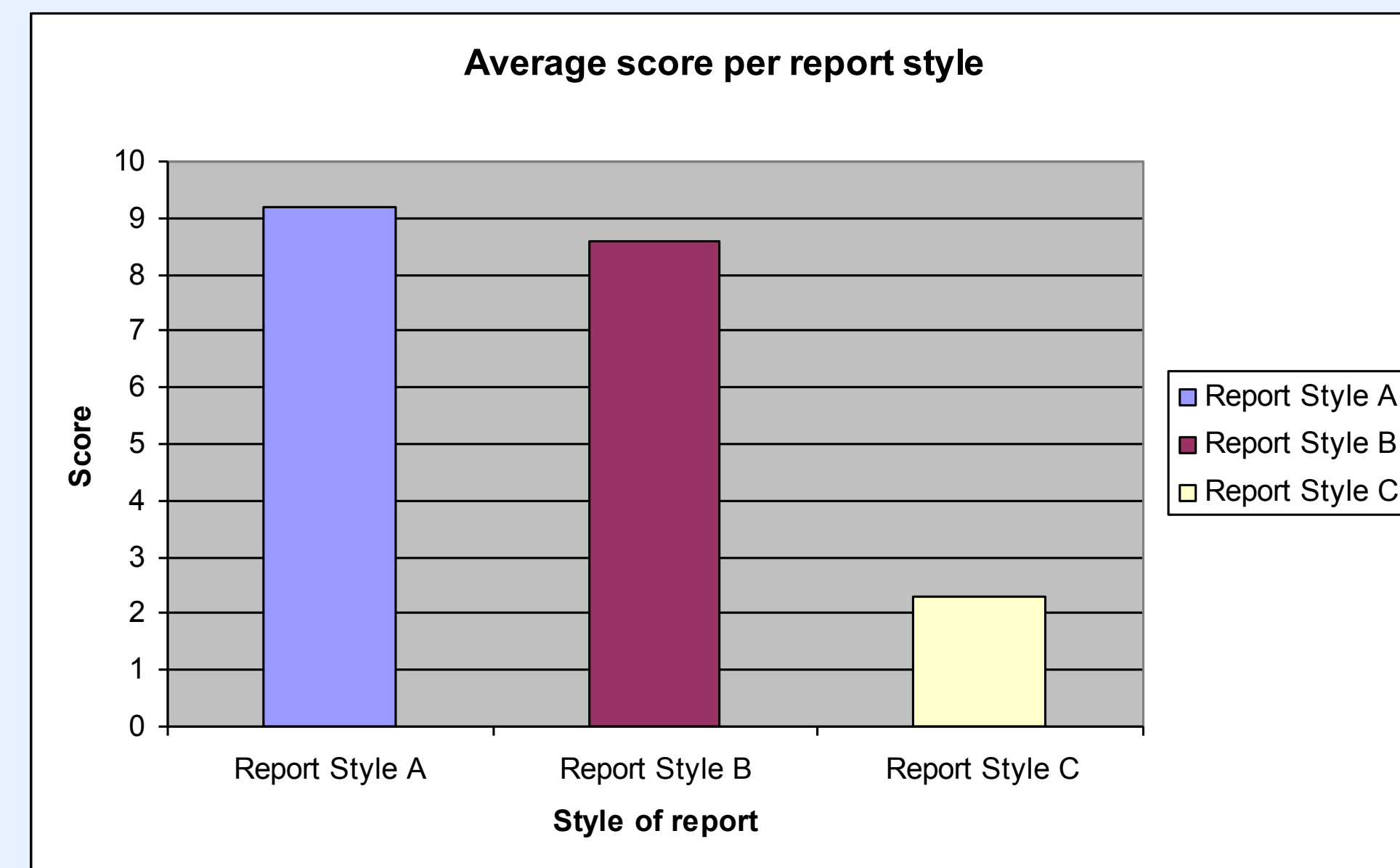
Figure 1 demonstrates the mean satisfaction levels for each image report.



Through the likert 10 point scale scoring method report style A received the highest score, with style B second and style C clearly least liked.

Preferred report

Figure 2 shows report preference by overall mean score. By evaluating the likert responses to generate a league table i.e. 14 participants generating 420 responses via 30 images, report style A gained 227 points against style B's 193 to generate the values in figure 2. Style C got no preferences indicating a simple normal/abnormal response was not satisfactory.



Did the report answer the clinical question?

Effectively the clinical question was answered by all three styles however, there was a clear dislike of style C that provides a simple normal/abnormal response with participants indicating they preferred more information.

Reporting radiographer versus radiologist reports.

A t-test was used to compare radiologist reports and reporting radiographers to see if there was increased satisfaction for one profession over the other for report style A (p=0.386) and remarkably for style B (p=0.386) indicating no statistical significance in satisfaction preference.

Conclusion

The results demonstrated that the study participants were satisfied with the reports they received. Report style A (free text paragraph form) rated between satisfactory and very satisfactory and that the reports answered the clinical question. This therefore met the needs of the ENPs and physiotherapists and enabled them to make clinical decisions.

It is clear from the responses and scoring mechanism that participants feel no useful help is provided by stating normal or abnormal as a report (style C). It was believed at the outset of the study that there may be a preference for a list style approach amongst the referring personnel. From the results generated it is evident that no statistically significant difference in preference for style A or B is expressed. This is interesting when compared with ideas suggesting a pre coded auto populating system is considered as a potential efficiency for reporting that recipients appear to prefer to feel, through reading the report, they are being guided through the image content as if they are being spoken to in a 1 to 1 experience.

The study also demonstrated no statistically significant difference in report satisfaction between reporting radiographers and radiologists suggesting, for this study group, that radiographers provide a service equivalent to radiologists.

Limitations

Unfortunately only 40% (n = 4) of the physiotherapy constituent working through the ED participated, suggesting the results from this professional group may not be more widely representative. As such this prevented direct comparisons between professions being possible. Further, a greater participation rate may influence the overall final results that can be obtained. Any future studies should attempt to ensure maximum and if possible closely matching numbers of professional representation be achieved.

Recommendations

Future study is recommended to extend this investigation more widely throughout the health board. This would improve the validity and answer any questions, due to cross site working, whether report content is satisfactory. This has implications especially for regional working and in Scotland's experience of the national PACS or third party reporting audit. Other allied health professionals, such as podiatrists, may also be approached to establish their needs and ensure a high standard of multi disciplinary working is achieved. High standards of radiology service will be evidenced and inter-professional working enhanced as a result.

References

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3. Hardy M. and Culpán G. Accident and emergency radiography: A comparison of radiographer commenting and 'red dotting.' 2013, *Radiography* **13**, 65 – 71.