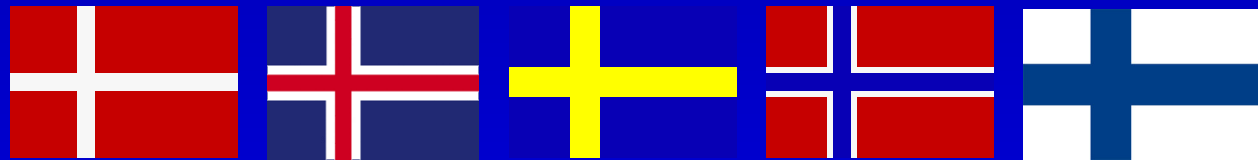


# Gambling and Problem Gambling studies among Nordic Adults: Are they comparable?



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# Overview

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- The Nordic studies
  - Problems with comparison
- Gambling among Nordic adults
  - Total and weekly gambling
  - Top three games
  - Demographic differences and the Internet
- Prevalence of PG among Nordic adults
  - Demographic differences in PG
  - The Norwegian paradox!
- A Nordic prevalence study?



# The Nordic gambling market

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- Common games
  - Lotto, lotteries, scratchcards, Bingo, sport pools, sport betting. Most of these games are available on the internet within in each country.
- Differences
  - Casinos
  - Horse racing
  - EGM 's (Slot machines)
  - Internet poker






# Recent Nordic Studies

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Studies	Year	N	References
 Adults I	2005	3.358	Olason, Barudottir & Gretarsson, 2005
Adults II	2007	3.009	Olason, 2007
 SINTEF I	2007	3.483	Øren & Bakken, 2007
SINTEF II	2008	3.441	Bakken & Weggeberg, 2008
Synovate MMI I	2005	3.135	Kavli & Berntsen, 2005
Synovate MMI II	2007	3.002	Kavli, 2007
 Adults I	1997	7.139	Rönnberg et al., 1999
 Adults I	2003	5.013	Ilkas & Turja, 2003
Adults II	2007	5.008	Aho & Turja, 2007
 Adults I	2005	8.153	Bonke & Borregaard, 2006

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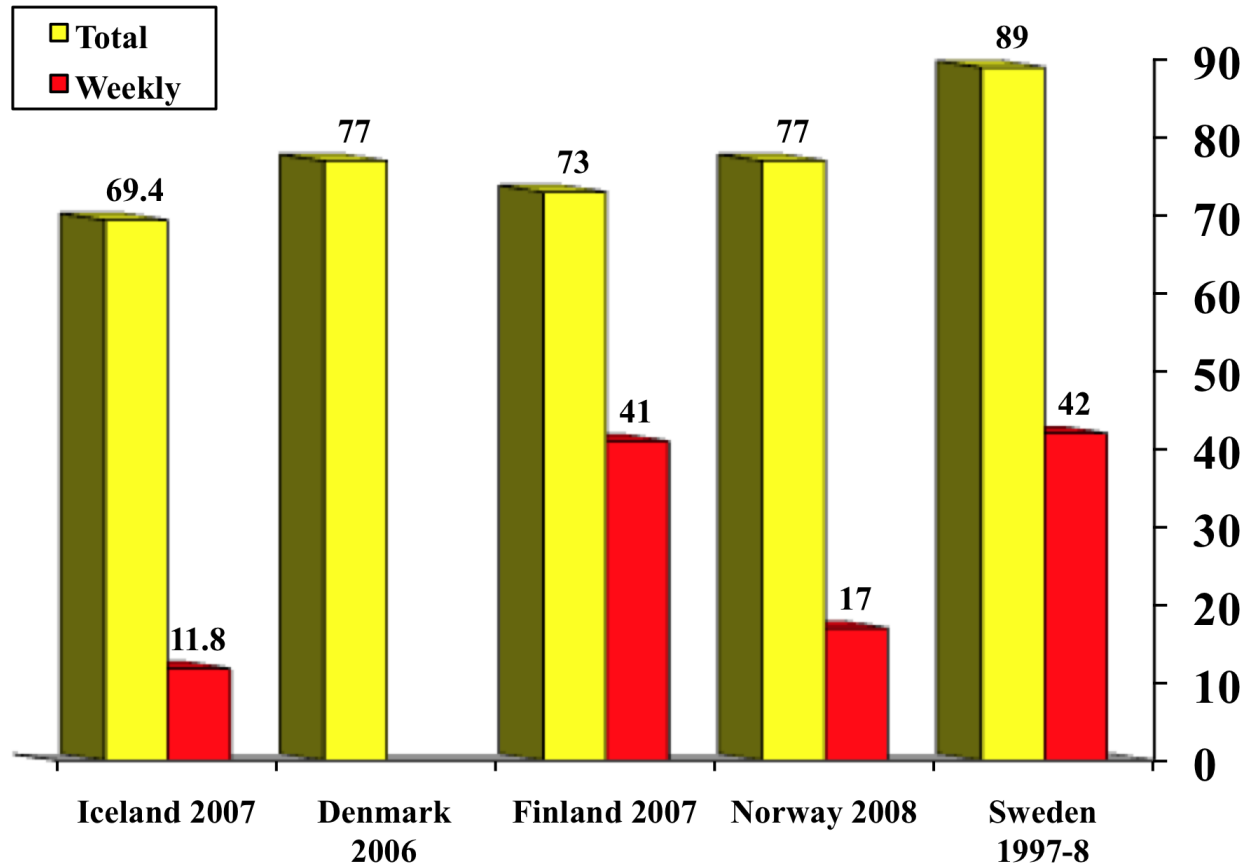
# Study comparison I

Studies	Sample frame	Age range	Data collection	Resp. rates
 Adults I	✓ National register	18-70y	Telephone/mail	69,8%
Adults II	✓ National register	18-70y	Telephone	63,4%
 SINTEF I	✓ National register	16-74y	Mail/Internet	36%
SINTEF II	✓ National register	16-74y	Mail/Internet	35%
Synovate MMI I	# Home/mobile	15-70y+	Mail	?
Synovate MMI II	# Home/mobile	15-70y+	Mail	22%
 Adults I	✓ National register	15-74y	Telephone/mail	71,9%
 Adults I	# Home/mobile	15-74y	Telephone	?
Adults II	✓ National register	15-74y	Telephone	48%
 Adults I	✓ National register	18-74y	Telephone/home	70%

# Study comparison II

Studies		Instruments	Psychometrics
	Adults I	√ √ DIGS/PGSI	Pretested, reliabilities satisfactory, factor structure adequate, validation analysis.
	Adults II	√ PGSI	
	SINTEF I	√ NODS	Reliabilities satisfactory, validated against the SOGS-R.
	SINTEF II	√ NODS	
	Synovate MMI I	√ PGSI	Found no information
	Synovate MMI II	√ PGSI	
	Adults I	√ √ SOGS-R/F-DSM-IV	Pretested, reliabilities satisfactory, validation analysis including comparing the two scales,
	Adults I	√ SOGS-R-lifetime	Found no information
	Adults II	√ SOGS-R	
	Adults I	√ √ NODS/SOGS-R	The two scales were compared, otherwise found no information

# Past year gambling



# Top three games

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	<b>Iceland 2007</b>	<b>Denmark 2006</b>	<b>Finland 2007</b>	<b>Norway 2008</b>	<b>Sweden 1997-8</b>
<b>Nr. 1</b>	Lotto	Lotto	Lotto	Lotto	Fast lotteries
<b>Nr. 2</b>	Monthly lotteries	Scratch cards	Slot machines	Scratch cards	Bingo- lotto
<b>Nr. 3</b>	Scratch cards	Slot machines	Scratch cards	Football betting	Lotto





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# Demographic differences and the Internet

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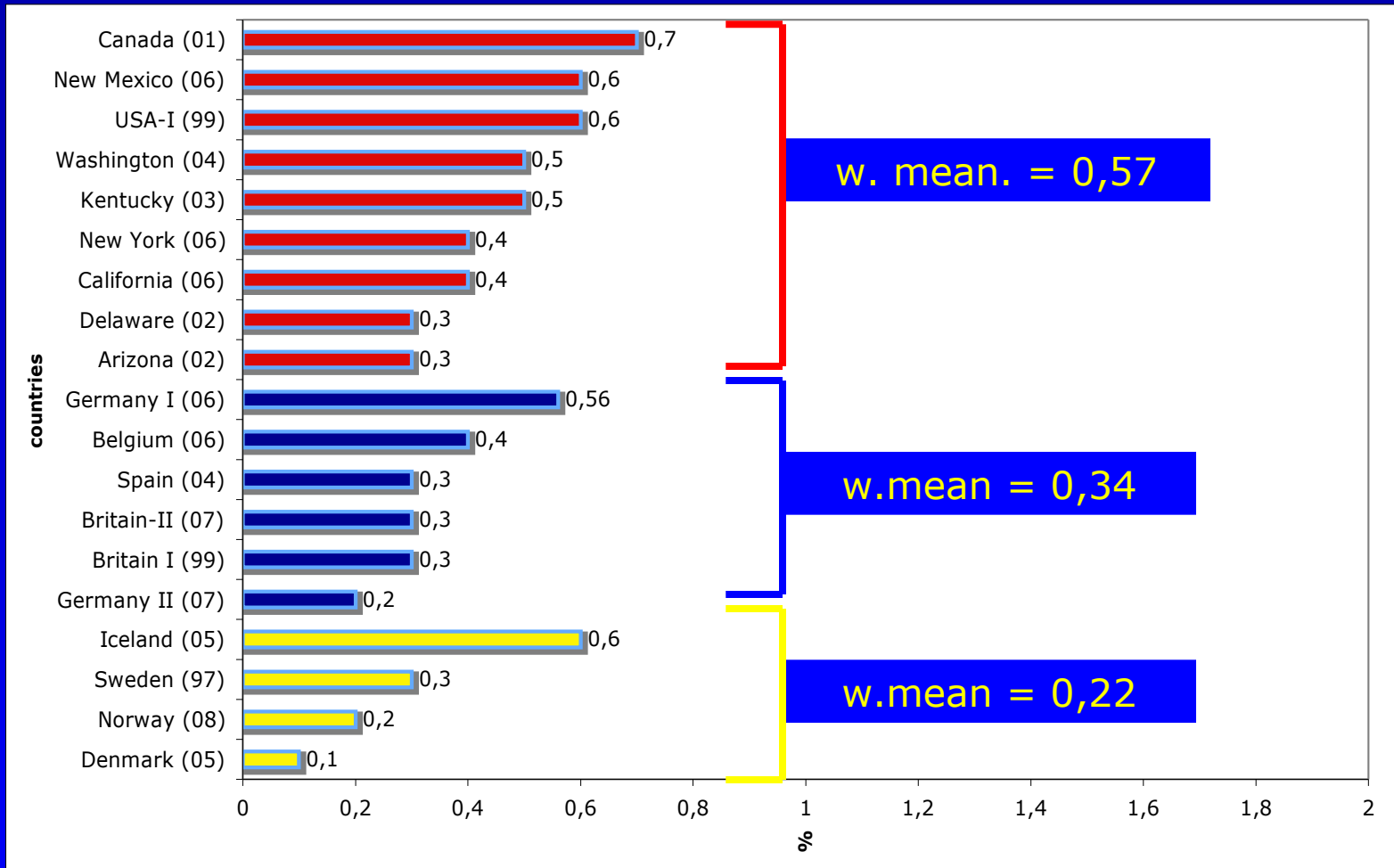
- **Gender differences:** In general, Nordic men are more likely to gamble on games that require knowledge or skill to some degree (e.g. sports betting, poker) and women more likely to gamble in games based on random events (lotteries, Bingo). **The exception for most of the Nordic countries are EGMs!**
- **Internet:** Although Internet gambling is relatively uncommon, there are significant increases between studies, in Finland (5% to 13 %), Norway (3.6 to 5.4) and Iceland (0,4% to 1.6%). Those who gamble on the Internet are mostly young males playing poker.

# Problem gambling: DSM-IV instruments

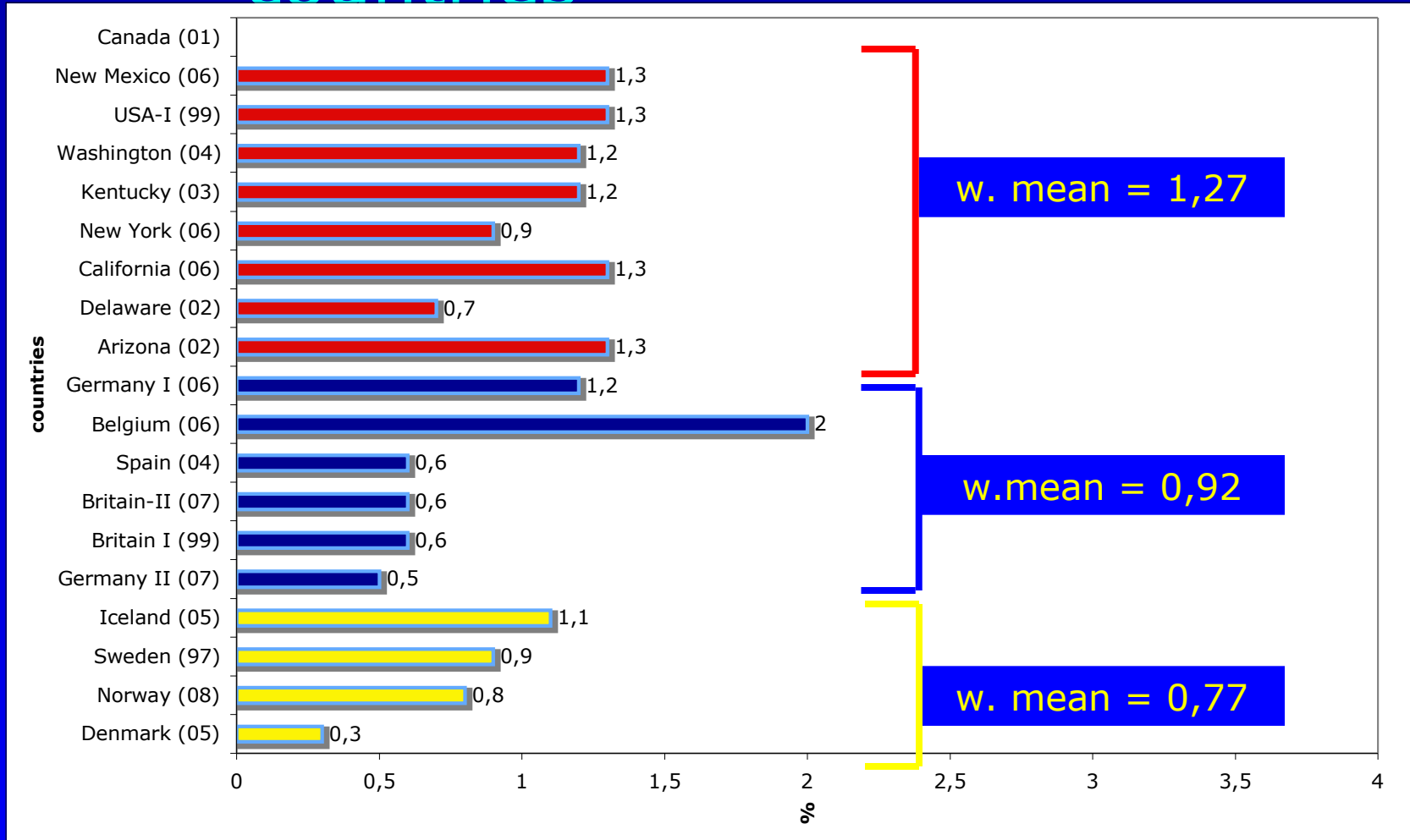
Studies	Instrument	PPG (5+)	PG (3+)
 Adults I (2005)	DIGS	0,6% (0,4-0,9)	1,1% (0,8-1,5)
 SINTEF I (2008)	NODS	0,2% (0,1-0,5) <sup>1</sup>	0,8% (0,6-1,2)
 Adults (2005)	NODS	0,1% (0,06-0,21)	0,3% (?)
 Adults (1997-8)	Fisher-DSM-IV	0,3% (± 0,1)	0,9% (?)

<sup>1</sup>CI estimated





# PPG prevalence in other countries



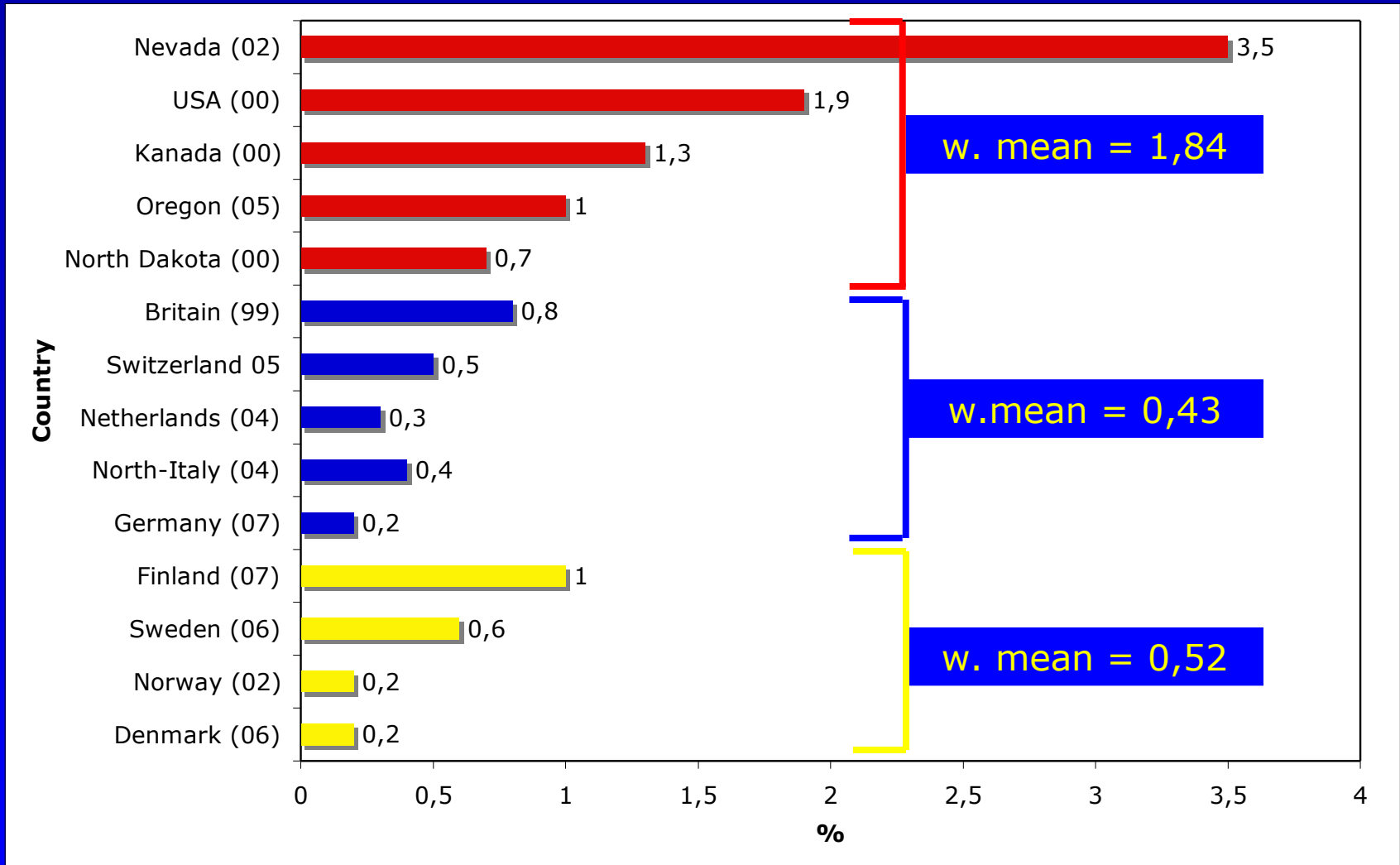
# PG (+3) prevalence in other countries



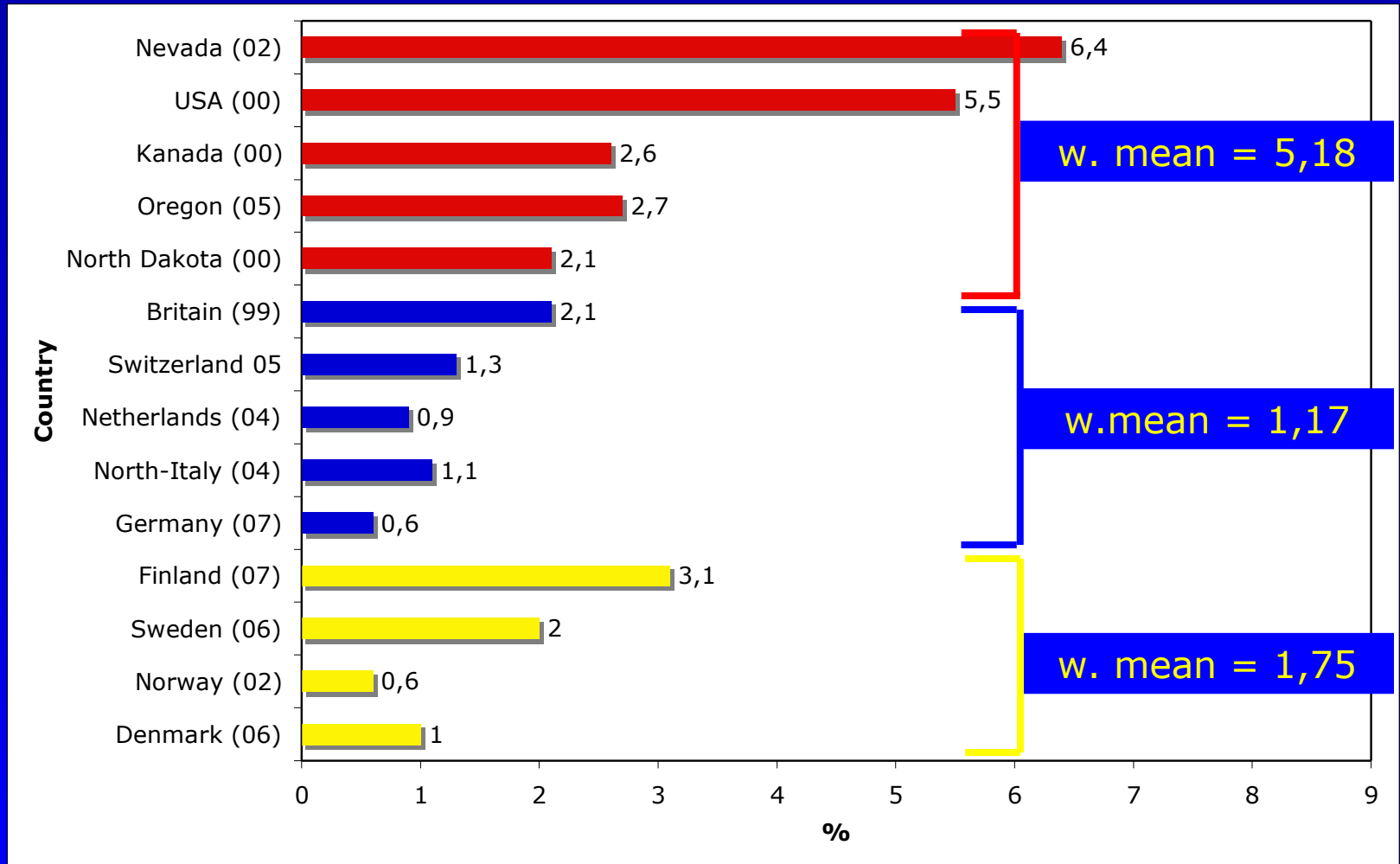
# Problem gambling: SOGS

Studies	Instrument	PPG (5+)	PG (3+)
 Adults II (2007)	SOGS-R +1	1,0% (?)	3,1% (?)
 Adults (2005)	SOGS-R	0,2% (?)	1,0% (?)
 SIRUS (2002)	SOGS-R	0,2% (?)	0,6% (± 0,2)
 Adults (1997-8)	SOGS-R	0,6% (± 0,2)	2,0% (?)



# PPG prevalence in other countries



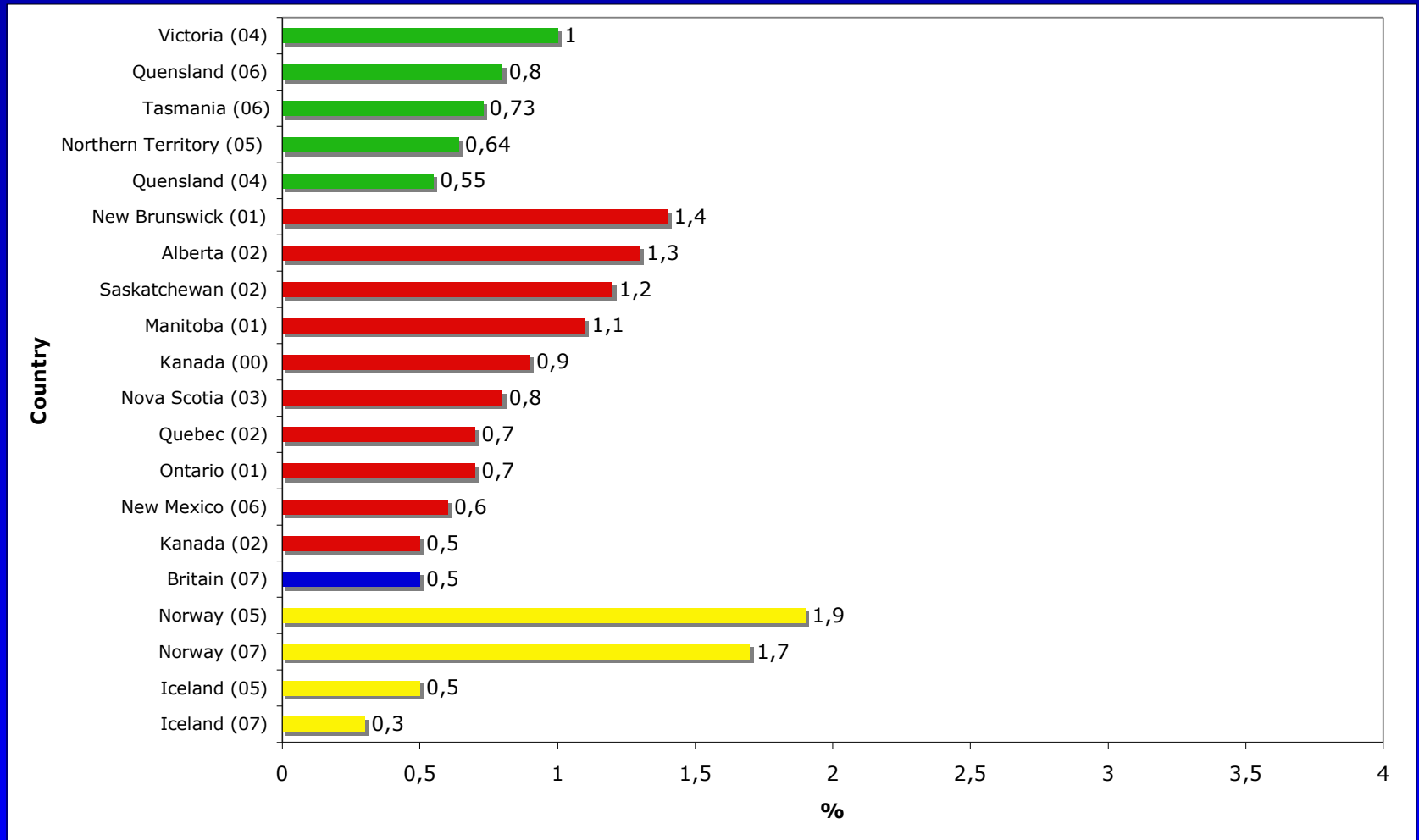
# PG (+3) prevalence in other countries



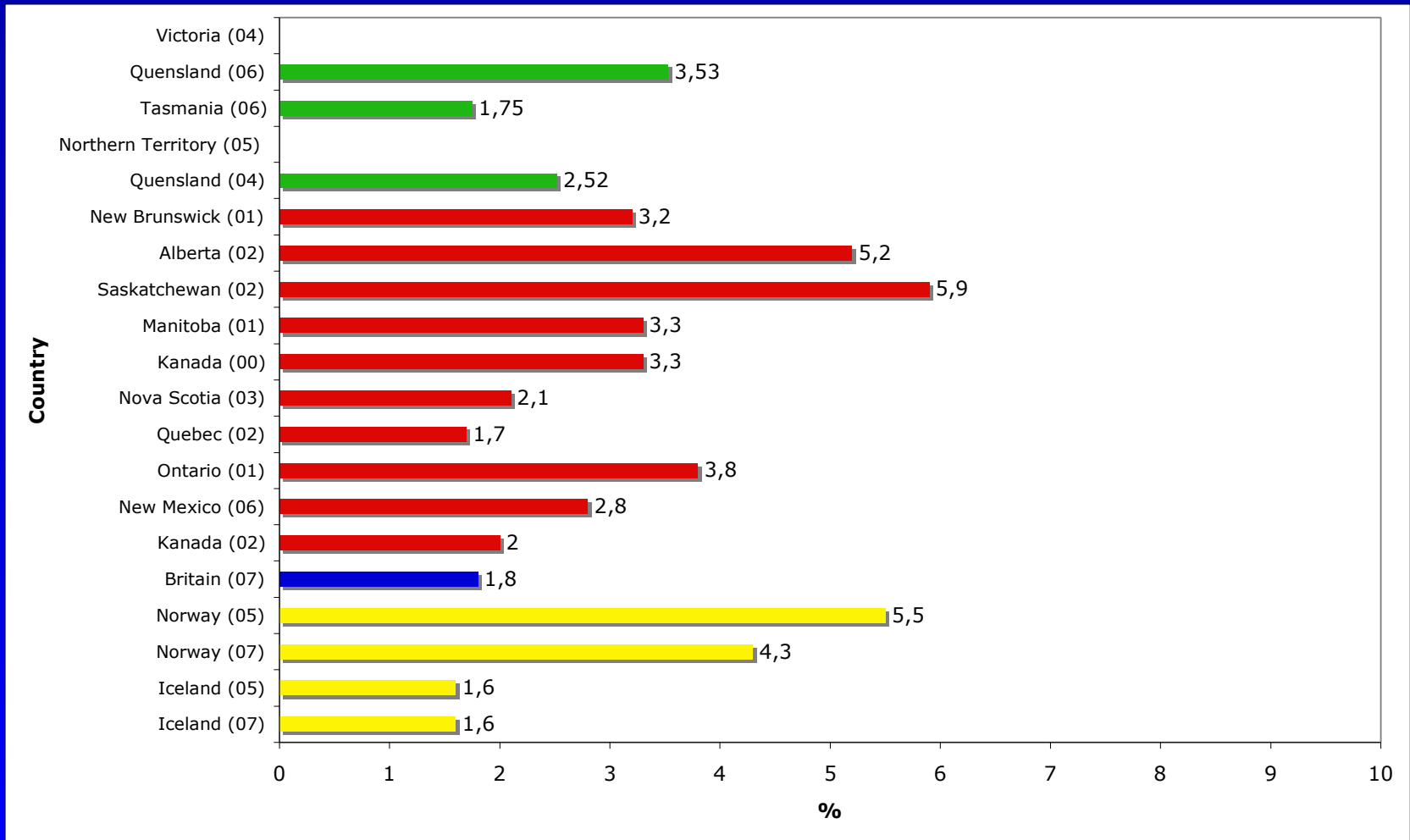
# Problem gambling: PGSI

Studies	Instrument	PPG (8+)	PG (3+)
 Adults I (2005)	PGSI	0,5% (0,3-0,8)	1,6% (1,2-2,1)
Adults II (2007)	PGSI	0,3% (0,2-0,6)	1,6% (1,2-2,1)
 Synovate MMI I (2005)	PGSI	1,9% (± 0,5)	5,5% (?)
Synovate MMI II (2007)	PGSI	1,7% (± 0,5)	4,3% (?)

# PPG prevalence in other countries



# PG (+3) prevalence in other countries






# Population based differences in PG

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- **Gender:** Problem gambling is more prevalent among Nordic men than women.
- **Age:** Young adults (adolescents) are more likely to have problems with their gambling than older age groups!
- **Education:** People with only primary school education are more at risk than more educated people!
- **Marital status:** Singles have higher prevalence rates than married/cohabiting!
- **Income:** Problem gambling is more common among the lowest income families!
- **Prototypic Nordic Problem gambler:** Young single male with little education and low income!

# Gambling preferences of PG

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-  Problem and at-risk gamblers played predominantly Slot machines, poker, dice games, sports betting and betting with foreign bookmakers
-  Problem gamblers played mostly Slot machines, Lotto and scratch cards
-  Problem gamblers played mostly Slot machines, poker and on the internet (internet poker)
-  Past 12 months figures indicate highest participation in Keno, scratch-tickets, sport pools and Horse racing. **Note PG** reported that internet poker and sport betting as their most important games
-  Problem gamblers were most likely to play weekly in sport pools, horse races and instant lottery games. Further analysis revealed that restaurant casino games and slot machines had the highest addiction potential.

# Summary

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- The Nordic studies differ in terms of methodology!
- Prevalence of gambling participation is similar, although regular gambling seems more common in Finland and Sweden.
- Demographic differences in Problem gambling is similar between countries!
- Problem gambling prevalence rates do not differ to great extent between countries, at least not for DSM-IV and SOGS-R.
- Interestingly, compared to other European studies there seems to be little difference in PG if measured by DSM-IV and SOGS-R but rates tend to be higher in N.A.
- **This does not apply to the Norwegian results**

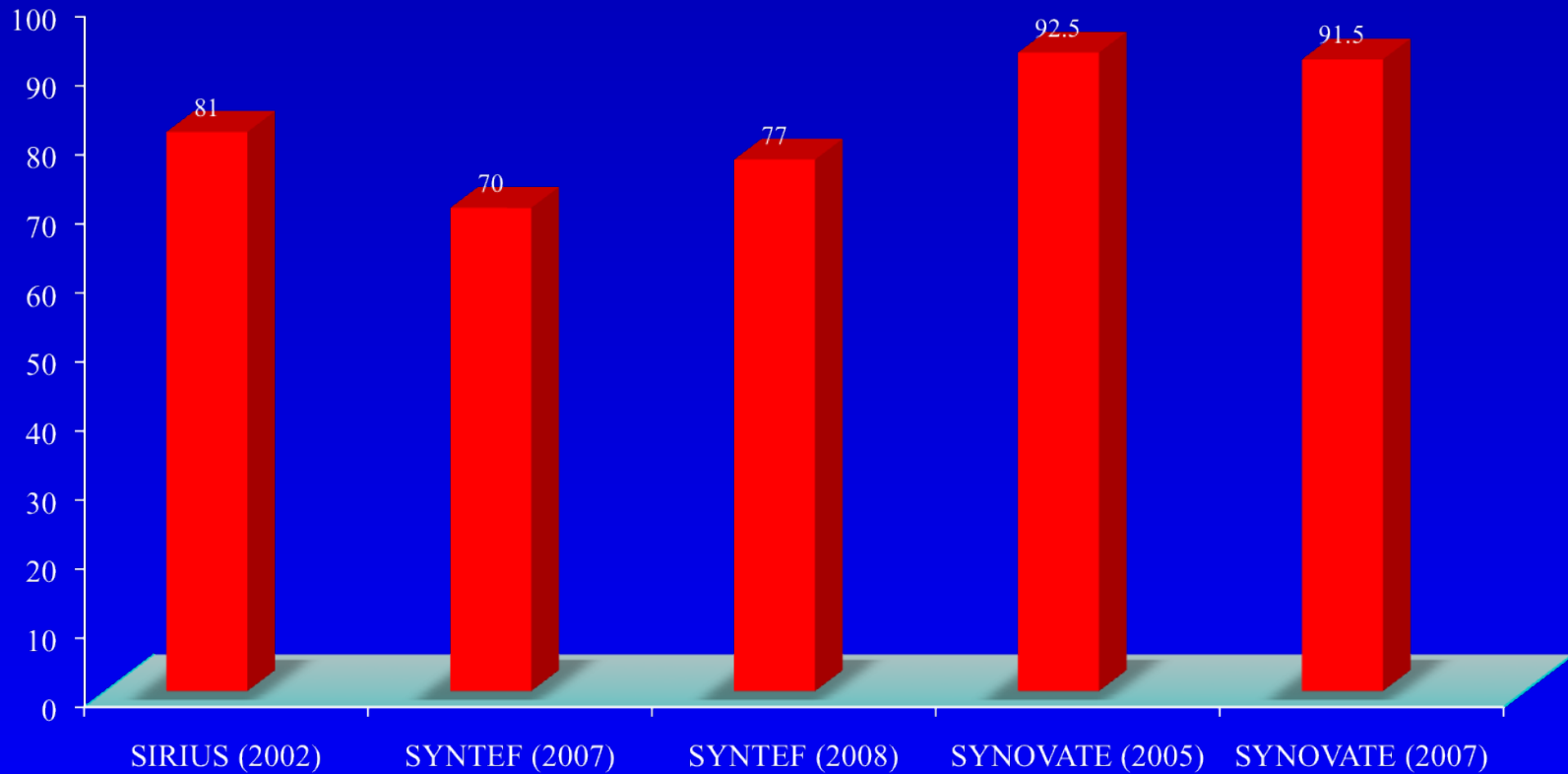
# The Norwegian Paradox!

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- Four Norwegian studies (using NODS/SOGS-R) suggest low PPG prevalence rates compared to other countries and two studies (using PGSI) suggest high PPG prevalence rates compared to other countries!
- **Questions:**
  - Does the novel sampling frame (home/mobile) introduce systematic skewness resulting in higher prevalence rates?
    - For example, are those in the mobile sampling frame different from the home number sampling frame?
  - Are there problems with Norwegian version of the PGSI instrument? Psychometric data lacking!
  - Is it possible that the low response rate (22%) included more interested/committed gamblers?

# The Norwegian Paradox II

**Total gambling (last 12 months)**



# A Nordic study

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- Why do a Nordic study
  - Comparable sampling frame (National register)
  - Same age range across studies
  - Same data collection method
  - Same instruments
  - Same year/time of year
  - Same risk factors evaluated

# How to do it

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- A Nordic team

- 2009-2011: A collective decision on methodology
- 2011: The Nordic study is introduced in the Nordic conference in Iceland.
- 2012-13: Data collection, analysis and report writing.
- 2013: Findings reported at the Nordic conference in Norway.

- Funding

- EU grants
- The Nordic council (Nordforsk)
- The gaming organizations