[PRACTICE]

D8.14 Testing of manuals – EMPIRICAL FOUNDATIONS OF PRACTICE COMMUNICATION TOOLS

PRACTICE WP8 deliverable

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Summary Work Package WP8

WP8 was designed to improve public knowledge and awareness of CBRN incidents by providing a toolbox of information, procedures and processes designed to facilitate the understanding of the human and societal factors that influence the impact of, and response to, CBRN incidents, and to reduce the impact of CBRN incidents on individuals and society as a whole. The effectiveness of the 'human and societal' toolbox was tested (via WP6) with members of the public and professional responders in a live emergency exercise at a conference/shopping centre in Birmingham in August 2013.

The output includes tools and measures designed to (i) inform, educate and prepare the mindset of the EU citizen for a CBRN event, (ii) provide guidance about protective behaviour and to aid the identification of relevant information sources during events, (iii) mitigate the societal impact on communities and individuals post event, and (iv) identify solutions aimed at recovery.

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1. Executive Summary

This report describes what empirical data were collected in what manner, by whom, and identifies the ways in which the data informed the development of tools and deliverables within the PRACTICE project (i.e. D8.10; D8.11; D8.12; D8.13; D8.15; D8.16). Moreover, it makes five arguments that highlight the innovative and robust character of the data collection and empirical testing and development of the WP8 material. This includes:

- Data collection during a live exercise;
- Mixed-method data collection (e.g. questionnaires, focus groups, waterproof booklets containing psychological scales);
- Continuous data collection before, during and after the emergency exercise, on the day of the exercise;
- Additional data collection using the same scenario as the exercise but not involving exercise participants;
- Data collection at multiple sites with diverse research participants.

Please note that the results of these empirical validation efforts are described in detail in report D8.15.

2. Introduction

WP8 developed tools designed to enable members of the public and emergency response professionals to respond to a CBRN incident more effectively. A more effective public response has the potential to reduce the psychosocial impact of CBRN incidents and to increase the likelihood that members of the public will engage in protective health behaviours. An effective public response has the added benefit of facilitating the emergency response by professionals. Three tools have been developed to achieve this goal:

1) D8.11 An information/education manual for members of the public: This public-facing manual includes general information about CBRN incidents, explains the emergency response processes and procedures, and identifies the actors involved in the response.
2) D8.12 Guidelines for emergency response professionals (Operational Level): This practitioner-facing manual includes general information about the psycho-social consequences of CBRN incidents, public behaviour during CBRN events, public knowledge levels, and public information needs and communication preferences during CBRN events.
3) D8.13 Guidelines for emergency response professionals on the (Strategic Level): This practitioner- facing manual includes advice about effective ways to organise and prepare for public engagement before, during and after a CBRN incident.

All three tools have been developed on the basis of a review of existing foundational theories, as well as the most recent theoretical advances in the understanding of public responses to CBRN incidents, as synthesised in the 4-Factor Model described in deliverable D8.8. The tools were developed as a result of the theoretical reviews before being empirically tested with members of the public and practitioners. This report presents the data collection techniques and highlights the unique character of the empirical testing of the PRACTICE human behaviour tools. More details on the ways in which the data collection has informed the development of the different tools (and preparatory reports) can be found in D8.15.

3. Overview of data collection

Table 1. *Data collection activities undertaken for PRACTICE WP8 by type and context.*

Tool	N	Data provided by…	Lead partner	Context	Used to test/ develop…
3x Focus groups	32	Experts; stakeholders; members of the public in UK	CBRNE Ltd	D8.4 Workshop	D8.16; D8.10
6x Focus groups	40	Naïve members of the public in UK	KCL	ARDEN exercise	D8.11; D8.12; D8.15
2x Focus groups	16	Experienced members of the public in UK	MIUN	ARDEN exercise	D8.13; D8.15
3x Focus groups	18	Members of the public with different cultural, professional and demographic backgrounds in Sweden	MIUN	Spring 2013	D8.13; D8.15
Questionnaires pre- and post-exercise	40	Naive members of the public in UK	KCL	ARDEN exercise	D8.11; D8.12; D8.15
Questionnaires 6 months after exercise	8	Naive members of the public in UK	KCL	ARDEN exercise	N/A
Questionnaires pre- and post-exercise	16	Experienced members of the public in UK	KCL	ARDEN exercise	D8.11; D8.12; D8.15
Questionnaires pre- and post-exercise	70/90	Emergency responders in UK	KCL	ARDEN exercise	D8.12; D8.15
During-exercise notebooks	40	Naive members of the public in UK	KCL	ARDEN exercise	D8.11; D8.12; D8.15
Focus group booklets	40	Naïve members of the public in UK	KCL	ARDEN exercise	D8.11; D8.12; D8.15
Semi-structured interviews	3	Emergency response professionals in UK	MIUN	ARDEN exercise	D8.13; D8.15
Semi-structured interviews	7	Emergency response professionals in Sweden	MIUN	Spring 2013	D8.13; D8.15
International survey among emergency professionals	90	Emergency response professionals across EU-28	KCL	Dec 2013-June 2014	D8.15; D8.12

D8.16 = Resilience matrix; D8.15 = Analytical report; D8.10 = Validation report

Table 1. summarises all data collection undertaken for D8.8. This overview of the data collection (design and execution) efforts involving all WP8 partners demonstrates the significant efforts undertaken to firmly base theoretically informed communication advice in the real world and make it relevant to both emergency responders and members of the public. From emergency responders, we obtained data that helped us understand current practices in communicating with the public, as well as the underlying perceptions and assumptions about likely public behaviour and information needs during a CBRN event held by the professionals. From the members of the public, we learned about information needs, communication preferences, and perceptions of responders, responses and their own response ability during a CBRN event.

4. Innovative and robust testing

Beyond the sheer volume of data collection, the empirical efforts can be seen as innovative and robust for five reasons.

First, collecting empirical data during a live simulation exercise involving members of the public and a full-scale emergency response by the emergency services is often, for logistical, ethical and financial reasons, not an option. However, embedding individuals into an exercise means that experiences have a much greater ecological validity in comparison to other methods such as desktop exercises and/or the scripting of actors/volunteers representing members of the public. Moreover, as D8.15 shows, the interactions with other 'victims' and the responders have a strong impact on individual perceptions, emotions and behaviour.

Second, the data has been collected through four different methods (semi-structured interviews, questionnaires, focus groups, and a web-based survey), ensuring triangulation and robustness of findings.

Third, in those few cases where data can be collected from members of the public during a live exercise, it is often limited to post-exercise data collection from the volunteers, in particular self-reporting data. This is because interruptions during the exercise to complete data collection are difficult to organise if many stakeholders are involved in the exercise play. PRACTICE enabled the development of a unique research tool (i.e. waterproof participant notebooks) that can be taken through every part of the emergency response process.

Fourth, comparative empirical data analysis in the field of emergency response remains limited. However, as D8.8 has shown, there are good reasons to ask cross-country institutional, cross-cultural and cross-group questions.

Fifth, all data collection was based on the ARDEN scenario of a chemical release in a conference hall. One of the key reasons was that this ensures consistency and comparability of data. Moreover, testing the tools for all types of hazards (not only C, but also N, B and R) could not be done within the framework of PRACTICE. While some of the emergency response procedures may be similar between C, B, R, or N risks, the psychological impact of each hazard is likely to vary, e.g. as a result of different 'reference (mental) models' or different levels of trust in involved actors (e.g. many countries' citizen's distrust government actors when it comes to nuclear issues).

5. Conclusions

WP8 produced tools with robust theoretical and practical foundations reflecting cutting-edge research. To this end, the partner organisations collected rich data from a large number of members of the public and emergency responders, using various methods across a number of EU Member States.