



# Usage of Online Panels in Survey Methodology Field: a Systematic Review

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# Motivations and aim

- Increasing spread of online panels in survey industry
  - solution to the problems of coverage, recruitment and nonresponse
- Online panels are used in:
  - social and marketing research as a sample source for substantive research
  - survey methodology research as
    1. an object of research itself
    2. a sample source for various experimental studies on survey data quality



Systematic review on the **usage** and **quality** of online panels in survey methodology field

# Research questions

RQ1: What types of online panels are used in survey methodology?

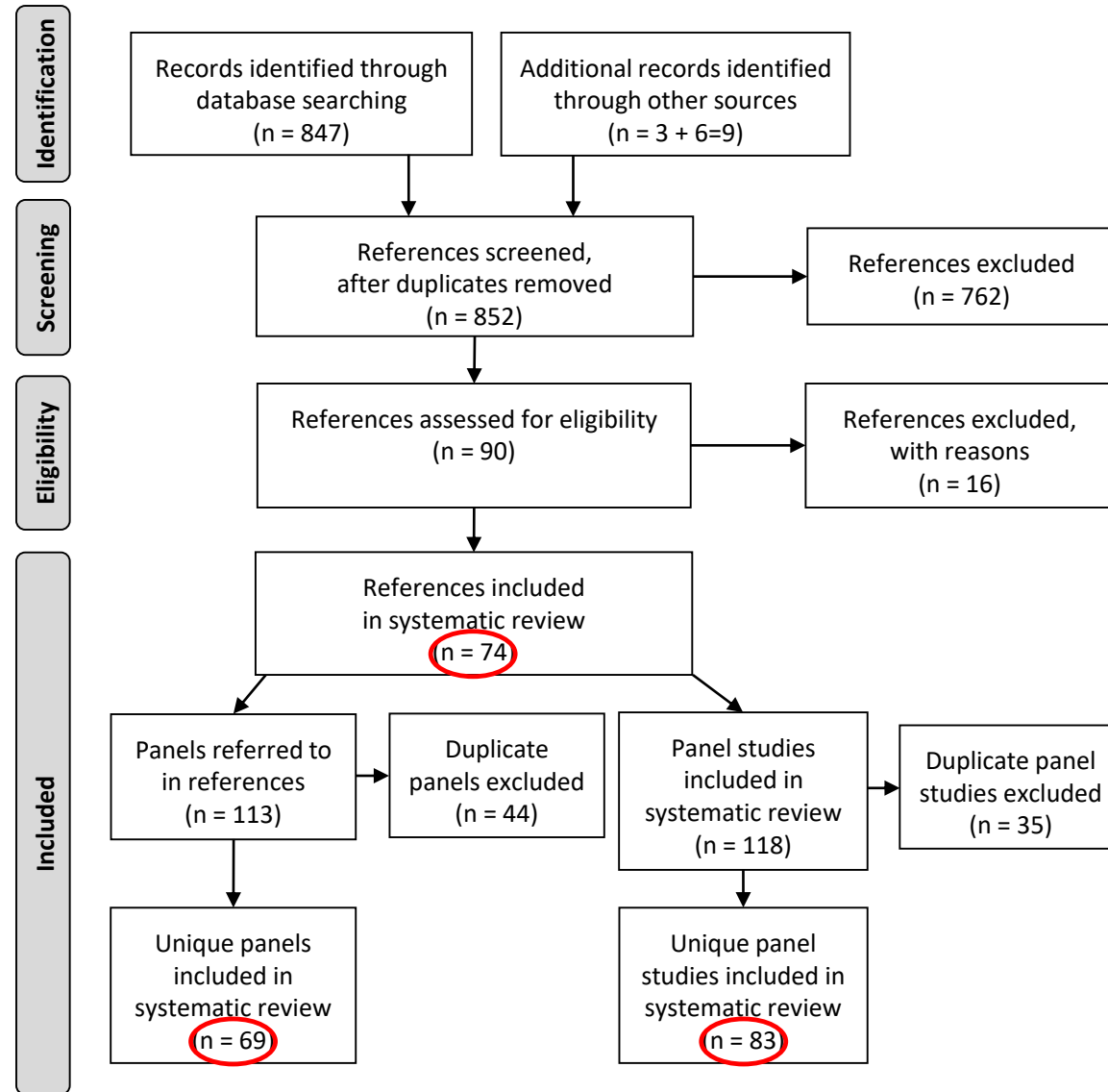
RQ2: What dimensions of quality of online panels are addressed by survey methodologists?

RQ3: What are characteristics of individual panel studies?

RQ4: What are research questions addressed by individual studies that use online panels as a sample source in survey methodology field?

# Method – selection process

PRISMA flow diagram (Moher *et al.*, 2009)



# Method – selection source and criteria

Source: a bibliographic database by [WebSM.org](http://WebSM.org)

## *General inclusion criteria*

- type of resource: journal papers and book chapters
- language of the full text: English
- year of publication: between January 2012 and June 2016 (exception: 6 Das and colleagues' book chapters published in 2011)

## *Specific inclusion criteria*

- keywords defining panels: “panel”, “probability”, “non-probability”, and “nonprobability”
- keywords referred to data quality in online panel studies: “weight”, “score”, and “representativeness”

# Method – overview of the selected references

- Type of resource

66.2% journal articles (almost all published in top journals)

33.8% book chapters

- Main Countries of the studies

36.5% The Netherlands

24.3% USA

21.6% Germany

- Number of panels addressed

83.8% one panel

16.2% from 2 to 19 panels

- Number of studies reported

91.9% one study

8.1% from 2 to 4 studies

- Study aim

62.2% panel itself

10.8% panel as a sample source for SM research

27.0 % both panel itself and panel as a sample source

- Target population of panels (panel type)

GENERAL  
POPULATION

76.8% panels with people aged 18 and older

7.2% panels with Internet users and visitors of popular websites

11.6% panels with other groups of people

PROPRIETARY

2.9% panels (clients of market research company, users of an app)

SPECIALTY

1.4% panels (immigrants)

# Method – coding procedure

Aims/Research questions	Variables	Units of analysis
Types of online panels (RQ1)	Membership composition	unique online panels
	Recruitment strategy	
	Size of the panel	
	Field of establishment	
	Geographical coverage	
Dimensions of quality of online panels addressed (RQ2)	Nonresponse issues	references
	Respondents' behaviour (speeders', fraudulents' and professional respondents' behaviour, and panel conditioning)	
	Comparison of point estimates with the gold standard	
	Weighting techniques	
	Participants' loyalty to the panel and membership tenure	
	Measurement error	
	Comparison of point estimates with other modes of data collection/study designs	
	Recruitment strategies for setting up the panel	
	Retention strategies for maintaining the panel	
	Questionnaire design	
Characteristics of online panel studies (RQ3)	Sampling method	unique online panel studies
	Size of the study sample	
	Questionnaire length (number of questions and/or estimated time to fill in the questionnaire)	
Purposes of the usage of online panels as a sample source for research on survey methodology (RQ4)	Measurement error	unique online panel studies
	Response process	
	Questionnaire design	

# Results RQ1 – types of online panels

Membership composition	Recruitment		N
	probability	non-probability	
general population	15	51	66
specialty	1	0	1
proprietary	0	2	2
N	16	53	69

Size of the panel	N	%
1,000-3,500	6	27.3
3,501-5,999	1	4.5
6,000-10,000	4	18.2
10,001-65,000	5	22.7
65,001-145,000	4	18.2
450,000-490,000	2	9.1
Total	22	100.0

50%

Field of establishment	N	%
commercial	57	82.6
research, non-commercial	3	4.3
academic	9	13.0
Total	69	100.0

Geographical coverage	N	%
national	59	85.5
international	10	14.5
Total	69	100.0



# Results RQ2 - dimensions of quality of online panels addressed

(1/2)

Dimensions	References
<b>Nonresponse issues</b> <ul style="list-style-type: none"><li>- at recruitment stage (recruitment rate, and profile rates)</li><li>- at specific study stage (mainly completion rate, and screening rate)</li></ul>	<b>25</b> 9 16
<b>Respondents' behaviour</b> (speeders', fraudulents' and professional respondents' behaviour, and panel conditioning)	<b>18</b>
<b>Comparison of point estimates with the gold standard</b> using mainly <ul style="list-style-type: none"><li>- socio-demographic variables</li><li>- attitudinal variables</li><li>- behavioral variables</li></ul>	<b>17</b> 15 6 6
<b>Weighting techniques</b> (post-stratification weights, design weights, propensity scores, or a combination of various types of weights)	<b>15</b>
<b>Participants' loyalty to the panel</b> (mainly factors influencing attrition, and attrition/retention rate)	<b>15</b>
<b>Measurement error</b> (mainly satisficing behavior)	<b>15</b>

# Results RQ2 - dimensions of quality of online panels addressed (2/2)

Dimensions	References
<b>Comparison of point estimates with other modes of data collection/study designs</b> using mainly <ul style="list-style-type: none"> <li>- socio-demographic variables</li> <li>- attitudinal variables</li> </ul> and <ul style="list-style-type: none"> <li>- other online panels</li> <li>- other sampling frame for a web survey (i.e., self-selected, random household or on-site recruitment sample)</li> <li>- F2F survey</li> </ul>	<b>11</b> 7 4  4 3 3
<b>Recruitment strategies</b> using mainly <ul style="list-style-type: none"> <li>- monetary incentive</li> <li>- reminder (letter, SMS, and e-mail)</li> <li>- multi-mode contact</li> </ul>	<b>8</b> 5 3 3
<b>Retention strategies</b> (mainly reminder, incentive, and feedback study results)	<b>4</b>
<b>Questionnaire design</b>	<b>1</b>

# Results RQ3 – characteristics of individual online panel studies

Sampling method	N	%
probability sampling	30	37.0
non-probability sampling	21	25.9
both probability and no sampling	2	2.5
no sampling, all panelists	28	34.6
Total	81	100.0

Size of the sample	N	%
300-1,500	12	18.2
1,501-3,200	23	34.8
3,201-5,999	7	10.6
6,000-10,000	14	21.2
10,001-20,000	2	3.0
20,001-154,000	8	12.1
Total	66	100.0

53%

Questionnaire length	Range	Modal value	Mean	N
number of questions	2-130	24 and 26	39.0	15
completion time (minutes)	1.27-30	class 10-15	16.8	30

# Results RQ4 – usage of online panels as a sample source for survey methodology research

Issues	Unique studies
<b>Measurement error</b> using as indicators mainly <ul style="list-style-type: none"><li>- satisficing in closed questions</li><li>- satisficing in open-ended questions</li><li>- time</li></ul>	<b>27</b> 21 12 12
<b>Response process</b> <ul style="list-style-type: none"><li>- indicators (mainly survey outcome rates)</li><li>- measures to increase RR (mainly various types of incentive)</li></ul>	<b>23</b> 21 6
<b>Questionnaire design</b> features (mainly question layout choices, and interactive/visual features)	<b>13</b>

# Conclusions

- Issues on online panels are:

- relevant (only 74 references out of 852 about web survey methodology, BUT published in top journals), even if
- not yet widespread in survey methodology field



Are online panels used for substantive research?

- Most papers deal with the quality of the online panels themselves ➡ quality of online panels is an important issue for survey methodologists
- Online panels could be used more often as sample source for methodological research, especially explorative ➡ limitations:
  - maybe professional respondents and
  - maybe different from other respondents

Comments are welcome!

# Thanks for your attention!

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