

# Perceptions of Post-Mortem Sperm Retrieval in the Israeli General Population: A Large-Scale Cohort Study

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## INTRODUCTION

Post-mortem sperm retrieval (PMSR) has been medically possible for decades, yet it remains a matter of philosophical, ethical, and religious debate, with different countries developing different legal policies. However, post-mortem *reproduction* (PMR) from the cryopreserved spermatozoa remains uncommon. Legislation status in Israel, which differentiates between single and married, and between express permission and the absence of such, has been discussed and remains controversial. The overwhelming PMSR performance in Israel since Oct 7<sup>th</sup>, 2023, has challenged previous conceptions and perceptions. The aim of the current pioneering research was to assess public perceptions towards PMSR and later PMR.

## METHODS

The study was conducted by "I PANEL" – a commercial polling company. The survey included three sections: (1) demographic data (e.g. income, occupation, community type, religion, religious identity, and family bereavement history); (2) questions about consent for sperm use in various scenarios; and (3) attitudes toward the practice. The study aimed to identify demographic factors influencing participants' consent and attitudes. The study was approved by the Human Subjects Institutional Review Board (HSIRB) at Bar-Ilan University (approval number: 1502241). Statistical analysis included Chi-square, Fisher's exact, Mann-Whitney U, and Kruskal-Wallis tests, as appropriate for data type and distribution. Spearman's correlation was used for continuous variables. Analyses were performed using SPSS v28 with significance set at  $p < 0.05$ .

## RESULTS

The survey was conducted among an adult population in Israel, both Jews and non-Jews, from across the country. It was sent to 3,644 people. Of these 1,175 responded (response rate: 32.2%), and 511 successfully completing the survey. The mean age of responders was  $36 \pm 11.3$  years. 86% were Jewish, 12% Muslim, and 2% from other minority groups (Druze, Christians). Among the Jewish responders, 63% identified as secular, and 37% as religious. Sixty-seven percent were married or in a stable relationship, while 33% were single, widowed, or divorced. Average monthly income: 50% of participants earned less than 12,000 NIS per month, 20% earned between 12,000 NIS and 16,000 NIS per month, and 30% earned over 16,000 NIS per month. Religion significantly influenced consent: 62% of Jewish participants agreed to posthumous sperm use compared to 23% of Muslims and other minorities ( $p < 0.001$ ). Secular participants were more than twice as likely to consent to PMRS and PMR compared to religious ones (68% vs. 31%,  $p < 0.001$ ). Income level did not significantly affect consent ( $p = 0.084$ ). Among single participants, 42% opposed PMR under any circumstances, compared to 24% of married participants ( $p < 0.001$ ). In contrast, the loss of a first-degree relative, military service, or number of children were not factors in the participant's consent or disagreement to PMSR ( $P = 0.328$ , 0.09, 0.178 respectively).

No significant difference was observed between the attitude to PMRS and to PMR. Those who showed a positive attitude to PMRS also agreed to PMR.

Figure 1 – Consent to the PMR - comparison between singles VS married (percentages)

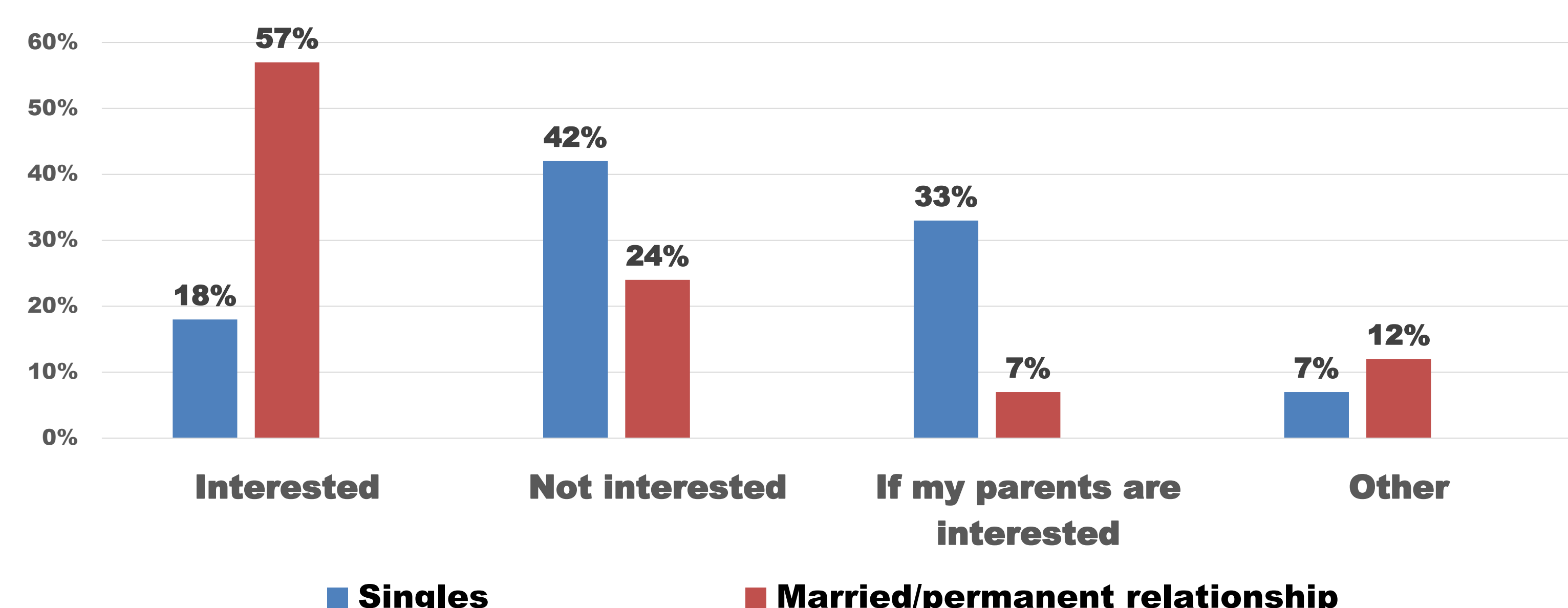


Figure 2: Correlation between demographic data and consent or non-consent to the PMR

The correlation variable use of sperm and:	The relative correlation vector	PV
Religion		
Jewish	+	0.04
Non-Jewish minorities	-	
Religious characterization - Jewish		
Secular	+	0.001
Traditional	+	
Modern Orthodox + Ultra-Orthodox	-	
Average monthly income (5 categories)		
high income	+	0.04
low income	-	
Education		
academic	+	0.03
not academic	-	

Figure 2: Correlation between demographic data and consent or non-consent to the use of sperm. "+" indicates a significant correlation between the demographic data and positive consent to the use of sperm. "-" indicates a correlation between the demographic data and non-consent to the use of sperm

## CONCLUSIONS

The huge gap between recent PMSR wide performance and a lack of updated legislation presents an ethical challenge. This is the largest general population cohort study performed by a large polling company, and, therefore, enables professional assessment of the Israeli public conceptions towards PMSR and PMR. Demographic parameters have strong impact on attitudes towards PMSR and PMR. We hope that scientific research may contribute to public discussion and balanced legislation in the near future.

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