Decree of the Rector n. 377 of 24/05/2023
Competition for awarding 1 research grant at the University of Udine

DISCLAIMER:
The official and legally binding call for applications is in Italian only. This document cannot be used for legal purposes and is only meant to provide information in English on the call for applications (Decree of the Rector n. 377 of 24/05/2023). Please refer to the official call published on: https://www.uniud.it/it/albo-ufficiale

Any change and integration will be made available on the above mentioned web page. Therefore, no personal written communication regarding the examination date and/or competition results shall be provided to applicants.

Annex 1

Competition announcement for the assignment of 1 one-year research grant at the University of Udine, entitled “Assessment of the relationship between cognitive functions and narrative skills in healthy aging” SSD: M-PSI/01 (principal investigator, Andrea Marini).

Art. 1
A selection procedure is hereby launched for the award of 1 one-year research grant at the University of Udine, as identified in Attachment A which constitutes an integral part of the present announcement. The research grant is linked to the research project and is subject and conditioned upon the relative funding.

The fellowship may be renewed, in compliance with Art. 22, Law No. 240 of 30 December 2010 (as in the text in force before the implementation of the Conversion Law of the D.L. 36/2022, L. 79/2022), Law No. 11 of 27 February 2015, and the current regulations of the University of Udine for awarding research grants, issued with the Rector’s Decree No. 182 of 31 March 2021. The renewal is subject to the scientific coordinator’s positive assessment of the researcher’s activities, an adequate scientific rationale, and a corresponding financial covering.

The research fellowship does not give rise to any right with regards to accessing University posts.

Any personal communication to candidates related to this selection will be sent exclusively to the email address indicated when registering for the selection, as mentioned in Art. 5.

Art. 2
The research grant described in this competition announcement and the required qualifications to apply for the position are identified in Attachment A. The lack of the admission requirements leads to the automatic exclusion from the competition procedure.

Possession of a PhD or equivalent degree obtained abroad or, only for the interested areas, of a medical specialization accompanied by an adequate scientific production, constitutes a preferential qualification for awarding the research fellowship of this selection, if it has not been provided as a mandatory requirement.

For the only purpose of the admission to the competition, the Examining Board (Art. 7) shall assess the equivalence of the qualification obtained abroad, except for the evaluation of the medical specialization.
qualification to which Article 38 of the Legislative Decree 165/2001 and subsequent modifications and additions, and EU regulations on the matter, shall be applied.

The Examining Board will proceed to the evaluation of the qualification obtained abroad according to the documentation attached to the application form. The Examining Board may exclude the candidate if the submitted documentation does not provide sufficient information for the assessment. Therefore, applicants must enclose all the documentation in their possession relating to their qualification in order to provide the Examining Board with sufficient information for assessment.

Candidates holding a qualification issued by a **European Research Area country**, if successful, must submit, if not already attached to the application form one of the following options:
- Supplement Diploma in English issued by the competent University.
- CIMEA Certificate of comparability of the foreign qualification, issued by CIMEA (Information Centre on Academic Mobility and Equivalence) via the "diplôme" service at [https://cimea.diplo-me.eu/udine/#/auth/login](https://cimea.diplo-me.eu/udine/#/auth/login)

Candidates holding a qualification issued by a **non-European Research Area country**, if successful, must submit, if not already attached to the application form one of the following options:
- Declaration of the on-site value of the qualification and the certificate relating to the degree with examinations and grades. A certificate in a language other than Italian or English must be accompanied by an official translation into one of these languages (certified by the competent diplomatic-consular authority or certified by a court in Italy).
- CIMEA Certificate of comparability of the foreign qualification, issued by CIMEA (Information Centre on Academic Mobility and Equivalence) via the "diplôme" service at [https://cimea.diplo-me.eu/udine/#/auth/login](https://cimea.diplo-me.eu/udine/#/auth/login)

If the Supplement Diploma or the statement/attestation of comparability are not available when signing the contract, the applicant must demonstrate that he/she has requested the documentation and submit it as soon as possible.

Any exclusion from the selection procedure due to lack of eligibility requirements, absence of required documents, failure to sign the selection application or submission of the selection application in a manner different from what is provided for in this call for applications will be communicated to applicants exclusively at the email address indicated in the application form.

**Art. 3**

**The research grant referred to in this call for applications cannot be awarded:**

a. to employees of Universities and the entities referred to in Article 22, section 1, of Italian Law no. 240 of 30 December 2010 (in the text prior to the reform introduced by Law no. 79 of 29 June 2022);

b. to those who have already been awarded research grants pursuant to Italian Law no. 240 of 30 December 2010 (prior to the reform introduced by Law no. 79 of 29 June 2022) for the maximum period provided by law, even if not continuously, excluding the period in which the grant was used in conjunction with the doctorate, up to the legal term of the relative course;

c. to those who have already benefited from research grants and fixed-term researcher contracts provided for, respectively, in Articles 22 and 24 of Italian Law no. 240 of 30 December 2010 (in the text prior to the reform introduced by Law no. 79 of 29 June 2022), for a total of 12 years, even if not consecutive;

d. to anyone who has a degree of kinship or affinity, up to and including the fourth degree, with:
   - the Rector, the Director General or a member of the Board of Directors of the University of Udine;
- the scientific supervisor or a professor/researcher belonging to the department or organisation hosting the research grant in question.

The research grant provided for in this call for applications cannot be combined:

a) with scholarships of any kind, except for those granted by Italian or foreign institutions to supplement, by means of stays abroad, the fellow's training or research activities;
b) with other research grants;
c) with an employment relationship, even if part-time, without prejudice to the relevant provisions for employees of public administrations.

The grant awarded under this call for applications is also incompatible with simultaneous attendance at university degree courses, either Bachelor's degree or Master's degree courses, research Doctorates with scholarships and medical specializations, in Italy or abroad.

**Art. 4**

Applicants must enclose with their application, under penalty of exclusion, the following documents:

a) their professional scientific CV, highlighting the candidate's aptitude for carrying out and implementing the research project (Attachment A);
b) their identity card, their passport or any other identification document¹;
c) (for candidates with a foreign qualification only) certification or self-certification of both the academic qualification required for the admission to the selection, and of the exams (with evaluation) took during the period of study abroad, and of any other document that can be useful to the evaluation of the degree by the Examining Board.

Applicants can attach to the application, publications and any other certification considered useful to demonstrate the qualification based on the research program (Attachment A) and to certify any research activity accomplished at public or private institutes (indicating the starting and ending date and the duration).

The documents and qualifications mentioned above must be submitted in Italian or English. Those that are not as requested will not be evaluated. Documents originally written in a language other than Italian or English must come with a translation in Italian or English, that the candidate will do on its own responsibility. The translation can be an abstract concerning the thesis.

Italian and Community candidates wishing to submit qualifications referring to conditions and facts attested by Public Administrations must proceed exclusively with self-certification.

Non-EU citizens legally residing in Italy may self-certify only data that can be verified or certified by Italian public bodies. They may also use declarations in lieu when provided for by an international convention between Italy and the declarant's country of origin.

Non-EU citizens not residing in Italy cannot self-certify.

Only the qualifications possessed by the candidate on the date the application form is submitted and submitted in accordance with the procedures set out in Article 5 will be assessed.

Failure to submit mandatory documents provided for in this article will constitute grounds for exclusion from the selection.

¹ Please be aware that the residence permit is not an identification document.
Art. 5

The submission of the applications for the present call starts on May 31, 2023 at 2:00 pm (Italian time) and ends on August 4, 2023 at 2:00 pm (Italian time).

The application to take part in the selection must be completed, under penalty of exclusion, using the appropriate online procedure, available at the link https://pica.cineca.it/

The procedure involves an applicant registration step, for those who do not already have an account, and then an application completion step.

Once completed, the online application must be signed in the manner described in the online procedure (manual signature with attached identity document or digital signature), under penalty of exclusion from selection. The application does not have to be signed if you access the above-mentioned online procedure using your SPID ID.

The qualifications referred to in Article 4 must be attached to the application in .pdf format. Individual .pdf files may not exceed 30MB.

The application for participation in the selection is automatically sent to the University of Udine with the definitive closing of the online procedure.

The University Administration:
- is not responsible if it is impossible to read the submitted documentation in electronic format due to damaged files;
- shall not accept or take into consideration qualifications or documents received in paper form or by any means other than what is specified in this article.

Reference to documents or publications already submitted in connection with other competitions is not allowed.

The Administration is not responsible for any missing document or communication because of inaccurate indication of residence and/or address submitted by the candidate during the application. Also, the Administration is not responsible if the candidate has not communicated changes in this information, or has communicated them too late. The Administration is also not responsible for any postal or telegraphic problems not attributable to the Administration itself.

Applicants are advised not to wait until the last few days before the closing date to submit their application. The University accepts no responsibility for any malfunctions due to technical problems and/or overloading of the communication line and/or application systems.

Art. 6

The selection procedure is held in accordance with the modality indicated in Attachment A.

The test will aim to assess the general preparation, experience and aptitude for research of the candidate. It will consist in the evaluation of the professional scientific curriculum, of the publications and qualifications presented, and of the interview, where foreseen.

Art. 7

The Examining board for the competition is identified in Attachment A of the present competition announcement, of which it is an integral part.
At its first meeting, the Examining board shall appoint its President and Secretary, and establish the criteria and methods for evaluating the qualifications and the interview, where foreseen.

The results of the qualifications assessment must be disclosed to applicants during the interview, where foreseen.

The Examining board can award a maximum of 100 points (one hundred out of one hundred) to the selection.

At the end of the evaluation procedure, the Examining board shall formulate the general merit list based on the overall score of each candidate, and draw up the minutes of the whole competition procedure.

Based on the ranking list, the assignment is awarded to candidates who have obtained a minimum overall score of 70/100 (seventy out of one hundred).

The Examining board's judgement is final.

The ranking list will be made public exclusively through publication on the University's official website.

Applicants will not be notified of the outcome of the evaluation.

Those who do not declare their acceptance of the research grant and do not present themselves at the research centre within the deadline communicated by the latter, even if not formally, shall lose the right to receive it. Exceptions to this term will only be granted in cases of documented force majeure.

Art. 8

The research activity cannot be started before signing the contract defining the terms and conditions of the collaboration.

The activity covered by the research grant must have the following characteristics:

a) it must be carried out as part of the research programme covered by the grant and not be a merely technical support to it;

b) it must have a close connection with the realization of the research program for which the winner of the grant has been awarded the contract;

c) it must be continuous and, in any case, temporally defined, not merely occasional, and in coordination with the overall activity of the University;

d) it must be carried out autonomously, solely within the limits of the programme prepared by the programme supervisor, without predetermined working hours.

The researcher is required to submit a detailed written report on the work carried out and the results achieved, accompanied by the opinion of the scientific supervisor, to the reference organisation at the intervals set out in the contract. The researcher must also submit interim reports and timesheets, if requested by the reference organisation.

Either the fellow or the reference organisation may withdraw from the contract. The reference organisation may terminate the contract not only in the cases referred to in Article 9, sections 2 and 3, of the "Internal rules for awarding research grants pursuant to law 240 of 30 December 2010" of the University of Udine, but also in the event the research project and therefore the financial coverage on which the research grant is based cease to exist.
Art. 9
The following legal dispositions shall apply to the grant referred to in this call for applications:
- for tax matters, the provisions of Article 4 of Italian Law no. 476 of 13 August 1984, as subsequently amended and supplemented;
- for social security matters, the provisions of Article 2(26) et seq. of Italian Law no. 335 of 8 August 1995, as subsequently amended and supplemented;
- for mandatory maternity leave, the provisions of the Italian Ministerial Decree of 12 July 2007;
- with regard to sick leave, the provisions of Article 1(788) of Italian Law no. 296 of 27 December 2006 and subsequent amendments.

During the period of mandatory maternity leave, the allowance paid by INPS according to Art. 5 of the Italian Ministerial Decree of 12 July 2007 is supplemented by the University up to the full amount of the research grant.

The grant will be paid in monthly instalments.

Art. 10
The data collected as part of the procedure referred to in Art. 5 are necessary to properly manage the selection procedure, for any subsequent management of the research grant and for purposes related to managing services provided by the University. The University of Udine is the Data Controller. At any time, the data subject may request access, rectification and, depending on the University's institutional purposes, cancellation and restriction of processing or oppose the processing of their data. The data subject can always lodge a complaint with the Italian Data Protection Authority. The complete disclosure is available on the University of Udine website in the "Privacy" section, accessible from the home page www.uniud.it Direct Link: https://www.uniud.it/it/pagine-speciali/guida/privacy

Art. 11
For all matters not expressly mentioned in this call for applications, refer to the regulations in force on the subject cited in the introduction and to the "Internal rules for awarding research grants pursuant to Italian Law no. 240 of 30 December 2010" of the University of Udine, issued by Rector's Decree no. 182 of 31 March 2021.

Art. 12
The procedure supervisor is Dr Sandra Salvador, Head of the Research Services Area of the University of Udine.

The Responsible office at the University of Udine is "Area Servizi per la Ricerca - Ufficio Formazione per la Ricerca", via Mantica n. 31 - 33100 Udine, Italia.

To request information about the call for applications, please complete the following form available on the University of Udine website:
https://helpdesk.uniud.it/SubmitSR.jsp?type=req&accountId=universityofudine&populateSR_id=42105
Attacco A

Responsabile scientifico della ricerca / Principal investigator:

Nome e cognome / Name and surname: Andrea Marini
Qualifica / Position: Professore Associato / Associate Professor
Dipartimento / Department: Lingue e Letterature Comunicazione Formazione e Società / Languages and Literature, Communication, Education and Society
Area MUR / Research field: 11 - Scienze storiche, filosofiche, pedagogiche, psicologiche
Settore concorsuale e Settore scientifico disciplinare / Scientific sector: 11/E1 – Psicologia generale, psicobiologia e psicometria; M-PSI/01 – Psicologia generale

Titolo dell'assegno di ricerca / Topic of the research fellowship “assegno di ricerca”:
I bandi sono consultabili dal sito dell’Ateneo, del MUR e di Euraxess / The calls are available on the University, MUR and Euraxess websites

Testo in italiano: Valutazione della relazione tra funzioni cognitive e abilità narrative nell’invecchiamento sano.

Text in English: Assessment of the relationship between cognitive functions and narrative skills in healthy aging.

Obiettivi previsti e risultati attesi del programma di ricerca in cui si colloca l’attività dell’assegna di ricerca / Foreseen objectives and results of the research programme performed by the research fellow “assegna di ricerca”:
I bandi sono consultabili dal sito dell’Ateneo, del MUR e di Euraxess / The calls are available on the University, MUR and Euraxess websites

Testo in italiano: Abstract del progetto

L’aumento dell’aspettativa di vita e il declino del tasso di natalità hanno portato a un aumento significativo della popolazione anziana negli ultimi decenni (Studer-Luethi et al., 2021). Il processo di invecchiamento è caratterizzato da un progressivo declino che interessa abilità cognitive (ad esempio, la memoria, l'attenzione e le funzioni esecutive; Mozeiko et al., 2011; Miyake et al., 2000) e comunicative (ad es. la capacità di trasmettere efficacemente significati complessi attraverso la narrazione). Purtroppo, ad oggi sono pochi gli studi che hanno fornito una valutazione completa delle prestazioni narrative nell'invecchiamento sano e che hanno indagato la relazione tra il declino delle abilità narrative, la memoria, l'attenzione e le funzioni esecutive (FE; per una recente rassegna si veda Marini, 2022). La presente proposta di progetto mira a colmare questa lacuna. In particolare, si propone di condurre una valutazione completa delle capacità narrative in 135 adulti sani appartenenti a diverse fasce d'età (N=45 di età compresa tra 20 e 40 anni; N=45 di età compresa tra 65 e 75 anni; N=45 di età compresa tra 76 e 86 anni) per valutare la relazione tra il declino delle abilità narrative e altre abilità cognitive. La memoria di lavoro, l'attenzione e le funzioni esecutive sono costantemente coinvolte nelle diverse fasi di pianificazione e produzione di un discorso (Indefrey e Levelt, 2000; Drag & Bieliauskas, 2010; Marini, 2018). Si ipotizza che la ridotta funzionalità di queste abilità nelle persone più anziane sia correlata alla minore efficacia comunicativa dei loro campioni narrativi. In altre parole, si ipotizza una diminuzione delle prestazioni narrative e cognitive tra i 3 gruppi, da quello più anziano (prestazioni più scarse) a...
Obiettivi del progetto

L'obiettivo di questa proposta di ricerca è quello di superare le lacune esistenti nella letteratura attuale e di aumentare significativamente le nostre conoscenze scientifiche sullo stato dell'arte, fornendo diversi aspetti di novità. Gli obiettivi specifici del progetto consistono nel: 1) fornire una valutazione completa delle abilità narrative nell'invecchiamento sano; ii. indagare la relazione tra il declino delle capacità narrative e altre funzioni cognitive (attenzione, memoria di lavoro e funzioni esecutive coinvolte nei processi di inibizione, pianificazione e shifting attivo). Questo aprirà la strada a studi futuri volti a sviluppare norme e profili discorsivi in grado di differenziare gli adulti che invecchiano in modo tipico da quelli che invecchiano in modo atipico e di distinguere ulteriormente le varie condizioni neurologiche che influenzano il discorso.

Stato dell'arte

Le abilità narrative sono tra le nostre più importanti capacità comunicative. Esse consentono agli individui di descrivere eventi temporalmente e causalmente correlati (Marini et al., 2005; Marini et al., 2019) e di comunicare significati, sentimenti, esperienze e conoscenze complesse. Gli effetti dell'invecchiamento sull'organizzazione narrativa potrebbero non essere sempre dannosi. Avendo una maggiore esperienza nel generare storie, gli anziani tendono ad avere maggiori capacità nella costruzione di un testo (ad esempio, James et al., 1998). Ad esempio, i loro diari scritti e le loro narrazioni personali possono includere più episodi incorporati rispetto a quelli prodotti da individui più giovani (ad esempio, Kemper, 1990). Tuttavia, alcune indagini hanno dimostrato che le capacità di pianificare, monitorare e organizzare le narrazioni diminuiscono con l'età (Pistono et al., 2017). In effetti, le storie prodotte dagli individui più anziani sono generalmente caratterizzate da una maggiore verbosità (Gold, & Arbuckle, 1995) e da una ridotta organizzazione (per una rassegna, si veda Ellis et al., 2016). I cambiamenti più rilevanti riguardano l'aumento degli errori di coesione e di coerenza locale (cioè la capacità di mettere in relazione gli enunciati attraverso legami linguisticci e concettuali adeguati; Nippold et al., 2014).

L'invecchiamento indebolisce anche la coerenza globale, cioè la capacità di mettere in relazione enunciati distanti all'interno di un determinato discorso. I tipici errori di coerenza globale possono includere la produzione di enunciati che sono riempitivi, ripetitivi, tangenziali o semanticamente non correlati al succo della storia. Quando gli anziani sono coinvolti in una conversazione spontanea, producono più discorsi fuori tema rispetto agli individui più giovani (ad esempio, Wills et al., 2012). Pertanto, il discorso narrativo degli anziani è spesso percepito come vago e incoerente. Le debolezze narrative osservate negli anziani potrebbero non dipendere interamente da un disturbo squisitamente linguistico (Marini & Andreetta, 2016). Infatti, le abilità narrative si basano su una complessa interazione con altre funzioni cognitive come l'attenzione, la memoria di lavoro e le funzioni esecutive (FE). Il lento, ma progressivo, declino di queste abilità cognitive indotto dall'invecchiamento interferisce con le attività della vita quotidiana (Barnes, 2015) e può influire anche sulla capacità di produrre efficacemente narrazioni (ad esempio, Pistono et al., 2017; Mozeiko et al., 2011; Miyake et al., 2000). È quindi importante comprendere a fondo la potenziale relazione tra queste debolezze cognitive e le capacità di produzione narrativa nell'invecchiamento sano. Sfortunatamente, le prove disponibili su questa relazione sono ancora scarse e i risultati spesso contraddittori (per una
recente rassegna si veda Marini, 2022).

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<th>Descrizione del progetto</th>
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|                          | Per il presente progetto saranno reclutati 135 partecipanti adulti. La dimensione minima richiesta (N=129) per questo disegno sperimentale che prevede delle analisi between-subjects e che utilizza la regressione lineare multipla per esplorare l’eventuale impatto di abilità attentive ed esecutive sulla capacità narrativa è stata determinata attraverso il software G*Power (Faul et al. 2009) impostando la dimensione dell’effetto attesa per una misura cardine della produzione discorsiva (cioè la % di informatività lessicale) a Cohen d = .15 sulla base di precedenti indagini (ad es., Marini et al. 2011), il livello di significatività a .05 e la potenza desiderata (1) a 0,95. 
I partecipanti formeranno tre gruppi:
- Gruppo 1 - Giovani adulti (Young Adults, YA): N=45; fascia d’età: 20-40 anni;
- Gruppo 2 - Adulti anziani (Old Adults, OA): N=45; fascia d’età: 65-75;
- Gruppo 3 - Adulti anziani senior (Senior Old Adults, SOA): N=45; fascia d’età: 76-86.
I partecipanti saranno tutti di madrelingua italiana. I tre gruppi saranno bilanciati per sesso e per livello di scolarizzazione. Potranno partecipare solamente i partecipanti che avranno firmato i moduli di consenso informato alla partecipazione al progetto di ricerca approvati dalla CGPER del DILL dell’Università di Udine.
A tutti i partecipanti saranno applicati i seguenti criteri di esclusione:
- diagnosi pregressa o attuale di malattia psichiatrica o neurologica
- presenza di gravi disturbi sensoriali della vista o dell’udito
- abuso di alcol o droghe per un periodo prolungato, passato o in corso
- uso di farmaci per la regolazione dell’umore
I criteri di inclusione saranno una prestazione nella norma nei seguenti test volti a escludere la presenza di difficoltà cognitive:
- Matrici Progressive Colorate di Raven (Raven, 1938),
- MiniMental State Examination (MMSE; Folstein et al., 1975).

Materiali e metodi

Valutazione cognitiva
Le abilità cognitive saranno valutate attraverso la somministrazione di compiti specifici: attenzione (Trail Making Test [Giovagnoli et al. 1996]), memoria di lavoro (Forward and Backward Digit Span [Monaco et al., 2013]) e memoria a lungo termine (Prose Memory [Spinler & Tognoni, 1987]). Per quanto riguarda le FE: shifting (Modified Card Sorting Test [Caffarra et al., 2004]) e inibizione (Stroop Test [Brugnolo et al. 2016]).

Compito di produzione narrativa
Le abilità di produzione del discorso narrativo dei partecipanti saranno valutate analizzando i campioni di linguaggio prodotti durante tre compiti di descrizione di immagini e storie. In particolare, a ciascun partecipante verrà chiesto di descrivere le storie rappresentate in una singola immagine (la scena di un pic-nic tratta dalla Western Aphasia Battery [Kertesz, 1982]) e
due storie a fumetti con sei immagini ciascuna, presentate sulla stessa pagina (le storie del vaso di fiori [Huber & Gleber, 1982] e del litigio [Nicholas & Brookshire, 1993]). L’ordine di presentazione sarà controbilanciato tra i soggetti. Ogni narrazione sarà registrata e trascritta testualmente da due valutatori indipendenti. Queste trascrizioni saranno sottoposte a un’analisi multilivello dell’eloquio narrativo (Marini et al., 2011) che si concentra sia su aspetti microlinguistici (parole e frasi) sia su aspetti macrolinguistici (abilità pragmatiche e discorsive). Le misure microlinguistiche esplorano la capacità dei partecipanti di generare campioni di discorso narrativo coerenti (% Errori di coerenza locale, % Errori di coerenza globale) e i loro livelli di informatività lessicale (% Informatività lessicale). Le prestazioni dei tre gruppi nella valutazione neuropsicologica saranno confrontate con una serie di ANOVA con il GRUPPO (OA, SOA e YA) come fattore fisso e i punteggi ottenuti nei compiti cognitivi come variabili dipendenti. Le prestazioni dei tre gruppi nella valutazione narrativa saranno confrontate con una serie di ANOVA con il GRUPPO (OA, SOA e YA) come fattore fisso e la produttività, l’elaborazione lessicale, grammaticale e narrativa come variabili dipendenti. Per tutte le analisi verrà applicata la correzione di Bonferroni per i confronti multipli. Il coefficiente di correlazione di Pearson sarà utilizzato per calcolare le correlazioni tra le abilità cognitive e gli indici narrativi. Per esaminare ulteriormente il ruolo dei possibili predittori, cioè le abilità cognitive, sulle prestazioni narrative, verranno utilizzati modelli di regressione lineare multiplo con l’informatività lessicale come variabile dipendente. Prima di eseguire le analisi di regressione, verrà effettuata una verifica della collinearità tra i predittori.

### Possibili potenzialità applicative
Negli ultimi decenni, l’aumento dell’aspettativa di vita e la diminuzione del tasso di natalità hanno portato a un aumento significativo dell’invecchiamento della popolazione (Studer-Luethi et al., 2021). Secondo il rapporto sull’invecchiamento dell’Unione Europea (Commissione UE, 2021), l’Italia è il Paese europeo con la più alta percentuale di persone anziane. Questi cambiamenti demografici richiedono lo sviluppo di servizi innovativi per
promuovere l'invecchiamento attivo e contrastare le conseguenze dell'invecchiamento fisiologico. In linea con queste considerazioni, la presente proposta progettuale mira a fornire risultati che possano avere un impatto scientifico, sociale ed economico rilevante.

Da un punto di vista scientifico, il progetto presenta diversi aspetti di originalità e innovatività che portano a un significativo miglioramento delle nostre conoscenze sugli aspetti cognitivi e cognitivo-emotionali delle persone anziane. Inoltre, rafforza l'impatto della ricerca italiana all'interno della comunità scientifica internazionale, in linea con gli obiettivi M4C2.2-Supporto ai processi di innovazione e al trasferimento tecnologico e M4C2.3-Miglioramento delle condizioni di sostegno alla ricerca e all'innovazione (PNRR 21-27, pp 193-194). In primo luogo, il progetto fornirà una valutazione completa delle capacità narrative degli anziani sani, attualmente non disponibile nella letteratura scientifica. In secondo luogo, lo studio fornirà risposte sulla potenziale relazione tra il declino delle capacità cognitive e il deterioramento della capacità di comunicare attraverso le abilità narrative, che non è sufficientemente indagata nella letteratura scientifica internazionale.

Un'ultima osservazione riguarda il potenziale impatto sociale ed economico dei risultati di questo studio. Contribuendo alla comprensione del rapporto tra capacità cognitive e narrative, questo progetto può aprire la strada a studi futuri volti a sviluppare norme e profili discorsivi in grado di differenziare gli adulti anziani tipici da quelli atipici e a distinguerle ulteriormente le varie condizioni neurologiche che influenzano la produzione di discorsi.

**Bibliografia**


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<th>Reference</th>
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<th>Authors</th>
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London: H.K. Lewis

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<td>The rise in life expectancy and the decline in birth rate have led to a significant increase in the aging population in recent decades (Studer-Luethi et al., 2021). Aging is characterized by a progressive decline that affects cognitive skills (e.g., memory, attention, and executive functions; Mozeiko et al., 2011; Miyake et al., 2000) and communicative skills such as the ability to efficiently convey complex meanings through discourse. Unfortunately, to date, just few studies have provided a complete assessment of narrative performance in healthy aging and investigated the relationship between the decline of narrative skills, memory, attention, and executive functions (EF; see Marini, 2022 for a recent review). This project proposal aims to fill this gap. Namely, it is proposed to conduct a comprehensive assessment of narrative abilities in 135 older and younger healthy adults (N=45 age 20-40; N=45 age 65-75; N=45 age 76-86) to assess the relationship between the decline of narrative abilities, and other cognitive skills. As working memory, long-term declarative memory, attention, and executive functions are constantly involved in different stages of discourse planning and production (e.g., Indefrey and Levelt, 2000; Drag &amp; Bieliauskas, 2010; Marini, 2018). It is hypothesized that the reduced functionality of these abilities in the older groups will be related to the reduced communicative effectiveness of their narrative samples. Namely, it is hypothesized a decrease of narrative and cognitive performance among the 3 groups, from the oldest (poorest performance) to the youngest group (best performance) and a relation between cognitive and narrative decline.</td>
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<td><strong>Objectives of the project</strong></td>
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<td>The goal of this research proposal is to overcome the existing gaps in the current literature and significantly increase the scientific knowledge of the state of the art, providing several aspects of novelty. Specific aims of the project are: i. To provide a comprehensive assessment of narrative abilities in healthy aging. ii. To investigate the relationship between the decline of narrative abilities and other cognitive functions, namely attention, working memory and executive functions (e.g., inhibition, planning and shifting). This will pave the way to future studies aimed at developing norms and discourse profiles able to differentiate typical from atypical aging adults and further distinguish the various neurological conditions that affect discourse.</td>
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<tr>
<td><strong>State of the art</strong></td>
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<td>Narrative skills are among our most important communicative abilities. They allow individuals to describe temporally and causally related events (Marini et al., 2005; Marini et al., 2019) and to communicate complex meanings, feelings, and knowledge. Aging effects on narrative organization may not always be detrimental. As they have more experience in generating stories, older adults tend to have higher abilities in the construction of a text (e.g., James et al., 1998). For example, their written diaries and personal narratives may include more embedded episodes than those produced by younger individuals (e.g., Kemper, 1990). However, some investigations showed that...</td>
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the abilities to plan, monitor and organize narratives decline with age (Pistono et al., 2017). Indeed, the stories produced by older individuals are also generally characterized by augmented verbosity (Gold, & Arbuckle, 1995) and reduced cohesive and coherent organization (see Ellis et al., 2016 for a review). Relevant changes concern the increase of errors of cohesion and local coherence (i.e., the ability to relate the utterances by means of adequate linguistic and conceptual ties; Nippold et al., 2014). Aging also weakens global coherence, i.e., the ability to semantically relate remote utterances within a given discourse. Typical errors of global coherence may include the production of utterances that are fillers, repetitions, tangential, or semantically unrelated to the gist of the story at hand. When older adults are involved in spontaneous conversation, they produce more off-topic speech than younger individuals (e.g., Wills et al., 2012). Therefore, the narrative discourse of older people is often perceived as vague and incoherent. The narrative weaknesses observed in the elderly might not entirely depend on a linguistic disturbance per se (Marini & Andreetta, 2016). Indeed, narrative skills rely on a complex interplay with other cognitive functions such as attention, long term and working memory, and executive functions (EFs). The slow, albeit progressive, decline in these cognitive abilities induced by aging interferes with daily-life activities (Barnes, 2015) and may affect also the ability to efficiently produce narratives (e.g., Pistono et al., 2017; Mozeiko et al., 2011; Miyake et al., 2000). It is therefore important to achieve a thorough understanding of the potential relationship between such cognitive weaknesses and narrative production abilities in healthy aging. Unfortunately, the available evidence on this relationship is still scanty at best with often contradictory results (see Marini, 2022 for a recent review).

**Project description**

**Participants**

For the present project, a total amount of 135 adult participants will be recruited. The minimum required size (N=129) for this between-subjects’ design using linear multiple regression was determined through the G* power software (Faul et al. 2009) by setting an expected effect size for a pivotal measure of discourse production (i.e., % of Lexical Informativeness) at Cohen’s d = .15 based on former investigations (e.g., Marini et al. 2011), the significance level at .05, and the desired power (1) at 0.95. The participants will form three groups:

- Group 1 - Young Adults (YA): N=45; age-range: 20-40;
- Group 2 – Old Adults (OA): N=45; age-range: 65-75;
- Group 3 - Senior Old Adults (SOA): N=45; age-range: 76-86.

The participants will be all native Italian speakers. Each age group will be balanced for sex and the three groups will be matched for educational level.

The following exclusion criteria will be applied to all participants:

- Past or current diagnosis of psychiatric or neurological disease
- Presence of severe sensory disorders affecting vision or hearing
- Past or current abuse of alcohol or drugs for a prolonged period
- Use of medication for mood regulation

Inclusion criteria will be a performance within normal range in the following tests designed to rule out the presence of cognitive difficulties:

- Raven’s Coloured Progressive Matrices (Raven, 1938),
- MiniMental State Examination (MMSE; Folstein et al., 1975).

**Materials and methods**

**Cognitive assessment**

Cognitive skills and EFs will be assessed by administering specific tasks: attention (Trail Making Test [Giovagnoli et al. 1996], working memory (Forward and Backward Digit Span [Monaco et al., 2013]), and long-term memory (Prose Memory [Spinell & Tognoni, 1987]). As for EFs: shifting, (Modified Card Sorting Test [Caffarra et al., 2004]) and inhibition (Stroop Test [Brugnolo et al. 2016]).

**Narrative production task**

The narrative discourse production skills of the participants will be assessed by analyzing the speech samples produced during three picture-story description tasks. Namely, each participant will be asked to describe the stories depicted in one single picture (the scene of a Picnic taken from the Western Aphasia Battery [Kertesz, 1982]) and two cartoon stories with six pictures each, presented on the same page (the stories of the Flower Pot [Huber & Gleber, 1982] and the Quarrel story [Nicholas & Brookshire, 1993]). The order of presentation will be counterbalanced across subjects. Each storytelling will be tape-recorded and transcribed verbatim by two independent raters. These transcripts will undergo a comprehensive multilevel analysis of discourse production [Marini et al., 2011], which focuses on both micro- (i.e., phonological, lexical and grammatical skills) and macrolinguistic (i.e., discourse level) aspects of narrative production. Microlinguistic measures include the analysis of productivity (in terms of words and speech rate, i.e., words per minute), lexical (% Phonological errors, % Semantic Errors, % Paragrammatic Errors), and syntactic (% Complete Sentences) organization. Macrolinguistic measures explore the participants’ ability to generate coherent samples of narrative discourse (% Local Coherence Errors, % Global Coherence Errors) and their levels of lexical informativeness (% Lexical Informativeness).

**Procedures**

All the above-mentioned tasks will be administered individually in 2 sessions of about 1h each. All the procedures will be performed individually, in a quiet room, by a research assistant previously trained on tools and procedures. Sessions will be recorded to allow offline coding by blind raters. Administration and scoring procedures will be carried out according to the instructions provided in Marini et al. (2005).

**Statistical analyses**

For all the tasks the scoring procedure will be performed independently by two blind coders, and the level of agreement (inter-rater reliability) between the raters will be calculated with the Intraclss Correlation Coefficient ≥.80. Normality assumption will be verified and, if needed, a transformation (e.g., arcsine) will be performed to meet the requirements for the analyses. The performance of the three groups on the neuropsychological assessment will be compared with a series of ANOVAs with GROUP (OA, SOA, and YA) as fixed factor and the scores obtained on the cognitive and EFs’ tasks as dependent variables. The performance of the three groups on the narrative assessment will be compared with a series of ANOVAs with GROUP (OA, SOA, and YA) as fixed
factor and their productivity, lexical, grammatical, and narrative processing as dependent variables. For all analyses, a Bonferroni correction for multiple comparisons will be applied.

A Pearson correlation coefficient will be used to calculate correlations between cognitive skills and narrative indexes. To further examine the role of relevant predictors, i.e., cognitive skills, on narrative performance, linear multiple regression models will be used with lexical informativeness as the dependent variable. Before running regression analyses, a check for collinearity between the predictors will be performed.

**Possible application potentialities**

Over the past decades, the rise in life expectancy and the decline in birth rate have led to a significant increase in the aging population (Studer-Luehi et al., 2021). According to the European Union’ Aging report [EU commission, 2021], Italy is the European Country with the highest proportion of aging people. These demographic changes require the development of innovative services to promote active aging and contrast the consequences of physiological aging. In line with these considerations, the current project proposal aims at providing results that might potentially have a relevant scientific, social, and economical impact.

From a scientific point of view, the project has several aspects of originality and innovativeness leading to a significant improvement in the state of the art. It also strengthens the impact of Italian research within the international scientific community, in line with M4C2.2-Support for innovation processes and technology transfer and M4C2.3-Enhancement of support conditions for research and innovation (PNRR 21-27, pp 193-194). First, the project will provide a comprehensive assessment of the narrative abilities of healthy older people that is not currently available in the scientific literature. Secondly, the study will provide answers about the potential relationship between the decline in cognitive abilities and the deterioration of the ability to communicate through narrative skills, which is not sufficiently investigated in the international scientific literature.

A final remark concerns the potential social and economic impact of the results from this study. Contributing to our comprehension about the relationship between cognitive and narrative functions, this project may pave the way to future studies aimed at developing norms and discourse profiles able to differentiate typical from atypical aging adults and further distinguish the various neurological conditions that affect discourse production.

**References**


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<th>Reference</th>
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Struttura dell'Università di Udine presso la quale verrà sviluppata l'attività di ricerca / Department or other structure of the University of Udine where research activities will be carried out:

Dipartimento di Lingue e Letterature, Comunicazione, Formazione e Società (DILL) / Department of Languages and Literatures, Communication, Education and Society.

Importo dell’assegno di ricerca (al lordo oneri carico assegnista) / Total grant gross for the research fellowship:

€ 19,367,00

Durata dell’assegno di ricerca / Duration of the research fellowship “assegno di ricerca”:

12 mesi / months

Finanziamento / Financed by:

La copertura finanziaria graverà sul progetto/fondo:
- risorse d’Ateneo: Il bando interno finanziamento assegni 2022 (D.R. n. 949/2022);
- fondi del piano strategico 2022-2025, progetto “le parole dell’educazione: inclusione, linguaggi, spazi e sviluppo (EDU-ILSS)”.

Requisiti di ammissione / Minimum qualifications necessary:

- Possesso del titolo di Dottore di ricerca o titolo equivalente conseguito all’estero;
- possesso di un curriculum scientifico professionale idoneo allo svolgimento dell’attività di ricerca contemplata.
- Research doctorate or equivalent qualification obtained abroad;
- professional scientific curriculum suitable for the research activity above mentioned.

**Research Services Area**

**Research Training Office**
Department Head: Sandra Salvador
Procedure Supervisor: Sandra Salvador
Procedure Compiler: Francesca Mion
Procedura selettiva / Competition procedure:

Valutazione per titoli e colloquio / Evaluation of titles and oral exam

I risultati della valutazione dei titoli saranno resi noti agli interessati nel corso del colloquio / The evaluation of the qualifications will be disclosed to candidates during the interview

<table>
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<tr>
<th>Calendario del colloquio / Calendar of the oral exam</th>
<th>Modalità / Modality</th>
<th>Videoconferenza (piattaforma Microsoft Teams) / Videoconference (Microsoft Teams platform)</th>
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<tr>
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Per sostenere il colloquio i candidati devono esibire un valido documento di riconoscimento. / Candidates must come to the interview with a valid identity document.

Eventuali variazioni saranno rese note esclusivamente mediante pubblicazione all’albo ufficiale on line dell’Ateneo / Any change will be made public solely through publication on the University web site http://web.uniud.it/ateneo/normativa/albo_ufficiale

Nota / Note: Le indicazioni sulle modalità di svolgimento della prova in modalità telematica saranno inviate ai candidati con successiva email da parte del Presidente della Commissione. Ai fini dell’identificazione e a pena di esclusione dalla procedura selettiva, ciascun candidato è tenuto ad identificarsi prima che il colloquio abbia inizio, esibendo il medesimo documento di identità allegato alla domanda di ammissione al concorso. Il candidato deve risultare reperibile nella giornata e all’orario indicato sul bando. Il mancato collegamento, l’irreperibilità del candidato nel giorno o nell’orario stabilito o la mancata esibizione del documento identificativo, sono motivo di esclusione dalla procedura selettiva. La registrazione delle prove orali è vietata. L’Ateneo adotterà pertanto tutti i provvedimenti in suo potere per tutelare i soggetti coinvolti qualora venissero diffuse tramite internet – o altri mezzi di diffusione pubblica – video, audio o immagini della procedura selettiva. / Instructions on how the video interviewing will be conducted will be provided to candidates by the Chairman of the Examining Board via email. For identification purposes, each candidate is required to identify him/herself before the interview by exhibiting the same identification document attached to the application. Candidates must be available on the day and time established by the call for applications. Failure of the candidate to establish a video connection, the unavailability of the candidate on the day and/or time established or failure of the candidate to provide the required identification document are all grounds for exclusion from the selection procedure. Recording of the video interviews is prohibited. The University will adopt all the measures within its power to protect all personnel involved as a result of dissemination via the internet or via other forms of public dissemination, of videos, audios or other pictures of the selection procedures.
### Commissione giudicatrice / Examining Board:

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<td>Membri Effettivi /Permanent members</td>
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<tr>
<td>Andrea Marini</td>
<td>PA</td>
<td>M-PSI/01</td>
<td>Università degli Studi di Udine</td>
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<td>Marina Camodeca</td>
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<td>M-PSI/04</td>
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<td>Cristiano Crescentini</td>
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<td>M-PSI/08</td>
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<td>Cosimo Urgesi</td>
<td>PA</td>
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