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▶ **To cite this version:**

Maylis Fontaine, Céline Lemercier, Valérie Le Floch, Aurélie Mouneyrac, Pierre-Vincent Paubel. The elderly faced with risk : time perspectives part in gambling. EuroScience Open Forum 2018, Jul 2018, Toulouse, France. hal-02095337

HAL Id: hal-02095337

https://univ-tlse2.hal.science/hal-02095337

Submitted on 10 Apr 2019

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The elderly faced with risk : time perspectives part in gambling

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Background

Statistics

- More than **50%** of French people gamble at least once a year (ODJ, 2015).
- Between 2000 and 2016 (ODJ, 2017) : **- 1.1%** of budget allocated to leisure
  + 1.6% of this allocated to gambling
- Between 2010 and 2014 (ODJ, 2015) : **+ 11.5%** of gamblers aged 45-75
- **Seniors** from 55 to 64 years old : first consumers of gambling (INSEE, 2014)
- High Consumption → excessive consumption → addictions (Philips, 2009)

However, the gambling behavior of this population is rarely investigated

Reference models

Illusion of control (Langer, 1975) : "an expectancy of a personal success probability inappropriately higher than the objective probability would warrant"

➡ Increases risk-taking and gambling persistence

Risk-taking (Mather et al., 2012) : loss aversion of seniors aged 55 to 89

➡ Make riskier choices than youth in loss situations

Time perspectives (Zimbardo & Boyd, 1999) : Emotional and cognitive dynamic relationships that a person has with his past, his present-day inscription, and his projections into the future

➡ Influence attitudes and behaviors / influenced by age

Aims

This empirical study attempts to describe the elderly specificities and to explain them in relation to time perspectives (TP), risk-taking and the illusion of control (IC). Understanding these specificities in terms of gambling behavior is necessary to develop preventive measures specific to the age.

Experiment A

- 391 participants

Youth	Adults	Middle-aged	Seniors
115 (M_{age}=20.86)	86 (M_{age}=30.59)	82 (M_{age}=44.57)	108 (M_{age}=65.19)

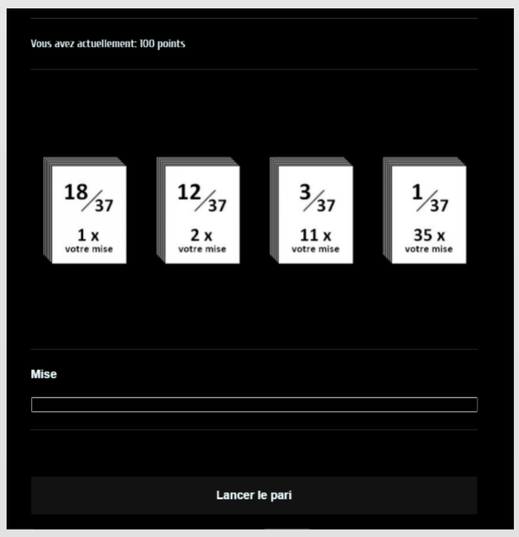
- Sequence of outcomes ascending / descending
- Risk-taking measure

(Martinez Formula, 2004)

- Questionnaires

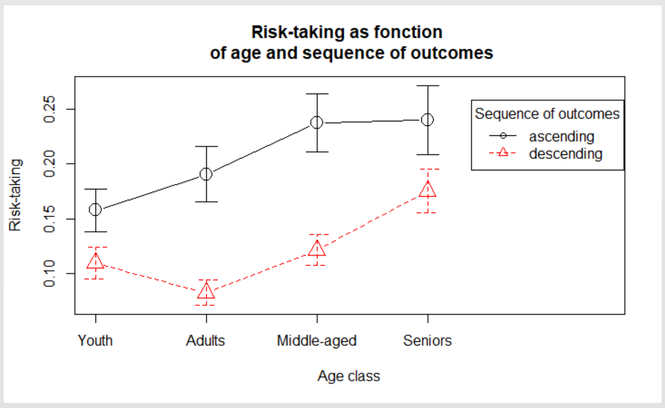
IC / TP (Apostolidis & Fieulaine, 2004)

- Gambling on a computer media on line



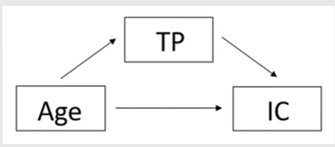
Results Experiment A

- Increased risk-taking with age
- Sequence of outcomes influence risk-taking



$F(3,382) = 5.72$, $p < .001$, $\eta 2 = 0.04$
$F(1,382) = 31.96$, $p < .001$, $\eta 2 = 0.08$

H =



Fit indices : $\chi^2 = 2.85$, $p = .241$, $CFI = 0.99$, $TLI = 0.96$, $RMSEA = .03$, $SRMR = .02$

✖ No mediation effect but direct effects :

✔ Decreased illusion of control with age (β= -0.12, p = .038, [95% IC = -0.24, -0.01])

✔ Positive influence of the fatalistic present on the illusion of control (β= 5.13, p = .002, [95% IC = 1.91, 8.42])

✔ Negative Influence of Age on the Negative Past and the Present Hedonist (β= -0.01, $p < .001$, [95% IC = -0.014, -0.006] ; β= -0.005, p = .001, [95% IC = -0.007, -0.002])

Discussion

The online gambling used in experiment A required special skills, thereby occurring a possible elderly's selection bias. A second experiment was therefore conducted with a face-to-face gambling and different type of elderly population.

Experiment B

- 44 participants

	Youth	Independent Seniors	Dependent Seniors
N (Mean age)	15 (M=23.07)	15 (M=67.27)	14 (M=87.64)
MMSE	M=29.47	M=27.73	M=26.21

- Mini Mental State Evaluation (MMSE)
- Risk-taking measure

(Martinez Formula, 2004)

- Questionnaires

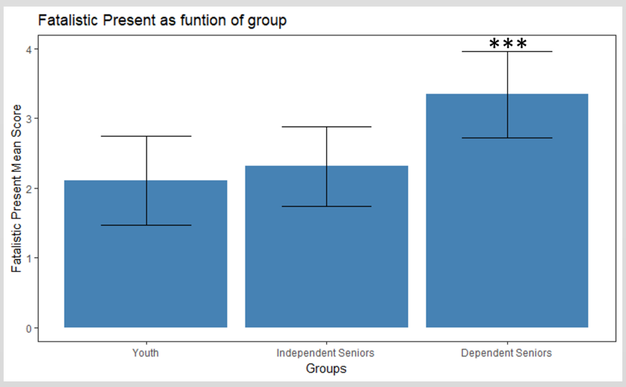
IC / TP (Apostolidis & Fieulaine, 2004)

- Gambling based on dice rolls face-to-face



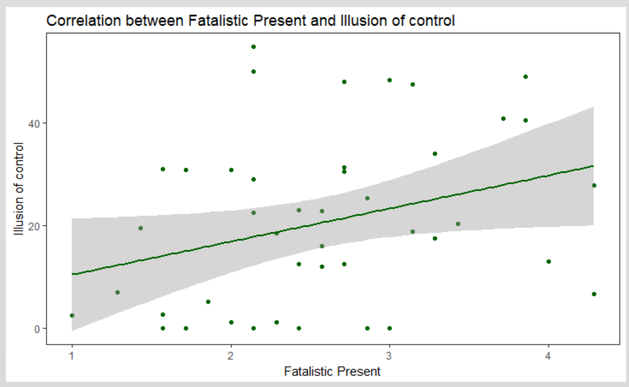
Results Experiment B

- Fatalistic Present influenced by age/dependence



$F(2,41) = 16.89$, $p < .001$, $\eta 2 = 0.45$

- Fatalistic Present ↔ Illusion of control



$r = .31$; $p = .041$

Discussion - Conclusion

- The elderly take more risks in gambling than the younger people.
- The present fatalistic TP positively influences the illusion of control, thus, to perceive the present as determined by uncontrollable forces would paradoxically increase the perceived level of control. This result is not inconsistent if considered in regard to the illusion of secondary control (Ejova, 2013 ; Wohl & Enzle, 2002). Indeed, if searching for gain goes by individual's actions at the primary level, it goes by higher nonphysical forces at the secondary level. Thus, believing in uncontrollable but favorable forces would be the expression of an illusion of secondary control ("I'm lucky").
- An age effect on the past negative TP and on present hedonistic TP also arises in the first experience. In the second, age/dependence influcence the present fatalistic.
- Seniors must therefore be considered as a specific population requiring targeted prevention measures. As an innovative and promising approach, the inclusion of time perspectives in the risk behaviors evaluation would allow the development of preventive measures specific to the age but also to the individual's TP profile.

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