KONKURS MAESTRO 9
WNIOSEK
O FINANSOWANIE PROJEKTU BADAWCZEGO
MAJĄCEGO NA CELU REALIZACJĘ PIONIERSKICH BADAŃ
W TYM INTERDYSCYPLINARNYCH, WAŻNYCH DLA ROZWOJU NAUKI,
WYKRACZAJĄCYCH POZA DOTYCHCZASOWY STAN WIEDZY,
I KTÓRYCH EFEKTEM MOGĄ BYĆ ODKRYCIA NAUKOWE,
REALIZOWANEGO PRZEZ DOŚWIADCZONEGO NAUKOWCA

[TO JEST WYDRUK ROBOCZY - NIE PRZEZNACZONY DO WYSŁANIA DO NARODOWEGO CENTRUM NAUKI]

DANE KIEROWNIKA PROJEKTU

(imię, nazwisko, tytuł lub stopień naukowy, adres zamieszkania, tel., e-mail)
dr hab. Agnieszka Monika Golec
os. Niepodległości 8 m. 27, 31-861 Kraków, małopolskie, Polska
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A. DANE WNIOSKODAWCY

Status wnioskodawcy:
1. Jednostka naukowa

Nazwa i adres podmiotu realizującego:
SWPS Uniwersytet Humanistycznospołeczny z siedzibą w Warszawie
SWPS University of Social Sciences and Humanities
ul. Chodakowska 19/31, 03-815 Warszawa, mazowieckie

Siedmiocyfrowy identyfikator gminy: **146507 8**
tel: **(22) 517-99-00, (22) 517-98-56**
E-mail: **biuro.rektora@swps.edu.pl** *, www:* **www.swps.pl**

NIP, REGON:
1180197245, 011947981

adres skrzynki podawczej ePUAP:
/BDBN_SWPS/skrytka

Status organizacyjny podmiotu:
A1. Uczelnia wyższa

Podmiot sprawujący nadzór:
Uczelnia nadzorowana przez MNiSW

Profil działalności:
AUPI - uniwersytet o innym profilu (wg. kryteriów wskazanych w art. 3.3, niezależnie od stosowanej przez uczelnię nazwy)

Profil uniwersytetu:
humanistycznospołeczny

Czy podmiot stanowi jednostkę zaliczaną do sektora finansów publicznych? **NIE**

Czy podmiot pozostaje pod zarządem komisarycznym lub znajduje się w toku likwidacji bądź postępowania upadłościowego?
NIE

Wnioskowane finansowanie na realizację projektu badawczego nie stanowi dla Podmiotu pomocy publicznej, o której mowa w art. 107 ust. 1 Traktatu o funkcjonowaniu Unii Europejskiej.

Kierownik podmiotu / Reprezentacja podmiotu:
prof. dr hab. Grzegorz Sędek, Prorektor ds. Nauki

Nazwa i adres jednostki realizującej:
SWPS Uniwersytet Humanistycznospołeczny z siedzibą w Warszawie, Wydział Zamiejscowy w Poznaniu

gen. T. Kutrzeby 10, 61-719 Poznań, wielkopolskie
tel: **(61) 8584363**
E-mail: **dziekan@swps.edu.pl** *, www:* **swps.edu.pl/poznan**

Czy jednostka otrzymuje dotację na działalność statutową z budżetu nauki? **NIE**

B. INFORMACJE OGÓLNE

Tytuł projektu:	Rola praktyki uważnej wdzęczności w redukowaniu agresji międzygrupowej wśród narcyzów grupowych.		
Obszar badawczy:	**HS - Nauki Humanistyczne, Społeczne i o Sztuce**		
Numer panelu dyscyplin:	HS6 - Człowiek i życie społeczne		
Pomocnicze określenia identyfikujące:	HS6_2 - Psychologia społeczna, polityczna, środowiskowa i międzykulturowa HS6_1 - Psychologia ogólna (w tym: procesów poznawczych, emocji, motywacji, osobowości, różnic indywidualnych), psychologia eksperymentalna, psycholingwistyka HS6_3 - Psychologia kliniczna, zdrowia, penitencjarna, rehabilitacji, neuropsychologia kliniczna		
Planowany okres realizacji projektu (w miesiącach):	60	Liczba wykonawców projektu:	5
Słowa kluczowe:	marginalizacja, agresja, ból, narcyzm grupowy, praktyka uważności		
Planowane nakłady w zł:		Ogółem:	Pierwszy rok realizacji:
		3 288 000,00	307 400,00
Czy projekt jest realizowany we współpracy międzynarodowej?			tak
Kraje:	Stany Zjednoczone Ameryki , Wielka Brytania		

C. **ABSTRACT**

Cel i hipotezy programu badawczego: Celem proponowanych badań jest sprawdzenie czy medytacyjna praktyka uważnej wdzięczności – kształcąca zdolność doceniania doświadczenia chwili obecnej (Kabat-Zin, 1982) – redukuje skłonność do agresji międzygrupowej ze strony osób, które taką agresją reagują na poczucie wykluczenia z relacji międzygrupowych i które określamy, jako narcyzów grupowych (Golec i in, 2009; 2016). Narcyzm grupowy polega na emocjonalnym zaangażowaniu w przekonanie o niezwykłej ważności grupy, do której się należy (np. narodowej lub ideologicznej), połączonym z ciągłą koniecznością zdobywania potwierdzenia jej ważności ze strony innych grup (Golec, i in., 2009). Narcyzi grupowi reagują agresją na poczucie zagrożenia wielkości grupy własnej prawdopodobnie, aby ochronić niestabilne poczucie własnej wartości (Golec i in., 2017). Praktyka uważności stabilizuje poczucie własnej wartości i obniża reaktywność wobec zagrożenia, dlatego może stanowić, dla narcyzów grupowych, alternatywną do agresji formę radzenia sobie z negatywnymi reakcjami emocjonalnymi na sytuacje wykluczenia przez inne grupy. Planowane badania testują dwie hipotezy: (1) że narcyzi grupowi reagują agresją w sytuacji wykluczenia z relacji międzygrupowych, aby zredukować negatywne odczucia, które budzi w nich wykluczenie (i do których się nie przyznają lub nie zdają sobie z nich sprawy, Cascio i in. 2015) oraz (2) że praktyka uważnej wdzięczności może zredukować skłonność do agresywnego reagowania ponieważ m.in. redukuje intensywność tych negatywnych odczuć (Riva,, 2017). W relacjach międzygrupowych praktyka uważności obniża uprzedzenia, ale mechanizmy tego oddziaływania nie są dobrze zbadane (Kang, i in. 2014). Dlatego proponowane badania mogą przynieść nowe odkrycia dotyczące dynamiki agresji międzygrupowej charakterystycznej dla narcyzów grupowych, mechanizmów redukcji tej agresji oraz mechanizmów oddziaływania praktyki uważnej wdzęczności na postawy i zachowania międzygrupowe. Poparcie dla stawianych hipotez sugerują wyniki badania pilotażowego (N = 569), które pokazały, że praktyka uważnej wdzięczności obniżyła uprzedzenia narcyzów grupowych, ponieważ obniżyła ich przekonanie, że grupa będąca przedmiotem uprzedzeń zagraża ich grupie. **Metodyka badań:** Planowane są badania eksperymentalne testujące model, w którym narcyzm grupowy jest moderatorem efektu wykluczenia (vs. akceptacji) w interakcjach międzygrupowych (vs. interpersonalnych, manipulowanych m. in. za pomocą sprawdzonej techniki Cyberball – wirtualnej gry w piłkę, gdzie badani mogą być wykluczeni lub zaakceptowani przez pozostałych uczestników, Wirth i Williams, 2009) na agresję wobec wykluczającej grupy (mierzoną wieloma technikami m.in., jako karanie hałasem, Chester, 2017; lub symboliczna agresja wobec lalki Voodoo, Chester i DeWall, 2017). W tym modelu negatywne emocje traktowane są, jako mediator efektu i mierzone techniką kwestionariuszową i za pomocą pomiarów neuronalnych (aktywacja ośrodków bólu i odporności w mózgu w badaniu fMRI) i fizjologicznych (rozszerzanie źrenic w badaniu okulograficznym, reaktywność kortyzolu oraz zmienność rytmu serca i oddechu). Model będzie testowany wśród badanych, którzy wzięli udział (vs. nie) w praktyce uważnej wdzięczności. Dodatkowo, badania porównają skuteczność praktyki uważnej wdzięczności, samej praktyki uważności, samej wdzięczności mierzonej metodą dzienniczkową i znanych sposobów obniżania wrogości wśród osób narcystycznych (autoafirmacja) i wrogości międzygrupowej (wyobrażony kontakt międzygrupowy). Ponadto, 12-tygodniowe badanie wzdłużne pozwoli określić dynamikę zmian oraz długość utrzymywania się efektu. **Wpływ spodziewanych rezultatów na rozwój nauki:** W kontekście światowego zagrożenia agresją międzygrupową (np. atakami terrorystycznymi) jednym z ważnych wyzwań dla nauk społecznych jest poszukiwanie sposobów zapobiegania radykalizacji osób, które mogą sądzić, że ich grupa jest wykluczona z relacji międzygrupowych. Skłonni do agresji członkowie zradykalizowanych grup charakteryzują się wysokim poziomem narcyzmu grupowego (Jaśko i in. 2017). Zatem, planowane badania mogą mieć istotny wpływ na rozwój nauki, społeczeństwa i cywilizacji ponieważ pozwolą lepiej zrozumieć psycho-fizjologiczny mechanizm leżący u podstaw agresji charakterystycznej dla narcyzmu grupowego oraz mechanizm redukcji tej agresji. Wiedza ta będzie istotna także dla utrzymywania harmonijnych relacji międzygrupowych w ingerującej się Europie, gdzie prawdopodobieństwo nieporozumień i poczucia wykluczenia w relacjach międzygrupowych jest duże. Efektywność znanych metod redukcji wrogości międzygrupowej nie jest sprawdzona w odniesieniu do osób, które są, jak narcyzi grupowi, do niej skłonne. Także, dlatego planowane badania mogą przynieść istotne dla nauk społecznych nowe odkrycia. **Pioniersość projektu:** Badania oparte są o najnowszy stan wiedzy w zakresie narcyzmu, szczególnie grupowego, reakcji na wykluczenie społeczne oraz praktyki uważności. Projekt zakłada współpracę wiodących ekspertów w zakresie tych badań. Projekt jest interdyscyplinarny, ponieważ zakłada wykorzystanie najnowszych odkryć w zakresie psychologii społecznej i klinicznej, neurobiologii społecznej oraz fizjologii reakcji emocjonalnych. Proponowane badania testują nowe hipotezy stanowiące twórcze powiązanie rezultatów najnowszych badań w tych dziedzinach. Miedzy innymi, dlatego, mają one dużą szansę dostarczyć nowych, istotnych dla nich odkryć. Szczególnie, badania te mogą znacznie pogłębić widzę na temat: (1) defensywnej roli agresji narcyzów grupowych, która była wielokrotnie postulowana, ale nigdy empirycznie potwierdzona; (2) wciąż niewystarczająco zbadanych czynników moderujących negatywne odczucia wobec wykluczenia w relacjach międzygrupowych oraz (3) wciąż niejasnych mechanizmów oddziaływania praktyki uważności na postawy i zachowania międzygrupowe.

POPULARNONAUKOWE STRESZCZENIE PROJEKTU

Cel projektu i powody podjęcia tej tematyki badawczej: We współczesnym świecie kontakty miedzy różnymi kulturowo, narodowo czy ideologicznie grupami obfitują w sytuacje, w których członkowie jednej grupy mogą czuć się odrzuceni przez inna grupę (niezależnie od intencji czy możliwości tej ostatniej). Niektóre osoby interpretują takie sytuacje, jako zagrożenie dla dobrego imienia ich grupy i reagują na nie agresywnie. Takie osoby często tworzą lub zasilają radykalne organizacje niestroniące od agresywnych działań (np. ataków terrorystycznych). Badania pokazują, że członków takich organizacji charakteryzuje wysoki poziom narcyzmu grupowego. Cechuje ich przekonanie, że ich grupa jest niezwykle ważna, zasługuje na uprzywilejowane traktowanie, ale nie jest wystarczająco doceniana przez innych. Proponowane badania poszukują sposobu zapobiegania radykalizacji takich osób. Proponowany projekt badawczy ma podwójny szczegółowy cel: (1) określenie, dlaczego narcyzi grupowi mają skłonność do reagowania agresywnie, gdy sądzą, że ich grupa jest wykluczana z relacji międzygrupowych oraz (2) określenie czy i jak dokładnie praktyka uważnej wdzięczności – kształcąca zdolność doceniania doświadczenia chwili obecnej (Kabat-Zin, 1982) –może obniżyć tą skłonność. Praktyka uważności i uważnego przeżywania emocji wiążących nas z innymi kształtuje zdolność konstruktywnego radzenia sobie z poczuciem zagrożenia i negatywnymi emocjami, także w sytuacji odrzucenia przez innych. Obniża uprzedzenia, choć dokładnie jeszcze nie wiadomo, dlaczego. Nie wiadomo także czy praktyka uważnej wdzięczności może obniżać agresję w relacjach międzygrupowych wśród osób, które są szczególnie skłonne do agresji, takich, jak narcyzi grupowi. Można jednak sądzić, że praktyka uważnej wdzięczności może być wśród takich osób szczególnie skuteczna. Narcyzi grupowi wyjątkowo mocno reagują na sytuacje zagrożenia dobrego imienia ich grupy, prawdopodobnie, dlatego, że, jak pokazują badania, nie potrafią oni w sposób konstruktywny radzić sobie z negatywnymi emocjami. Przypuszczamy, że także w sytuacji odrzucenia przez inną grupę będą oni szczególnie silnie odczuwać typowe w takiej sytuacji negatywne emocje, choć, jak sugerują badania, mogą się do tego nie przyznawać lub nawet nie być tego świadomi. Wyniki dużego wstępnego badania potwierdziły, że narcyzi grupowi, którzy przez 10 minut praktykowali uważną wdzięczność byli potem mniej uprzedzeni, ponieważ byli mniej skłonni postrzegać, że grupa będąca obiektem uprzedzeń jako źródło zagrożenia. Dzięki planowanym badaniom możemy lepiej zrozumieć, dlaczego praktyka uważnej wdzięczności miała taki efekt. Planujemy sprawdzić dwie hipotezy:

Hipoteza 1: narcyzi grupowi odczuwają szczególnie silne negatywne emocje w obliczu wykluczenia ich grupy z relacji międzygrupowych. Ponieważ prawdopodobnie nie są tych reakcji świadomi i nie potrafią radzić sobie z nimi w konstruktywny sposób, reagują agresją wobec odrzucającej grupy. Agresja ta pozwala im obniżyć negatywne emocje.

Hipoteza 2: praktyka uważnej wdzięczności pozwala narcyzom grupowym na redukcję negatywnych emocji i dając im inny sposób redukcji tych emocji, obniża ich skłonność do agresji w sytuacji wykluczenia.

Jakie badania będą realizowane w projekcie: Aby sprawdzić postawione hipotezy planujemy postawić narcyzów grupowych w eksperymentalnej sytuacji wykluczenia z interakcji międzygrupowej. Sytuacja ta może zostać zaaranżowana np. przez ich uczestnictwo w znanej grze komputerowej (Cyberball) wykorzystywanej w badaniach nad wykluczeniem. W grze tej uczestnicy z dwóch grup podają miedzy sobą wirtualną piłkę. Badani mogą zostać wykluczeni lub zaakceptowani przez graczy z drugiej grupy, którzy podają do nich piłkę (lub nie). Planujemy zbadać odczucia narcyzów grupowej w trakcie i po sytuacji wykluczenia z tej gry za pomocą bezpośrednich pytań, ale także neuronalnych (za pomocą skanowania mózgu) i fizjologicznych pomiarów bólu i negatywnego pobudzenia (badając rozszerzanie źrenic, reaktywność kortyzolu oraz zmienność rytmu serca i oddechu). Aby zbadać czy negatywne reakcje na wykluczenie prowadzą do agresji planujemy stworzyć sytuację, w której badani będą mogli skrzywdzić członków grupy, która odrzuciła ich w wirtualnej grze w piłkę. Takie zachowania w sposób etyczny, planujemy mierzyć za pomocą nasilenia hałasu, którym badani będą mogli ‘ukarać’ graczy z przeciwnej grupy lub za pomocą symbolicznej agresji wobec lalki Voodoo przedstawiającej członków tej grupy. Takie metody badania zachowań agresywnych stosowane są powszechnie w badaniach psychologicznych. Planujemy porównanie negatywnych reakcji na wykluczenie oraz zachowań agresywnych narcyzów grupowych, którzy brali udział w medytacyjnej praktyce uważnej wdzięczności i reakcji i zachowań narcyzów grupowych, którzy nie brali udziału w tej praktyce. Planujemy także sprawdzić skuteczność praktyki uważnej wdzięczności w porównaniu do praktyki uważności bez odczuwania wdzięczności, doświadczanie wdzięczności bez praktykowania uważności, a także w porównaniu do znanej metody redukcji uprzedzeń, jaką jest wyobrażanie sobie przyjemnego kontaktu z osobami z grupy obcej oraz w porównaniu do autoafirmacji, jako metody redukcji agresywności wśród osób o osobowości narcystycznej. Planujemy także przeprowadzić tzw. badanie wzdłużne, trwające 12 tygodni, w którym badani wezmą udział w specjalnie opracowanym, 6-tygoniowym treningu uważnej wdzięczności, a my będziemy mierzyć, jakie efekty stopniowo przynosi ten trening i jak długo utrzymują się one wśród grupowych narcyzów i osób, które nie przejawiają tej cechy.

JUSTIFICATION - BASIC RESEARCH

The planned research qualifies as original scientific research of basic character. Its aim is to test original hypotheses derived from scientific theories and findings. It aims at producing new knowledge and developing scientific theory. The planned research is not aimed at direct practical application. However, the new knowledge obtained as its result and part of the methods design in its course (such as a computer/mobile app to support mindful gratitude meditation) may have practical application.

D. ANKIETA DOROBKU NAUKOWEGO KIEROWNIKA PROJEKTU

1. Imienny wykaz
(tytuł naukowy, stopień naukowy, imię, nazwisko, charakter udziału w realizacji projektu)

Tytuł zawodowy, stopień naukowy lub tytuł naukowy	Imię i nazwisko	Charakter udziału
dr hab.	Agnieszka Monika Golec	Kierownik projektu

2. Ankieta dorobku naukowego

Kierownik projektu dr hab. Agnieszka Monika Golec

1) Dane osobowe

Imię i nazwisko: dr hab. Agnieszka Monika Golec
PESEL: 70121206205

Typ zatrudnienia w projekcie: wynagrodzenie dodatkowe
Rodzaj stanowiska: pozostałe
Okres pobierania wynagrodzenia w projekcie (w miesiącach): 60

2) Adres zamieszkania, numer telefonu, email

Adres zamieszkania: os. Niepodleglości 8 m. 27, 31-861 Kraków, małopolskie, Polska
Adres do korespondencji: os. Niepodleglości 8 m. 27, 31-861 Kraków, małopolskie, Polska
Numer telefonu: 00447914631589
E-mail: agnieszka.golec@gmail.com

3) Miejsca zatrudnienia i zajmowane stanowiska

SWPS Uniwersytet Humanistycznospołeczny z siedzibą w Warszawie; Wydział Zamiejscowy w Poznaniu; Instytut Psychologii (SWPS University of Social Sciences and Humanities; Branch Faculty in Poznań; Institute of Psychology)
Stanowisko: profesor (professor)
Adres: ul. gen. T. Kutrzeby 10, 61-719 Poznań, wielkopolskie, Polska

4) Informacje o liczbie cytowań oraz indeksie H dla paneli HS (nauki humanistyczne i społeczne), tam gdzie to możliwe podać

Źródło: Google Scholar (the only source that can find all my publications)
Łączna liczba cytowań wszystkich dotychczasowych publikacji bez autocytowań: 945
Indeks H: 19

5) Academic and Research Career (in English)

(Institution, Department/Faculty or any other Research Unit, Academic Training, Date of obtaining Academic Degree)

Academic qualifications

Oct. 2015 Habilitation, University of Humanities and Social Sciences, Wrocław, Poland
Nov. 1999 PhD in Social and Political Psychology, Institute of Psychology, Polish Academy of Sciences, Warsaw, Poland;
June 1994 MA with honours in Social and Developmental Psychology, Institute of Psychology, Jagiellonian University, Krakow, Poland

Academic employment

March 2015 - present University Professor, University of Humanities and Social Sciences, Poznań, Poland
Sept 2013 – present Senior Lecturer in Psychology, Goldsmiths, University of London, UK
Sept 2013 - present Visting Professor, Centro de Investigação e Intervenção Social, Instituto Universitario de Lisboa, Portugal
Jan 2012 – Sept 2013 Marie Curie Fellow, Centro de Investigação e Intervenção Social, Instituto Universitario de Lisboa, Portual
Aug. 2005 – Dec. 2011 Senior Lecturer in Psychology, Middlesex University, UK
Aug. 2005 - Dec. 2007 Visiting Professor, The Warsaw School of Social Sciences and Humanities Psychology,

Poland
Aug. 2005 - Jan 2007 Visiting Professor, Institute of Psychology, Polish Academy of Sciences
Oct. 2000 – July 2005 Assistant Professor, The Warsaw School of Social Sciences and Humanities Psychology, Poland
Dec. 1999 – July 2005 Assistant Professor**,** Institute of Psychology, Polish Academy of Sciences

6) Publication Record for HS (Art, Humanities and Social Sciences)

5-10 most important works published over the period of 10 years prior to the submission of the proposal. During the evaluation emphasis will be put on the quality of the publications, i.a. if they are listed by the ERIH and/or ERIH Plus, JCR, their nationwide or international impact (where possible, please indicate current five-year impact factor of the journal and number of citations of each publication excluding self-citations; 3 most important publications from the list must be attached as pdf files)

No.	Author(s)	Publication title in the original publication language	Journal (volume, pages) / monograph or monograph by many authors (editor(s), place, publisher, pages. Important note: please do not translate into English journals' and monographs' titles)	Year of publication	Current five-year impact factor	Total number of citations excluding self-citations
1	2	3	4	5	6	7
1.	Golec de Zavala, A., Cichocka, A. & Iskra-Golec, I.	Collective narcissism moderates the effect of in-group image threat on intergroup hostility.	Journal of Personality and Social Psychology, 104, 1019-1039.	2013	7,300	17
2.	Golec de Zavala, A., Cichocka, A., Eidelson, R., & Jayawickreme, N.	Collective Narcissism and Its Social Consequences.	Journal of Personality and Social Psychology, 97, 1074-1096.	2009	7,300	138
3.	Golec de Zavala, A., Peker, M., Guerra, R. & Baran, T.	Collective Narcissism Predicts Hypersensitivity to In-group Insult and Direct and Indirect Retaliatory Intergroup Hostility.	European Journal of Personality, 30, 532–551	2016	3,710	3
4.	Golec de Zavala, A., Cichocka, A. & Bilewicz, M.	The paradox of in-group love: Differentiating collective narcissism advances understanding of the relationship between in-group and out-group attitudes.	Journal of Personality, 81, 17-28	2013	3,590	36
5.	Golec de Zavala, A., Waldzus, S. & Cypryanska, M.	Prejudice towards gay men and a need for physical cleansing.	Journal of Experimental Social Psychology, 54, 1-10	2014	2,970	8
6.	Golec de Zavala, A., Cislak, A. & Wesolowska, E.	Need for Cognitive Closure, Political Conservatism and aggressiveness in inter-group conflict and under collective threat.	Political Psychology, 31, 521-541	2010	2,760	67

7.	Cichocka, A., Golec de Zavala, A,. Marchlewska, M., Bilewicz, M., Jaworska, M., Olechowski, M.	Personal control increases secure but decreases narcissistic in-group positivity.	Journal of Personality	2017	3,590	3
8.	11. Golec de Zavala, A., Cichocka, A., Orehek, E., & Abdollahi, A.	Intrinsic religiosity reduces intergroup hostility under mortality salience	European Journal of Social Psychology, 42, 451-461	2012	2,220	23
9.	Golec de Zavala, A. & Cichocka, A.	Collective narcissism and anti-Semitism in Poland	Group Processes and Intergroup Relations, 15, 213-229	2012	174,000	35
10.	Golec de Zavala, A. van Bergh, A.	Need for cognitive closure and conservative political beliefs: Differential mediation by personal worldviews	Political Psychology, 28, 587-609	2007	2,760	46

7) and/or the research in art: music, fine arts, theatre, film (in English)

up to 10 most important artistic achievements and achievements in the research in art (dating from the period of 10 years prior to the submission of the proposal) with nationwide or international impact, e.g. authorship and publication of a work of art. (a musical score, a record), directing a film, a play, an opera, playing a lead role, authoring an individual exhibition, actively participating in a festival with international impact, directing an international artistic venture

Nie dotyczy

8) Research projects led: both on-going and carried out in the period of 10 years prior to the submission of the proposal (only those to which one contributed as the Principal Investigator, "Kierownik" in Polish), funded under national and international funding schemes (in English)

(titles and ID numbers of projects, sources of funding, dates and places of project implementation and the list of the most important publications resulting from each project)

Manually entered data

1.	Role in the project:	Principal Investigator		
	Project title:	"(Not only) ethnic cleansing: embodiment of prejudice as physical cleansing"	Project ID:	PTDC/MHC-PSO/5141/2012
	Sources of funding:	Fundação para a Sciência e a Tecnologia, Ministerio da Educação e Ciência	Amount of funding:	111 400,00 EUR
	Host Institution:	Centro de Investigação e Intervenção Social, Instituto Universitario de Lisboa		
	Start date:	2013-01-01	Finish date:	2016-05-31
	List of the most important publications:	Golec de Zavala, A., Lantos, D., & Bowden D. (2017). Yoga poses increase psychological empowerment and state self-esteem in comparison to 'power poses'. Frontiers in Psychology. DOI:10.3389/fpsyg.2017.00752 Viewed over 5000 times since publication in April 2017 which places it in first 10% of the most frequently viewed papers of this Journal. I was invited to edit a special issue on psychological effects of yoga. Golec de Zavala, A., Waldzus, S. & Cypryanska, M. (2014). Prejudice towards gay men and a need for physical cleansing. Journal of Experimental Social Psychology, 54, 1-10 Certificate for being among first 10% of the most downloaded paper 3 months of the publication and featured in a dedicated column by Owen Jones in the Guardian https://www.theguardian.com/commentisfree/2014/jun/01/homophobia-deep-rooted-rife-ultimately-doomed		
2.	Role in the project:	Principal Investigator		
	Project title:	"The scent of bigotry. The embodied social cognition and processes of prejudice: Malodors, disgust and prejudice"	Project ID:	PIEF-GA-2010-273896
	Sources of funding:	European Research Commission Marie Curie Intra-European Fellowship (IEF)	Amount of funding:	211 180,00 EUR
	Host Institution:	Centro de Investigação e Intervenção Social, Instituto Universitario de Lisboa		
	Start date:	2012-01-01	Finish date:	2013-08-31
	List of the most important publications:	Golec de Zavala, A., Wladzus, S., Schnall, S., Simao, C. & Murteira, C. (2017) Sensitivity to smell and prejudice: the moderating role of essentialist beliefs. Fronitiers of Psyhcology. Manuscript submitted. Golec de Zavala, A., Wladzus, S., Schnall, S., Simao, C. & Murteira, C. (2015) Observing inter-racial contact increases specific need for cleansing that generalizes and intensifies after actual cleansing. Manuscript submitted Golec de Zavala, A., Wladzus, S., Schnall, S., Simao, C. & Murteira, C. (2015) Observing inter-racial contact increases specific need for cleansing that generalizes and intensifies after actual cleansing. Poster presented at American Psychological Science association in New York, May, 2015 Golec de Zavala, A., Wladzus, S., Simao, C. & Murteira, C. (2014). Why ethnic cleansing? - Is the need for physical cleansing related to prejudice? Paper presented at Paper presented at ISPP 36th Annual Scientific Meeting, Rome Italy Murteira, C., Golec de Zavala, A., Wladzus, S., & Simao, C. (2014). The scent of bigotry: Does environmental smell influence implicit prejudice? Paper presented at Paper presented at ISPP 36th Annual Scientific Meeting, Rome Italy		

3.	Role in the project:	Principal Investigator		
	Project title:	'Exploration of narcissistic beliefs about groups'	Project ID:	SG090532
	Sources of funding:	British Academy	Amount of funding:	7 289,00 GBP
	Host Institution:	Middlesex University		
	Start date:	2010-01-01	Finish date:	2010-03-30
	List of the most important publications:	Golec de Zavala, A., Cichocka, A. & Bilewicz, M. (2013). The paradox of in-group love: Differentiating collective narcissism advances understanding of the relationship between in-group and out-group attitudes. Journal of Personality, 81, 17-28. doi: 10.1111/j.1467-6494.2012.00779.x Golec de Zavala, A., Cichocka, A. & Iskra-Golec, I. (2013). Collective narcissism moderates the effect of in-group image threat on intergroup hostility. Journal of Personality and Social Psychology, 104, 1019-1039. Golec de Zavala, A. & Cichocka, A. (2012). Collective narcissism and anti-Semitism in Poland, Group Processes and Intergroup Relations, 15, 213-229. Golec de Zavala, A. (2011). Collective narcissism and intergroup hostility: the dark side of 'in-group love' Social and Personality Psychology Compass, 5, 309–320. doi: 10.1111/j.1751-9004.2011.00351.x Golec de Zavala, A. & Schatz, R. (2013). Extreme forms of in-group positivity and their negative consequences for intergroup relations. In A. Golec de Zavala & A. Cichocka (Eds). Social psychology of social problems. Intergroup perspective. Basingstoke, UK: Palgrave MacMillan. Golec de Zavala, A. (2012). Collective narcissism. (pp. 151-155) In D. J. Christie (Ed.), Encyclopedia of Peace Psychology. Hoboken, New Jersey: Wiley-Blackwell.		

9) Information on similar research tasks implemented or completed by projects' Principal Investigator (in English)
(project title, ID number of project, principal investigator, main research tasks, source of funding, justification of the need to fund the proposed research tasks in the light of similar tasks listed above)

Nie dotyczy

10) Research experience (longer research visits, placements, etc.) in Poland and abroad over the past 10 years (in English)
(country, institution, type of research stay, duration)

Jan 2012 – Sept 2013 Marie Curie Fellow, Centro de Investigação e Intervenção Social, Instituto Universitario de Lisboa

Sept 2013 – Dec 2014 Research grant from Fundação para a Sciência e a Tecnologia, Ministerio da Educação e Ciência, Centro de Investigação e Intervenção Social, Instituto Universitario de Lisboa

11) Plenary and invited lectures, presentations at renowned international conferences; in case of arts, active participation in international exhibitions, festivals, artistic events and projects in fine arts, music, theatre and film (in English)

Chairing and discussing peer reviewed symposia on collective narcissism at international conferences

Golec de Zavala, A. & Guerra, R. (2017). Quest for collective glory as motivation for political radicalization and intergroup hostility. Symposium co-organizer, chair and discussant at the General Meeting of the European Association of Social Psychology, Granada, Spain

Golec de Zavala, A. & Guerra, R. (2017). Collective Narcissism as a Motivation behind Trump, Brexit and Violent Extremism. Symposium co-organizer, chair and discussant at the ISPP Annual Meeting, Edinburgh, UK

Golec de Zavala, A. (2016). *Collective narcissism and in-group positivity in predicting intergroup attitudes*. Symposium organizer and chair at the ISPP Annual Meeting, Warsaw, Poland

Invited conference and group meeting presentations (last 10 years)

Golec de Zavala, A. (2014). Collective narcissism as predictor of retaliatory intergroup aggression towards those who threaten the in-group´s image. Paper invited to the symposium entitled "Developments in research on narcissism" organized by Barbara Nelicky during the general meeting of the European Association of Social Psychology (EASP) in Amsterdam,

The Netherlands.
Golec de Zavala, A. (2011). *Collective narcissism, genuine in-group love and out-group negativity.* Paper invited to the symposium entitled "Representations of the ingroup and intergroup relations" organized by Sonia Roccas and Michael Wohl during the general meeting of the European Association of Social Psychology (EASP) in Stockholm, Sweden.
Golec de Zavala, A. (2011). *Emotional obstacles to harmonious intergroup relations: love and fear of contamination.* Paper invited to a mini-seminar on Politics of emotions at the Centre for European Studies, University of Lund, Sweden
Golec de Zavala, A. (2010). *Collective narcissism as predictor of intergroup hostility under threat*. Paper invited at Tajfel's conference at University of Warsaw, Warsaw, Poland
Golec de Zavala, A. (2009). *Collective narcissism, perceived threat and intergorup hostility*. Paper invited for Psychological Study of Social Issues and the European Association of Social Psychology sponsored small group meeting on Uncertainty and Extremism, Claremont Graduate College, USA.
Federico, C. & Golec de Zavala, A. (2009). *Status asymmetries in the relationship between the need for closure and extremity in group-centric biases.* Paper invited for Psychological Study of Social Issues and the European Association of Social Psychology sponsored small group meeting on Uncertainty and Extremism, Claremont Graduate College, USA.
Golec de Zavala, A, Cichocka, A., Swierszcz, J. & Orehek, E. (2008). *Intrinsic Religiosity And Inter-Group Hostility In Times Of Existential Threat.* Invited paper presented at a symposium at International Congress of Psychology, Berlin, Germany
Golec de Zavala, A. & Federico C. (2007). *Need for closure and actions in conflict: moderating effect of salient conflict schema*. Invited paper presented at a symposium at Annual Meeting of International Society of Political Psychology, Portland, USA
Golec de Zavala, A. & Federico C. (2007). *Need for closure and conflict-strategy preferences: Experimental evidence for the moderating effect of salient conflict schema*. Invited paper presented at a symposium at Annual Meeting of Society of Personality and Social Psychology, Memphis, USA
Golec de Zavala, A. (2007). *Understanding responses to political conflict: interactive effects of the need for closure and conflict schemas.* Invited paper presented at a symposium at British Psychological Society Social Psychology Section Conference, Kent, UK

Other invited presentations at universities (last 10 years)
Golec de Zavala, A. (2017). *Untangling the links between self views, in-group satisfaction, nationalism and collective narcissism.* Invited lecture at Institute University of Lisbon (ISCTE), Portugal.
Golec de Zavala, A. (2017). *Collective narcissism and its social consequences* Doctoral seminar at the Institute of Social Sciences at Institute University of Lisbon (ISCTE), Portugal.
Golec de Zavala, A. (2016). *Collective narcissism and its social consequences.* Invited seminar presentation at the department of psychology, Royal Holloway, University of London.
Golec de Zavala, A. (2015). *Prejudice, contamination and cleansing*. Invited seminar presentation at the department of psychology, University College, London.
Golec de Zavala, A. (2015). *Collective narcissism and its social consequences.* Invited seminar presentation at the department of psychology, University of Southampton.
Golec de Zavala, A. (2014). *Prejudice, contamination and cleansing*. Invited seminar presentation at the department of psychology, Brunel University.
Golec de Zavala, A. (2014). *Prejudice, contamination and cleansing*. Invited seminar presentation at the department of psychology, Anglia Raskin University.
Golec de Zavala, A. (2014). *Prejudice, contamination and cleansing*. Invited seminar presentation at the department of psychology, University of Kent.
Golec de Zavala, A. (2014). *Collective narcissism and its social consequences.* Doctoral seminar at the Institute of Social Sciences at Institute University of Lisbon (ISCTE), Portugal.
Golec de Zavala, A. (2014). *Collective narcissism and its social consequences.* Seminar presentation at the anomalistic psychology research group meeting, Goldsmiths, University of London
Golec de Zavala, A. (2014). *Collective narcissism and its social consequences.* Seminar presentation at the social psychology research group meeting, Goldsmiths, University of London
Golec de Zavala, A. (2013). *Is homophobia co-experienced with physical contamination? Evidence from psychological studies.*Invited talk at the Center of Gender Research, University of Winchester
Golec de Zavala, A. (2012). *Dark side of in-group love*: *Collective narcissism and its social consequences*. Invited presentation for the Social Psychology Seminars Series at ICS-Instituto Universitario de Lisboa
Golec de Zavala, A. (2012). *Collective narcissism.* Invited talk at the Social Psychology Seminars at the Institute of Social Sciences at Institute University of Lisbon, Portugal.
Golec de Zavala, A. & Cichocka A. (2012) *Collective narcissism.* Invited research talk at the research seminar series organized by the Group, Self and Intergroup Relations research group at CIU IUL, Portugal
Golec de Zavala, A. (2012) *Not only ethnic cleansing: the effects of imagined intergorup contact on the need for cleansing.* Invited research talk at the research seminar series organized by the Group, Self and Intergroup Relations research group at

CIU IUL, Portugal
Golec de Zavala, A. (2011) *Collective narcissism and its intergroup consequences*. Invited research talk at research seminar in psychology series at School of Psychology, University of St Andrews
Golec de Zavala, A. (2010). *Collective narcissism and its intergroup consequences.* Research talk at Research Seminars series at London South Bank University
Golec de Zavala, A. (2009) *Existential threat and inter-group conflict: Moderating role of mature religiosity*. Research talk at Research Seminars series at Middlesex University
Golec de Zavala, A. (2009) *Collective narcissism and its social consequences*; Research talk at Research Seminars series at University of Essex
Golec de Zavala, A. (2008) *Narcyzm grupowy i jego rola w stosunkach miewdzygrupowych* (Collective narcissism and its role in intergroup relations). Invited lecture at Warsaw University; Centre For Research On Prejudice.
Golec de Zavala, A. (2008) *Narcissistic group identification and its inter-group consequences*; Research talk at Research Seminars series at University of Kent
Golec de Zavala, A. (2008) *Narcissistic group identification and its inter-group consequences*; Research talk at Research Seminars series at Middlesex University
Golec de Zavala, A. (2007) *Understanding responses to political conflict: interactive effects of the need for closure and conflict schemas.* Research talk at Research Seminars series at Royal Holloway University

12) Membership in renowned scientific societies, Polish and international scientific or academic organisations (in English)
(name of the society, scientific or academic organisation, role, positions held)

European Association of Social Psychology
International Society of Political Psychology

13) Membership in the scientific committees of renowned international conferences, exhibitions, festivals, artistic events (in fine arts, music, theatre and film) (in English)

2011 Member of the Award Committee for the International Society of Political Psychology Lasswell Award for distinguished scientific contribution in the field of political psychology.
2008 Member of the Award Committee for the International Society of Political Psychology Roberta Sigel Award for Best Dissertation
2004 Intergroup relations Section Chair for Scientific Committee for the program of the Annual Meeting of International Society of Political Psychology, Lund, Sweden

14) Most significant research achievements (in English)
(description of up to 3 most significant research achievements in the last 10 years; in the case of research initiatives in art, also authorship of works of international impact, or works of art significant for Polish culture)

(1) Collective narcissism research impact. Since the introduction of the first line of studies on the concept of collective narcissism and the introduction of the Collective Narcissism Scale in a large paper published by *Journal of Personality and Social Psychology* in 2009,brought up significant theoretical developments which were published in further 12 international outlets (including Journal of Personality and Social Psychology, Journal of Personality, European Journal of Personality, Political Psychology, European Review of Social Psychology). They were presented in several invited review papers published in representative journals in social psychology and books in social psychology and personality and individual difference psychology. In particular, I was invited to write review chapter on collective narcissism for a book (In Hermann, A., Brunell, A.,& Foster., J. (Eds.) *The Handbook of Trait Narcissism: Key Advances, Research Methods, and Controversies.* Springer) that features all leading scholars on narcissism (e.g. Roy Baumeister, Brad Bushman, Constantine Sedikides). In addition, I was invited to write a review article for a prestigious outlet of ISPP Advances in Political Psychology for January 2019 issue. In research on collective narcissism I have collaborated with leading researchers in the field of political psychology (Professor Christopher Federico, Professor Robert Schatz), personality psychology (Professor Constantine Sedikides) and with such recognized research centers as START. I have trained outstanding scholars who publish on collective narcissism (Aleksandra Cichocka, Aleksandra Cislak). The research on collective narcissism, is now conducted at least in four independent labs (Goldsmiths University, the National Consortium for the Study of Terrorism and Responses to Terrorism (START) at the University of Maryland, College Park, University of Kent, Kardynal Wyszynski University), The research on collective narcissism has been featured in a number of press publications inclusing a feature in:
the BPS Digest (https://digest.bps.org.uk/2016/12/09/theres-such-a-thing-as-collective-narcissism-and-it-might-explain-a-

lot-thats-going-on-at-the-moment/); **the Vox** (https://www.vox.com/science-and-health/2017/1/4/14106088/collective-narcissism-trump-brexit-psychology); **the BBC online** (http://www.bbc.com/future/story/20170303-how-collective-narcissism-is-directing-world-politics); **the Independent (http**://www.independent.co.uk/news/world/politics/welcome-to-the-age-of-collective-narcissism-a7546986.html); **the Washington Post (**https://www.washingtonpost.com/news/monkey-cage/wp/2017/03/17/collective-narcissism-explains-at-least-some-of-president-trumps-support/?utm_term=.c123d353b0ea); **Polityka** (http://archiwum.polityka.pl/art/narcyz-zbiorowy,452837.html)

(2) Collective narcissism Scale. I have developed the Collective Narcissism Scale that assesses the concept of collective narcissism – individual difference in emotional investment in the belief in in-groups exaggerated greatness contingent on external recognition. This concept extends the concept of individual narcissism onto the social dimension of self. The scale was demonstrated to have high validity and high internal consistency. It was presented in a publication in one of the leading journal of the field – *Journal of Personality and Social Psychology* in a 5 studies paper. The scale was included in the APA repository of psychological tests PSYCHtest. It has been translated to multiple languages and used in research in multiple countries including a large cross-cultural study (Zemojtel-Piotrowska, 2017), US (national representative sample, Federico & Golec de Zavala, 2017, Poland, national representative samples e.g. Cichocka, Golec de Zavala et al., 2017; Russia, representative sample, Golec de Zavala,et al., 2017; and samples in China, Gries, Cai, 2013). The scale has been used to assess collective narcissism in organizational contexts.

(3) **Embodiment research.** I have obtained the prestigious Marie Curie IntraEuropean Fellowship to conduct research at ISCTE CIS IUL in Portugal – an outstanding international institution for study of social and organizational psychology. The fellowship allowed me to collaborate with leading researchers in the field of cognitive embodiment and prejudice. I have developed research collaborations with such scientists as Sven Wladzus, Alan Fiske, Thomas Schubert. The scholarship resulted in publications in international outlets despite the difficulties expereinced by embodied cognition as a field in recent years (e.g. Journal of Experimental Social Psychology, Frontiers of Psychology), my collaboration as an expert reviewer for research grants submitted to European Research Council and my membership in ISCTE CIS and my continuous Visiting Professorship at this institution. Research on this project was presented by Owen Jones in a publication in the Guardian https://www.theguardian.com/commentisfree/2014/jun/01/homophobia-deep-rooted-rife-ultimately-doomed. My research on yoga as embodiment of empowerment has been recently published in *Frontiers in Psychology (http://journal.frontiersin.org/article/10.3389/fpsyg.2017.00752/full)*. It was viewed over 5500 times since publication in April 2017 which places it in first 10% of the most frequently viewed papers of this Journal. The journal invited me to edit a special issue on psychological effects of yoga. This research was also popularized by an article in the Conversation which attracted over 60 000 readers (https://theconversation.com/how-yoga-makes-us-happy-according-to-science-77840).

15) Most important international and prestigious Polish awards for research as well as other research activity (plenary lectures at conferences; in case of research in art, also active participation in international exhibitions, festivals, artistic events and projects in fine arts, music, theatre and film) (in English)

(type of prize/award, place and date)

I was nominated to have my research profile entered to AcademiaNet run by the Robert Bosch Stiftung which supports and promotes prominent female scientists
http://www.academia-net.org/profil/dr-agnieszka-golec-de-zavala/1212639

PLAN BADAŃ

Lp.	Nazwa zadania badawczego w języku polskim	Podmiot realizujący zadanie
1.	Zadanie 1: Przeprowadzenie internetowego badania 1, aby sprawdzić efektywność techniki uważnej wdzięczności w odniesieniu do sytuacji wykluczenia oraz aby dopracować metody dalszych badań	SWPS Uniwersytet Humanistycznospołeczny z siedzibą w Warszawie, Wydział Zamiejscowy w Poznaniu
2.	Zadanie 2: Przeprowadzenia badania 2 w laborstorium Dr Chestera w Virginia Commonwealth University, obórbka i analiza danych	SWPS Uniwersytet Humanistycznospołeczny z siedzibą w Warszawie, Wydział Zamiejscowy w Poznaniu
3.	Zadanie 3: Przeprowadzenie okulograficznego badania 3, obróbka danych i analiza	SWPS Uniwersytet Humanistycznospołeczny z siedzibą w Warszawie, Wydział Zamiejscowy w Poznaniu
4.	Zadanie 4: Przeprowadzenie internetowych badan 4a i b w Polsce i w USA, analiza danych	SWPS Uniwersytet Humanistycznospołeczny z siedzibą w Warszawie, Wydział Zamiejscowy w Poznaniu
5.	Zadanie 5: Przeprowadzenie badania 5 z pomiarem EKG i kortyzolu, obróbka i analiza danych	SWPS Uniwersytet Humanistycznospołeczny z siedzibą w Warszawie, Wydział Zamiejscowy w Poznaniu
6.	Zadanie 6: Przeprowadzenie badania 6 porównujące skuteczność praktyki uważnej wdzięczności do innych praktyk, analiza danych	SWPS Uniwersytet Humanistycznospołeczny z siedzibą w Warszawie, Wydział Zamiejscowy w Poznaniu
7.	Zadanie 7: Przeprowadzenie wzdłużnego badania 7, analiza danych	SWPS Uniwersytet Humanistycznospołeczny z siedzibą w Warszawie, Wydział Zamiejscowy w Poznaniu

UWAGA: Zadaniem badawczym nie jest np. zakup aparatury, udział w konferencji, przygotowanie publikacji itp. Zadania badawcze muszą zawierać tożsamą treść w języku polskim i angielskim.

F. KOSZTORYS

Pozycja	Rok 2018	Rok 2019	Rok 2020	Rok 2021	Rok 2022	Rok 2023	Razem
1	2	3	4	5	6	7	8
Koszty bezpośrednie realizacji projektu, w tym:	271 000	598 000	461 000	474 000	560 000	36 000	2 400 000
- wynagrodzenia wraz z pochodnymi i stypendia naukowe	54 000	385 000	385 000	385 000	385 000	18 000	1 612 000
- koszty aparatury naukowo-badawczej, urządzeń i oprogramowania	180 000	0	0	0	0	0	180 000
- inne koszty bezpośrednie	37 000	213 000	76 000	89 000	175 000	18 000	608 000
Koszty pośrednie	36 400	239 200	184 400	189 600	224 000	14 400	888 000
Koszty realizacji projektu ogółem	307 400	837 200	645 400	663 600	784 000	50 400	3 288 000

Kalkulacja i uzasadnienie poszczególnych pozycji kosztorysu

1) Investigator / Staff Costs

a) Number of Investigators: 5

The number of individuals to constitute the basis for the calculation of additional remuneration budget: 1

b) Investigators: nature of their contribution in the project and a justification of investigator costs

No.	Full name / Nature of contribution in the project / Type and character of position	Employing entity	Project-related remuneration period (months)	Total salary cost on grant (PLN)
1.	dr hab. Agnieszka Monika Golec Principal Investigator Position: no full-time position, other	SWPS University of Social Sciences and Humanities, Faculty of Psychology in Ponzań	60	360 000
	Scope of work within individual project tasks:	Principal investigator will supervise all tasks of the project, coordinate the work of postodoctoral researcher and lab manager and supervise two doctoral researchers . Principal investigator will organize collaboration with international experts and oversee data collection, analysis, interpretation and presentation. Principal investigator will engage in communicating the research findings to academic and non-academic audiences. Principal investigator will lead works on presenting and writing up the results of planned studies, submitting empirical manuscripts to peer reviewed journals and preparing all versions of manuscripts until publication.		
2.	Post doctoral researcher Co-Investigator Position: full-time position, post-doc type	SWPS University of Social Sciences and Humanities, Faculty of Psychology in Ponzań	48	480 000
	Scope of work within individual project tasks:	A post doctoral researchers will be employed with the full time salary for a period of 48 months. They will supervise one and support the other of the two lines of lab-based studies. The position will require expertise in social neuroscience research and substantial knowledge in combining psychological and physiological measurements. The researcher will be expected to supervise and support the data collection in collaboration with lab manager and Principal Investigator. They will process, analyze, interpret and collaborate in presenting the collected data. They will be responsible for preparing publications presenting obtained results. The most suitable candidates will be selected through the process of open job application in response to a list of required skills and competences.		
3.	doctoral student Co-Investigator Position: scholarship position, PhD student type	SWPS University of Social Sciences and Humanities, Faculty of Psychology in Ponzań	48	216 000
	Scope of work within individual project tasks:	A full time PhD scholarship will be offered to recruit the most suitable candidates to support the project. This complex project that brings together an interdisciplinary, international team of experts will offer outstanding training and mentorship opportunities for junior scholars. Doctoral student will support data collection, analysis, interpretation and presentation. They will develop original research hypotheses which they will test while supporting the work testing the main hypotheses of the project. One of the doctoral projects can focused more specifically on the expected discrepancy between self-reported and physiological indicators of distress among collective narcissists after intergroup exclusion and on compensatory role of collective narcissistic aggression. Thus, students' work can both contribute to the planned research and develop independent line of investigation.		

4.	doctoral student Co-Investigator Position: scholarship position, PhD student type	SWPS University of Social Sciences and Humanities, Faculty of Psychology in Ponzań	48	216 000
	Scope of work within individual project tasks:	A full time PhD scholarship will be offered to recruit the most suitable candidates to support the project. This complex project that brings together an interdisciplinary, international team of experts will offer outstanding training and mentorship opportunities for junior scholars. Doctoral student will support data collection, analysis, interpretation and presentation. They will develop original research hypotheses which they will test while supporting the work testing the main hypotheses of the project. One of the doctoral projects can focused on f the role of short and long term mindfulness practice in shaping intergroup behaviors and attitudes. Thus, students' work can both contribute to the planned research and develop independent line of investigation.		
5.	Lab manager Stanowisko pomocnicze Position: full-time position, Technical assistant	SWPS University of Social Sciences and Humanities, Faculty of Psychology in Ponzań	48	340 000
	Scope of work within individual project tasks:	Lab manager to oversee research in the newly created lab. This lab will be equipped with eyetracker and ECG measurement (with possible extension for EEG measurements, skin conductance measurement etc.). The project will require expertise in physiological measurements and combining physiological and psychological indicators while interpreting the data. Especially knowledge of processing and interpreting eye-tracking and ECG data indicative of HRV and respiratory sinus arrhythmia will be required. The lab manager need to have expertise in the use of those equipment and processing of the data obtained with this equipment. The role of the lab manager will be providing training and assistance and preparing data for statistical analysis.		
			Total:	1 612 000

2) List of equipment to be purchased and/or built

No.	Nazwa aparatury	Purchasing entity	Year of purchase	Unit Cost (PLN)	Amount	Cost (PLN)	Contribution of the NCN (PLN)
1.	Okulograf Tobii Pro Spectrum TX 300 Hz i oprogramowanie iMotions software CORE	Faculty of Psychology in Ponzań	2018	150 000	1	150 000	150 000
	Justification of purchase:	The project will require a large study measuring pupil dilation. Thus, the project requires a professional eyetracker with sufficient resolution and relevant software. This equipment and software will be used for the purposes of a new lab to be established at University, SWPS, Poznan which does not currently have such equipment. Costs include VAT, handling and shipping. This equipment is necessary for Task 3 but will be bought before this task is planned to train investigator and lab management to use it.					

	Shimmer3 EkG / EMG Kit i oprogramowanie iMotions software	Faculty of Psychology in Ponzań	2018	15 000	1	15 000	15 000
2.	**Justification of purchase:**	The project will require a HRV measurement and respiratory sinus arrhythmia measurement. Thus, the project requires a professional equipment to measure blood pressure and perform pulmometry at the same time and relevant software. Thus, we plan to acquire professional equipment and software to support this measurement. They will equip a new psycho-physiological measurement lab at University, SWPS, Poznan. The costs include VAT, handling and shipping. This equipment is necessary for Task 5 and 7 but will be bought before this task is planned to train investigator and lab management to use it.					
	Laptop + Office	Faculty of Psychology in Ponzań	2018	3 000	5	15 000	15 000
3.	**Justification of purchase:**	The project will require intense data storage, processing, analysis. These will need to be supported with portable computers (to allow mobility and accessing larger numbers of participants as well as safe and convenient storage and transportation facilitating exchange between the members of the international team. We plan to acquire 5 laptops for each member of the team. The laptops will equip a new psycho-physiological measurement lab at University, SWPS, Poznan. Calculated at c.a. 3000PLN per laptop. The laptops are necessary for Tasks 1-7.					
					Total:	180 000,00	180 000,00

3) Other costs justification (in English)
(Please list and justify type of costs, estimated costs in accordance with the research plan)

Materials
(expendable goods for direct use in the project)
Cost: 5 000,00
Laser Printer/Scanner and toner for 5 years 3000PLN
One heavy duty laser printer will be required to equip the psycho-physiological measurement lab at University, SWPS, Poznan. It will support administrative and office work related to the project: printing leaflets, communicaton with participants, printing academic communications etc. The printer is necessary to support Tasks 1-7.
Office materials (paper etc) for 5 years 2000PLN
Office materials will support administrative and office work related to the project. Office materials are necessary to support Tasks 1-7.

Outsourced services
(services ordered from entities external to the Host Institution)
Cost: 262 000,00
Cortisol reactivity 10 000PLN
The project will require cortisol reactivity analysis to asses distress in Study 5 among 200 participants. Samples will be collected after exclusion and after aggression in the lab. Research assistants will be trained to collect the samples by the Lab Manager. External company will be recruited to perform the analysis. . This cost is calculates at 50PLN per participant. This analysis is necessary for Task 5.
Online Research 66 000PLN
Online research panel will be required to collect data for large Study 1 (14 000PLN), 4 (22 000PLN) and 6 (30 000PLN) in Poland . The project requires data collection in adult samples to complement lab-based studies conducted on opportunistic student samples. An external company with substantial experience and own platform to conduct online studies will be required to collect such data. The costs include VAT. These costs are necessary to support Tasks 1, 4 and 6.
App and website 34 000PLN
Study 7 will require construction of a mobile phone application allowing participants to practice mindful gratitude daily in a longitudinal study. The app will allow for controlling that participants meditate and collect daily mood measurements. Study 7 will require a website allowing participants to check their progress and obtain additional information to increase their engagement in the project. External company will be hired to program the app that participants would be able to download to their phones and computers. The same company will be hired to create and support the website. The costs are calculated at 10 000PLN for app construction, and 4000PLN project website construction. Support of the website of the project is calculated at 5hours per month maintenance and development for 60 months. Website is neccessary to support Tasks 1-7. Especially, it will be used to recruit participants for Tasks 3, 5 and 7. The app is necessary for Task 7.
Mindfulness trainer 6000PLN
The planned study 7 will develop a 6 weeks long mindful gratitude meditation training based on known foundational mindfulness techniquest such as a body scan. An experienced mindfulness trainer will be hired for three months to develop the midnful gratitude training, working in close collaboration with Principal Investigator and other experts. The trainer will support program implementation. This service is necessary for Task 7. It is based on 1500PLN per month for four months.
Renting of the MRI scanner 146000PLN.
Hiring the MRI scanner is necessary for succesful completion of Task 2. The scanner will be hired from dr Chester's lab at Virginia Commonwealth

University where necessary equipment and staff are available to assist in fMRI and HRV measurements necessary for Study 2. Costs are calculated at 500USD per participants per 80 participants.

Conferences and business trips
(by members of the research team)
Cost: 128 000,00

A research trip to Virignia Commonwealth University to assist the fMRI study (Principal Investigator and post doctoral researcher): 24000PLN
Study 2 will be conducted at neuroscience lab at the Virginia Commonwealth University under the supervision of dr Chester who has an extensive experience in conucting fMRI studies in the context of social exclusion assessing neural and physiological substrates of distress. This lab has software and expertise necessary to conduct studies in experimental design using the Cyberball, HRV and resporatory assessment and the Taylor Aggression Paradigm in the scanner. The costs are calculated for a research visit to support data collection for Study 2. The costs are calculated for Principal Investigator (1 week long visit) and postdoctoral researcher (1 month long visit including training) based on following estimates: plane tickets to Richmont or Washington DC at 700USD per person (6000PLN), accommodation for 1 week in a hotel at 100USD per night for Prinicpal Investigator (700USD) and at 1000USD a month for the Post doc (plus costs of living for a month for the postdoctoral researcher calculated at at 80USD a day including insurance (2400USD). This research trip is necessary for Task 2.
Conference participation 104 000PLN
Dissemination of the results of conducted studies will be crucial for adjusting and imporoving consecutive studies. Thus, principal investigator, postdoctoral researcher and doctoral students will organize symposia and present conference papers to disseminate the results of the studies conducted for the project. In addition, international conferences will provide opportunities to meet with project collaborators to discuss and plan the developments of the project. The costs of conference participation for four members of the research team are conswervatively calculated for one conference per year per four people. Costs are based on follwoing estimates: plane ticket 600USD, accommodation at 100USD for 5 days, average conference fee 400USD, maintenance 80USD a day (6500PLN per person per conference) Conference participation will be crucial to facilitate data analysis and interpretation, write up and dissemination. It is necessary to support Tasks 1-7.

Visits and consultations
(travel expenses / travel expenses by external collaborators and/or consultants and costs of meetings)
Cost: 36 000,00
Project meetings of all collaborators 36 000PLN
Two project meetings are planned to bring together all collaborators of the project for a dedicated meeting. The dedicated meetings will be organized in the begining and in the middle of the project duration to support planning and improvement of the studies, and interpretation and dissemination of results. The meetings will also provide opportunities for mentorship and learning for the junior staff. Those meetings are crucial to support Tasks 1-7. Three foreign experts will be invited to take part in each meeting. Costs are calculated at following estimates: 2 plane tickets from the U.S. (800USD each), 1 plane ticket from the UK (200USD), hotel accommodation for 3 people at 100USD for 4 nights (1200USD), maintenance at 100USD per day for 6 days for 3 people. Costs are estimated to be 18000PLN per meeting.

Collective investigators
(groups of at least 5 individuals with a uniform scope of work, e.g. a team of pollsters, laboratory technicians, other technicians etc.; specify the total cost of all collective groups, and in a separate description of each group state its cost, function in the project, number of individuals involved; give justification of the collective investigators' relevance and connection to the tasks in the project; this category does not include technicians and laboratory assistants)
Cost: 177 000,00
Research participants 162 000PLN
The planned studies will require large samples to test the hypotheses in online and lab based studies. The lab based studies will require participants to spend longer than usual time in the lab and will require special incentives in the form of payment. The longitudinal study will require participants to stay engaged in their participation for 12 weeks. In order to ensure succsful completion of such studies the project will require substantial incentives for participants. Total costs include incentives for:

- Participants for the fMRI study calculated at 50USD per participants per 80 participants in study 2. 14000PLN
- Participants for lab based Study 3 N = 120 to be paid 100PLN per participant 12 000PLN
- Participants for lab based Study 5 N = 200 to be paid 100PLN per participant 20 000PLN
- MTurk participants for Study 4 N = 800 at .5 USD per participant 16 000PLN
- Participants for the longitudinal Study to be paid 50PLN per participant for each week of participation for 6 weeks and then 50PLN for each additional measurement (max 500PLN per participant). 100 000PLN

These costs are necessary for Tasks 2, 3, 4 and 7.

Additional assistance 6000PLN
Lab technicians in the project will be needed for technical support during lab-based studies, which require taking physiological measurements and preparing complex data for analyses. Technical lab assistants will be hired for such help to support tasks 3, 5 and 7. Costs are calculated at 1500PLN per four months of support.
Additional support 9000PLN

Statistical analysis support will be required to process and analyze complex datasets. Temporary assistance will be needed for the longitudinal study 7 to support the lab based measurements in different time points. This help is calculated at 1500PLN monthly per person for six months of total support.

4) Investigators' qualifications
(Qualifications required from investigators involved in the project)

The Principal Investigator will be required to be able to manage the whole project supervising the junior staff, liaising with the lab manager and international experts to ensure that the tasks of the projects are performed on time, to the highest standards and problems are tackled effectively as they arise. The Principal investigator will need to have a substantial knowledge and expertise in the main area of the study (psychology of intergroup relations, narcissism), track record of outstanding academic publications to demonstrate the ability to disseminate important results. The Principal Investigator has a track record of successful research project that brought new development into science and were internationally recognized. She manager complex project and supervised junior Staff and lead international teams of researchers.

Postdoctoral researcher will be required to have expertise in research in social neuroscience as well as in psycho-physiological methods of assessments. They will be required to demonstrate the ability to process and analyze fMRI data, eyetracker and ECG/EMG data or be able to undergo training in some of those methods during the project if sufficient expertise is missing. Post doctoral researcher will be also required to have excellent knowledge in relevant statistical methods. Post doctoral researcher would have experience in conducting interdisciplinary research and track record of academic publications demonstrating the ability to present and disseminate research results.
Doctoral students will be required to have initial training (Masters level) in psychology, preferably social, with interest in intergroup relations and interdisciplinary research. They will be able to train in psycho-physiological methods of assessments and have a good understanding of social neuroscience. Doctoral researchers will have excellent command of statistics and ability to learn new methods of analysis. They will be able to demonstrate research skills, involvement in conducting and disseminating results of academic research.

In addition to junior researchers employed by the project, the planned research will be supported by help and expertise from three international experts in the domains relevant to the project.

Dr David Chester (http://www.psychology.vcu.edu/people/faculty/chester.html) will support the project by collaborating in conducing data for Study 2 with assistance of the postdoctoral researcher who will spend a month working with dr Chester in his lab at Virginia Commonwealth University. We will use the equipment of this lab and available staff to collect and process the data. Dr Chester has an impressive track record of research and publications in social neuroscience. In particular, her researched pain and resilience reactions in face of interpersonal exclusion, the moderating role of dAAC activation on retaliatory aggression of individual narcissists and the reinforcing role of retaliatory aggression in the context of interpersonal exclusions. Dr Chester's recent research investigates the role of mindfulness practice in mitigating aggression in relationships. He analyzed neural substrates of the effects of mindfulness on interpersonal aggression. In his research, he often combines neurological and physiological assessments. Thus, dr Chester can offer invaluable expertise and support for the project. He will collaborate not only in data collection, processing and analysis but also in dissemination of results.

Professor Constantine Sedikides (https://www.southampton.ac.uk/psychology/about/staff/cs2.page) is the head of the Centre of Research on Self and Identity. He is a world renowned expert in research on narcissistic personality. He has collaborated with the Principal Investigator on previous projects. He will support this project with his expert knowledge of the dynamics underlying narcissistic aggression and with his excellent skills in conducting academic research and disseminating their results. He and his team will offer support in data analysis.

Professor Kipling Williams (http://www.psych.purdue.edu/~willia55/) is a word renowned expert in research on ostracism and social exclusion and the author of Cyberball research paradigm. In his recent research he explores moderators of people's reactions to social exclusion as well as the role of exclusion in intergroup dynamics. He will support the project with his expert knowledge of the dynamics of social exclusion and with his excellent skills in conducting academic research and disseminating their results. His team will support the project in conducing the online study in the US.

5) Technical assistant full time employment
(Is full-time employment for Technical Assistant justified and does Technical Assistant meet the criteria for fulltime employment? Describe his/her current employment status and justify full time salary requirements.)

Lab manager to oversee research in the newly created lab. This lab will be equipped with eyetracker and ECG measurement (with possible extension for EEG measurements, skin conductance measurement etc.). The project will require expertise in physiological measurements and combining physiological and psychological indicators while interpreting the data. Especially knowledge of processing and interpreting eye-tracking and ECG data indicative of HRV and respiratory sinus arrhythmia will be required. The lab manager need to have expertise in the use of those equipment and processing of the data obtained with this equipment. The role of the lab manager will be providing training and assistance and preparing data for statistical analysis. The lab manager will be recruited via an open job application until the position is filled. We will look for a person with the above expertise clearly outlined in the job advertisement.
The lab manager is planned as a full time position because the project assumes intense use of psycho-physiological lab for cross-sectional and longitudinal research. Constatnt assistance will be required in carrying on of multiple measurements with the new equipment. The lab manager will be trained and will provide training to doctoral students and additional staff hired during the more intense data collection period. The lab manager will support data processing liasing with the experts collaborating on the project. The lab manager will perform statistical analyses on the data in collaboration with the postdoctoral researcher, Principal Investigator and the experts. The intensity of the project and the lab manager's tasks justify the full time position. The project will require specific and complex expertise which justifies high salary.

G. OŚWIADCZENIA

G1. OŚWIADCZENIA KIEROWNIKA PROJEKTU dr hab. Agnieszka Monika Golec

1. Oświadczam, że zadania badawcze, objęte niniejszym wnioskiem, nie są i nie były finansowane z Narodowego Centrum Nauki, jak również z innego źródła.
   Oświadczam, że równocześnie nie ubiegam / ~~ubiegam~~ się o finansowanie tych zadań z innych źródeł:
2. Oświadczam, że w przypadku uzyskania finansowania na zadania objęte wnioskiem z innego źródła niezwłocznie poinformuję o tym fakcie Narodowe Centrum Nauki, i:
   a. powiadomię osobę upoważnioną do reprezentacji podmiotu będącego wnioskodawcą o rezygnacji z ubiegania się o finansowanie zadań badawczych w tym konkursie, albo
   b. zrezygnuję z przyjęcia finansowania zadań badawczych z innego źródła.
3. Oświadczam, że w przypadku przyznania decyzją Dyrektora NCN finansowania na zadania objęte wnioskiem :
   a. powiadomię osobę upoważnioną do reprezentacji podmiotu będącego wnioskodawcą o rezygnacji ze środków przyznanych na realizację zadań badawczych przez Dyrektora NCN w tym konkursie, albo
   b. zrezygnuję z ubiegania się o finansowanie zadań badawczych z innych źródeł.
4. Oświadczam, że jestem świadomy, że:
   a. podstawę prawną przetwarzania danych osobowych przez Narodowe Centrum Nauki stanowi art. 23 ust. 1 pkt 2 ustawy z dnia 29 sierpnia 1997 r. o ochronie danych osobowych (tekst jednolity: Dz. U. z 2002 r. Nr 101 poz. 926, ze zm.) – dane osobowe są niezbędne dla realizacji zadań określonych w ustawie z dnia 30 kwietnia 2010 r. o Narodowym Centrum Nauki;
   b. dane osobowe zawarte we wniosku o finansowanie projektu badawczego będą przetwarzane wyłącznie w celu dokonania jego ewaluacji, przeprowadzania ewaluacji realizacji zadań Centrum oraz upowszechniania informacji o ogłaszanych przez Centrum konkursach, a w przypadku przyznania środków finansowych na realizację projektu badawczego w celu nadzoru, kontroli, oceny realizacji i rozliczania projektu oraz sprawozdawczości;
   c. dane osobowe zawarte we wniosku zostaną udostępnione osobom, które na zlecenie Narodowego Centrum Nauki dokonują ewaluacji wniosku, lub uczestniczą w ewaluacji realizacji zadań Centrum, a w przypadku przyznania środków finansowych na realizację projektu także osobom, które uczestniczą w sprawowaniu nadzoru, kontroli oraz ocenie realizacji projektu badawczego i jego rozliczaniu;
   d. podanie danych jest dobrowolne, przy czym odmowa ich podania jest równoznaczna z nieprzekazaniem wniosku do oceny merytorycznej w konkursie;
   e. osoby, których dane są przetwarzane przez Narodowe Centrum Nauki mają prawo dostępu do treści swoich danych i ich poprawiania zgodnie z przepisami ustawy o ochronie danych osobowych.
5. Oświadczam, że projekt badawczy obejmuje badania:
   a. ~~wymagające zgody i / lub pozytywnej opinii właściwej komisji bioetycznej;~~
   b. ~~wymagające zgody właściwej komisji etycznej ds. doświadczeń na zwierzętach;~~
   c. ~~wymagające zgody na podstawie przepisów o organizmach genetycznie modyfikowanych;~~
   d. ~~wymagające zgody i / lub zezwolenia na badania na gatunkach chronionych lub na obszarach objętych ochroną;~~
   e. wymagające innych pozwoleń, zgodnie z zasadami dobrej praktyki w danej dziedzinie / dyscyplinie naukowej;
   f. ~~kliniczne podlegające ustawie z dnia 6 września 2001 r. z późn. zm. o prawie farmaceutycznym lub ustawie z dnia 20 maja 2010 r. z późn. zm. o wyrobach medycznych.~~

   i zobowiązuję się do uzyskania wymaganych zgód, opinii, zezwoleń oraz pozwoleń przed rozpoczęciem realizacji badań, których dotyczą.

   Opis działań podjętych w celu zapewnienia wykonywania badań zgodnie z zasadami dobrej praktyki w danej dziedzinie / dyscyplinie naukowej oraz informacja czy takie zgody zostały już wydane, bądź informacje jak te warunki zostaną spełnione (maks. 2,5 tys. znaków ze spacjami).

Wszystkie planowane badania zostaną przed przeprowadzeniem przedstawione do oceny Komisji ds Etyki Badań Psychologicznych na Uniwersytecie Humanistyczno Społęcznym. Komisja ta sprawdza, czy zaplanowane badania spełniają miedzynarodowe standardny etyczne w badaniach psychologicznych. Zaplanowane badania wykorzystują metodologię, która została zaakceptowana przez Amerykańskie Towarzystwo Psychologiczne (APA) jako spełniająca standardy etycznego badania efektów wykluczenia społecznego i zachowań agresywnych. W badaniach tych nie dochodzi do fajtycznych zachowań agresywnych. Badani moga odczuwać dyskomfort w sytuacji odrzucenia dlatego też badane osby bedą po badaniu szczegółowo informowane o przebiegu i celu badania, będzie im zaoferowany dostęp do pomoc psycologicznej. Badani będą szczegółowo poinformowani o przebiegu badania, oraz o tym, że ich udział w badaniu jest całkowicie dobrowolny i anonimowy i że w każdej chwili trwania badania mogą, bez podawania przyczyny, zrezygnować z udziału. Zebrane dane będą wykorzystywane jedynie do celów naukowych.

6. Oświadczam, że jestem autorem / ~~współautorem~~ szczegółowego i skróconego opisu projektu badawczego w niniejszym wniosku.
7. Oświadczam, że:
   a. zapoznałem się z zasadami doręczania decyzji Dyrektora Narodowego Centrum Nauki;
   b. wyrażam zgodę na dokonanie weryfikacji wniosku przy pomocy oprogramowania antyplagiatowego oraz umieszczenie treści wniosku w bazie danych oprogramowania;
   c. zapoznałam/em się z treścią *Kodeksu Narodowego Centrum Nauki dotyczącego rzetelności badań naukowych i starania o fundusze na badania* i zobowiązuję się do jego stosowania.

G2. OŚWIADCZENIA OSOBY/OSÓB UPOWAŻNIONEJ/YCH DO REPREZENTACJI PODMIOTU BĘDĄCEGO WNIOSKODAWCĄ

SWPS Uniwersytet Humanistycznospołeczny z siedzibą w Warszawie

1. Oświadczam, że zadania badawcze, objęte niniejszym wnioskiem, nie są i nie były finansowane z Narodowego Centrum Nauki, jak również z innego źródła. Oświadczam, że podmiot, który reprezentuję nie ubiega / ~~ubiega~~ się równocześnie o finansowanie zadań z innych źródeł.
2. Oświadczam, że w przypadku uzyskania finansowania na zadania objęte wnioskiem z innego źródła niezwłocznie poinformuję o tym fakcie Narodowe Centrum Nauki, i:
   a. zrezygnuję z ubiegania się o finansowanie zadań badawczych w tym konkursie, albo
   b. zrezygnuję z przyjęcia finansowania z innego źródła.
3. Oświadczam, że w przypadku przyznania decyzją Dyrektora NCN finansowania na zadania objęte wnioskiem:
   a. zrezygnuję ze środków przyznanych na realizację zadań badawczych przyznanych przez Dyrektora NCN w tym konkursie, albo
   b. zrezygnuję z ubiegania się o finansowanie zadań badawczych z innych źródeł.
4. Działając w imieniu podmiotu, który reprezentuję, w przypadku przyjęcia do finansowania zobowiązuję się do:
   a. włączenia projektu badawczego do planu zadaniowo-finansowego podmiotu;
   b. zatrudnienia kierownika projektu badawczego na zasadach zgodnych z wnioskiem i warunkami konkursu;
   c. zatrudniania wykonawców niezbędnych do realizacji projektu na zasadach zgodnych z wnioskiem i warunkami konkursu;
   d. zapewnienia warunków do realizacji prowadzonych badań, w tym udostępnienia przestrzeni biurowej/laboratoryjnej oraz aparatury naukowo badawczej niezbędnej do realizacji tych badań;
   e. zapewnienia obsługi administracyjno-finansowej realizacji projektu badawczego;
   f. sprawowania nadzoru nad realizacją projektu badawczego i prawidłowością wydatkowanych na ten cel środków finansowych.
5. Oświadczam, że projekt badawczy obejmuje badania:
   a. ~~wymagające zgody i / lub pozytywnej opinii właściwej komisji bioetycznej;~~
   b. ~~wymagające zgody właściwej komisji etycznej ds. doświadczeń na zwierzętach;~~
   c. ~~wymagające zgody na podstawie przepisów o organizmach genetycznie modyfikowanych;~~
   d. ~~wymagające zgody i / lub zezwolenia na badania na gatunkach chronionych lub na obszarach objętych ochroną;~~
   e. wymagające innych pozwoleń, zgodnie z zasadami dobrej praktyki w danej dziedzinie / dyscyplinie naukowej;
   f. ~~kliniczne podlegające ustawie z dnia 6 września 2001 r. z późn. zm. o prawie farmaceutycznym lub ustawie z dnia 20 maja 2010 r. z późn. zm. o wyrobach medycznych.~~

   i zobowiązuję się do uzyskania wymaganych zgód, opinii, zezwoleń oraz pozwoleń przed rozpoczęciem realizacji badań, których dotyczą.

   Opis działań podjętych w celu zapewnienia wykonywania badań zgodnie z zasadami dobrej praktyki w danej dziedzinie / dyscyplinie naukowej oraz informacja czy takie zgody zostały już wydane, bądź informacje jak te warunki zostaną spełnione (maks. 2,5 tys. znaków ze spacjami).

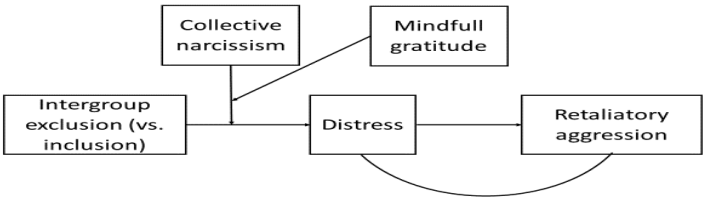
   Wszystkie planowane badania zostaną przed przeprowadzeniem przedstawione do oceny Komisji ds Etyki Badań Psychologicznych na Uniwersytecie Humanistyczno Społecznym. Komisja ta sprawdza, czy zaplanowane badania spełniają miedzynarodowe standardny etyczne w badaniach psychologicznych. Zaplanowane badania wykorzystują metodologię, która została zaakceptowana przez Amerykańskie Towarzystwo Psychologiczne (APA) jako spełniająca standardy etycznego badania efektów wykluczenia społecznego i zachowań agresywnych. W badaniach tych nie dochodzi do fajtycznych zachowań agresywnych. Badani moga odczuwać dyskomfort w sytuacji odrzucenia dlatego też badane osby bedą po badaniu szczegółowo informowane o przebiegu i celu badania, będzie im zaoferowany dostęp do pomoc psycologicznej. Badani będą szczegółowo poinformowani o przebiegu badania, oraz o tym, że ich udział w badaniu jest całkowicie dobrowolny i anonimowy i że w każdej chwili trwania badania mogą, bez podawania przyczyny, zrezygnować z udziału. Zebrane dane będą wykorzystywane jedynie do celów naukowych.

6. W przypadku zakwalifikowania wniosku do finansowania wyrażam zgodę na zamieszczenie, wraz z informacją o wynikach konkursu, na stronie podmiotowej Narodowego Centrum Nauki oraz Ośrodka Przetwarzania Informacji (OPI) popularnonaukowego streszczenia projektu.
7. Działając w imieniu podmiotu, który reprezentuję oświadczam, że:

a. zapoznałem się z zasadami doręczania decyzji Dyrektora Narodowego Centrum Nauki;
b. zapoznałam/em się z treścią *Kodeksu Narodowego Centrum Nauki dotyczącego rzetelności badań naukowych i starania o fundusze na badania* i zobowiązuję się do jego stosowania;
c. wyrażam zgodę na dokonanie weryfikacji wniosku przy pomocy oprogramowania antyplagiatowego oraz umieszczenie treści wniosku w bazie danych oprogramowania.

H1. SKRÓCONY OPIS PROJEKTU.

Research Project Objectives: The proposed research addresses a timely need to find ways of preventing political radicalization among members of marginalized social groups. In the globalizing world, complex intergroup interactions provide ubiquitous occasions for members of one group to feel excluded by members of another group (an outgroup) (Williams, 2012). Collective narcissists see even accidental and unintended intergroup exclusion as a threat to their group's (an ingroup's) image and engage in aggressive retaliation (Golec, et al., 2016). Such people can radicalize towards political violence. Indeed, members of radicalized (and terrorist) organizations score high on the Collective Narcissism Scale (Jaśko, et al., 2017). Collective narcissism is an emotional investment in a belief in exaggerated greatness of one's own group contingent on external validation (Golec, et al., 2009). People who score high on the Collective Narcissists Scale agree that their group's importance and true worth is not recognized by others, concur that their group deserves privileged treatment, and expect that their group obtains its due acknowledgement and respect. Collective narcissism predicts hypersensitivity to intergroup threat and retaliatory aggression: harming others, denying help, and rejoicing in their misfortunes (Golec, et al., 2016). Finding ways of reducing radicalization and aggression of marginalized groups is an important challenge for social sciences. To respond to this challenge the proposed research aims at answering **two questions:** (1) whether collective narcissists are especially distressed by intergroup exclusion and reduce this distress by aggressive retaliation and (2) whether mindful gratitude meditation - the practice of grateful appreciation of the present moment– that fortifies against the particular deficits of the self-worth underlying collective narcissism (Golec, 2017), offers an alternative, to aggression, way of reducing collective narcissistic distress. Encouraged by promising results of a large pilot study (N = 569), the project will test **two hypotheses:** *Hypothesis 1*: collective narcissists feel distressed after being excluded by another group, which leads them to aggress against this group, which reduces their distress and *Hypothesis 2*: mindful gratitude meditation reduces collective narcissistic distress in face of exclusion by another group therefore reducing their aggression. The theoretical model being tested is presented in the Figure 1 below.



Significance of the project. The state of the art and justification: Narcissists - people who hold a grandiose self-image contingent on validation by others – are particularly prone to respond aggressively to social exclusion (Twenge et al., 2001). Most likely, they do so because they experience exclusion as particularly painful: They show enhanced activation of social pain circuits in brain and an increased cortisol reactivity (Cheng et al., 2013) in responses to social exclusion (but they do not acknowledge this experience in self-report, Cascio, et al., 2014). Studies suggest also that narcissists retaliate aggressively to social exclusion because they find the discrepancy between their grandiose self-image and its version threatened by exclusion aversive (Chester & DeWall, 2015). In addition, retaliatory aggression brings momentary positive reinforcement after distress of exclusion (Chester & DeWall, 2017). This may be the reason why it is a default reaction to interpersonal exclusion among narcissists. Given the emerging understanding of the mechanism underlying narcissistic aggression in face of exclusion, it is of paramount importance to understand whether a similar processes can be observed in the context of intergroup exclusion among collective narcissists. Studies show that collective, not individual, narcissism predicts intergroup attitudes and behaviors (Golec, 2017). There are several reasons to expect that collective narcissists may experience heightened distress after intergroup exclusion and to retaliate aggressively to reduce it. First, aggressive retaliation generalizes to all group members when exclusion is seen as perpetrated by a group rather than an individual (Geartner et al., 2008). Negative effects of exclusion increase when exclusion is attributed to group membership (Wirth & Williams, 2009). Second, collective narcissism, uniquely predicts hypersensitivity to ingroup's image threat and retaliatory aggression (Golec, 2017). But, collective narcissists' reactions have not yet been examined in the context of intergroup exclusion. Although it has been previously proposed that collective narcissistic aggression is defensive and compensatory (Golec, 2017), this claim has never been empirically tested. Demonstrating that collective narcissists use intergroup aggression to reduce the distress in face of intergroup exclusion would provide such a test. Such results would also fit the latest findings indicating that collective narcissism is underlain by vulnerable sense of self-worth, self-criticism and negative emotionality, suggestive of inability to constructively regulate emotions and self-soothe in face of adversity (Golec, 2017). Thus, collective narcissists may be particularly driven to reinforcing function of retaliatory aggression as method of down-regulating distress of intergroup exclusion. Crucially, once we understand the driving force behind

collective narcissistic aggression, we can attempt to down-regulate it. The proposed research will test whether the dynamics of collective narcissistic intergroup aggression can be down-regulated by mindful gratitude meditation. Mindful practice of prosocial emotions fortifies against self-vulnerability, improves self-regulation, and reduces reactivity to threat (Brown & Ryan, 2003). As such, it may be particularly effective in addressing self-regulation deficits specific to collective narcissists. It can offer an alternative, to aggression, way of reducing distress of intergroup exclusion thus breaking the vicious circle of collective narcissistic aggressive retaliation. The present project will test whether mindful gratitude meditation is especially effective in reducing collective narcissistic retaliatory aggression. In doing so, the project aims at filling important gaps in our understanding of the role of mindfulness in intergroup context. First, mindful attention practice and mindful practice of prosocial emotions develop different skills and perspectives in practicing individuals (Hildebrandt, et al., 2017). With regards to intergroup attitudes, research shows that mindfulness can reduce prejudice (mindful attention, Lueke & Gibson, 2014; loving kindness meditation, Kang et al., 2013), but it is not clear why and how this happens. It is also unclear whether mindfulness can reduce retaliatory aggression in face of intergroup rejection, especially among collective narcissists who report and embrace explicit prejudice and engage in intergroup aggression. We expect that mindful attention practice may not be sufficient to reduce retaliatory intergroup aggression among collective narcissist because the mechanism underlying their aggression is based on distress reactions to exclusion. Mindful practice of prosocial emotions fortifies against this distress but not all prosocial emotions may be equally easy to practice for collective narcissists. We expect that loving-kindness and compassion meditations may not be effective among collective narcissists because they encounter resistance from people, who like collective narcissists, are highly self-critical (Gilbert, et al., 2012). In addition, convincing collective narcissists - who embrace intergroup hostility - to feel loving kindness towards threatening outgroups is unlikely to be effective. However, experiencing gratitude may increase prosocial emotionality even among collective narcissists, who may not object to counting their blessings. Gratitude is related to physical and psychological well-being (Emmons & McCullough, 2004) and reduced interpersonal aggression (DeWall, & Lambert, 2012). Thus, mindful gratitude meditation may be effective in soothing distress of intergroup exclusion *and* less likely to encounter resistance from collective narcissists than other prosocial emotions. This expectation was supported by results of a pilot study on 569 adult participants which compared the role of mindful attention and mindful gratitude meditation (vs. control) in reducing collective narcissistic prejudice towards a threatening outgroup. They indicated that mindful gratitude meditation, specifically decreased the link between collective narcissism and prejudice by decreasing the perception of the targeted outgroup as threatening. Such findings suggest that the planned research can bring ground-breaking insights in our understanding of ways of reducing collective narcissistic aggression and warrant further, more in-depth investigation of their underlying mechanism. Apart from examining the hypotheses regarding the neural and psycho-physiological mechanism underlying collective narcissistic aggression and the mechanism underlying the down-regulating role of mindful gratitude meditation, the proposed project plans also to test: (1) the unique role of collective narcissism in this model (comparing its role to the role of individual narcissism, self-esteem, other forms of ingroup positivity and other variables predicting intergroup hostility i.e. right wing authoritarianism and social dominance orientation); (2) the unique role of mindful gratitude meditation in reducing collective narcissistic retaliatory aggression (by comparing it to other relevant practices – mindful attention practice, gratitude without mindfulness practice, self-affirmation (which reduces aggressiveness among individual narcissists) and imagined intergroup contact (which reduces prejudice but it is not clear whether it works also on prejudiced people); (3) how long the predicted changes develop and last in a longitudinal study. **Pioneering nature of the project:** The project is based on the cutting-edge research on collective narcissism, neural and physiological correlates of distress of social exclusion and the role of mindfulness and prosocial emotionality in reducing this distress. It assumes confirmed collaboration of leading experts in those areas of research. The project is truly interdisciplinary as it combines the methods and discoveries of social and clinical psychology, social neuroscience and physiology of distress. The planned research tests novel hypotheses combining new discoveries in those domains in innovative and creative ways. The project can bring substantial, and possibly ground-breaking, theoretical advances in our understanding of (1) the defensive nature of collective narcissistic aggression which was frequently postulated but never empirically tested; (2) individual differences and situational factors moderating of the effects of intergroup exclusion, which are still not sufficiently understood and (3) the still unclear mechanisms of the influence of mindfulness on intergroup attitudes and behaviors. **The impact of the project results on the development of the research field and scientific discipline:** In the context of the global terrorism threat, one of the vital tasks of social sciences is understanding ways of preventing political radicalization of groups that may feel marginalized in intergroup relations. Thus, the planned research can have a significant impact on development of social sciences allowing us to better understand the psycho-physiological mechanism underlying aggression from members of such groups and ways of constructively down-regulating this mechanism. This knowledge will be of importance also in integrating and multi-cultural

Europe, where the issue of maintaining harmonious and productive intergroup relations is fundamental especially, while it is facing the refugee crisis and needs to rapidly address psychological consequences of social marginalization. In addition, neither the effectiveness of mindfulness as a method of prejudice reduction, nor the effectiveness of other methods of reducing intergroup hostility (such as the intergroup contact) have been sufficiently examined among people prone to prejudice and intergroup aggression such as collective narcissists. Thus, the proposed research can bring additional insights in this important domain. Finally, the mechanism underlying the influence of mindfulness on prejudice is not entirely clear. The planned research can bring significant new developments in our understanding of this mechanism.

Work plan: A series of experimental studies will test the project's hypotheses. All studies will use **mindful gratitude meditation** lead by an audio recording, prepared by an experienced mindfulness trainer based on a technique called 'body scan' in which attention is focused on the body and gradually moved from feet to head (Brown & Ryan, 2003). During the body scan feeling of gratitude is directed towards each scanned body part. The pilot study showed that 10 minutes of mindful gratitude meditation increased the state mindfulness significantly in comparison to body scan without gratitude vs. a recording of anatomical description of the body. It also reduced collective narcissistic prejudice. Another pilot study (N= 550), showed that self-affirmation which reduces aggressiveness among narcissists (Thomaes, et al., 2009), was ineffective in reducing prejudice among collective narcissists. This technique will be used in Study 6 testing uniqueness of mindful gratitude mindfulness in comparison to other interventions. In all studies (except studies 4a and b, which uses a pretested (N = 176) minimal group paradigm to test generalizability of the findings outside of the Cyberball paradigm) **intergroup exclusion** (vs. inclusion) will be manipulated using the Cyberball paradigm adapted for the intergroup context (Wirth & Williams, 2009). In this computer based game participants are asked to toss a virtual ball to two other participants who either toss the ball back (inclusion condition) or not (exclusion condition). In the intergroup version of the game participants are asked to indicate their ingroup and the alleged co-players represent an outgroup. In all studies using this paradigm the same manipulation check questions will be asked regarding participants' subjective perception of being excluded from interaction solely based on their group membership. **Distress** will be assessed by multiple methods including self-report (the Positive and Negative Affect Scale (PANAS) and the Need Threat Scale (NTS, Chester & De Wall, 2015), physiological (Pupil dilation, heart rate and respiration patterns, cortisol reactivity) and neural methods (activation of dorsal anterior cortex dAAC and anterior insula and activation of resilience to threat regions i.e. ventromedial prefrontal cortex, VMPFC, Maier & Watkins, 2010). The project will be supported by a confirmed collaboration with Dr David Chester from Virginia Commonwealth University. His lab has necessary equipment and trained staff to perform fMRI and HRV studies. In addition, the project will recruit full time lab manager experienced in psycho-physiological assessment and a post doctoral researcher with expertise in social neuroscience. **Intergroup aggression** will be assessed by multiple methods: (1) Taylor Aggression Paradigm (Chester, 2017) in which intensity and duration or a white noise blast is used as an objective and ethically acceptable index of aggressive behavior; (2) the Voodoo Doll Task assessing symbolic aggression as a number of pins stuck into a doll representing members of outgroup (Chester & DeWall, 2015) and (3) a role playing paradigm in Study 4 in which participants can make a choice which can harm the outgroup. All studies will assess collective narcissism and a number of continuous **covariates** usually controlled in studies on collective narcissism to indicate uniqueness of the latter's predictions: individual narcissism (because it predicts retaliation after interpersonal exclusion, Chester & DeWall, 2015), nationalism (because it predicts hypersensitivity to intergroup threat when collective narcissism is not covaried out, Golec et al., 2016) and ingroup satisfaction (because covarying it out typically enhances the effects of collective narcissism, Golec et al, 2013, 2016) as covariates to ensure the expected links are unique for *collective* narcissism in face of *intergroup* exclusion. The studies will also assess covariates usually taken into account in studies on intergroup aggression: Right wing authoritarianism (RWA) and social dominance orientation (SDO) and self-esteem. Those variables will be assessed by relevant scales that have been used in previous studies both in Polish and English language context and they demonstrated excellent validity, reliability and comparability across cultures. **Statistical analyses:** Most of the studies will use moderated mediation in regression context (PROCESS macro for SPSS, Hayes, 2013) to test the model in Figure 1. In the longitudinal study 7 moderated mediation will be tested in a cross lagged model in structural equation models context performed in Mplus or R. The project assumes confirmed collaboration of senior scientists (Professors Williams and Sedikides) who will facilitate the analyses and interpretation of the research results. **Feasibility of research objectives:** The proposed research tests hypotheses based on cutting-edge, but already recognized and reliable, results. Its hypotheses are daring and unconventional, but based on sound theoretical reasoning and supported by such results. The basic predictions of the tested theoretical model were confirmed in a large pilot study. Initial results from another pilot study point also to uniqueness of mindful gratitude mindfulness as a method of reducing collective narcissistic aggression. All methods used in the planned research were used by previous studies and proven valid and reliable or successfully pretested for the purposes of the present

project. All sample sizes were estimated based on effect sizes from previous studies. The project will be supported by experienced postdoctoral researcher and lab manager. The project secured help from renowned experts in relevant research with track records in successful research projects and extensive experience in conducting and disseminating results of cutting edge influential research. All those aspects of the project ensure that the projects tasks are feasible and can be successfully carried out.

Research Methodology

	Aim/Design	Methods
Study 1 (N=500) Online	To conceptually replicate the results of the pilot study and support mindful gratitude as effective technique 3 (mindful gratitude vs. mindful attention vs. control: between) X 2 (intergroup exclusion vs. inclusion: within) design. Collective narcissism, distress, aggression- continuous	-Pretested audio recording to guide mindfulness meditations vs. control -Online Cyberball to manipulate intergroup exclusion - PANAS and NTS before and after exclusion and after aggression -online Voodoo doll task to assess aggression
Study 2 (N=80) Lab-based fMRI study	To conceptually replicate the results of the Study 1 with neural and physiological assessment of distress before, during exclusion and after aggression 2 (mindful gratitude vs. control: between) X 2 (collective narcissism high vs. low: between) X 2 (intergroup exclusion vs. inclusion: within) design. Distress and aggression - continuous	- Preselected participants high (+1SD) vs. low (-1SD) on collective narcissism - Pretested audio recording to guide mindful gratitude meditation -Cyberball to manipulate intergroup exclusion in MRI scanner with simultaneous HR and respiration patterns measurement -Taylor Aggression Paradigm
Study 3 (N=160) Lab-based pupilometry	To increase reliability of findings of Study 2 using pupilometry to assess distress 2 (mindful gratitude vs. control: between) X 2 (collective narcissism high vs. low: between) X 2 (exclusion vs. inclusion: within) design. Distress and aggression - continuous	- Pretested audio recording to guide mindful gratitude meditation - Preselected participants high (+1SD) vs. low (-1SD) on collective narcissism -Cyberball to manipulate intergroup exclusion, - pupil dilation measured before and during the game, before and after aggression. HR and respiration patterns measured simultaneously -Taylor Aggression Paradigm
Study 4a and b (N=800 each) Online	To test the proposed model in a minimal intergroup settings with continuous measurement of moderator and covariates in Poland and in the US to test generalizability of findings. To test the theoretical model in large samples in full factorial between subjects design 2 (mindful gratitude vs. control: between) X 2 (intergroup exclusion vs. inclusion: between) X 2 (opportunity to aggress vs. control: between) design. Collective narcissism, distress and aggression measured as continuous variables	-Pretested audio recording to guide mindful gratitude meditation vs. control -Exclusion and aggression manipulated in a pretested fantasy role-playing game. Participants allocated to groups ostensibly based on a personality test. Description of intergroup relations in which participants' group is either included or excluded from governing in the fantasy world. Aggression opportunity: members of the other group fall to a mysterious illness to which participants' group has a cure. -Distress measured by PANAS and NTS before and after exclusion and after aggression
Study 5 (N=200)	To test the proposed model in a lab based study and compare effects of intergroup to interpersonal exclusion 2 (mindful gratitude practice vs. control) X 2 (interpersonal vs. intergroup) X 2 (intergroup vs. interpersonal: within) X 2 (exclusion vs. inclusion) design. Collective narcissism, distress and aggression measured as continuous variables	- Pretested audio recording to guide mindful gratitude meditation -Cyberball to manipulate intergroup exclusion -HR and respiration patterns measured before and during the game, before, during and after aggression. Cortisol samples taken after exclusion and after aggression - Voodoo doll task to assess aggression
Study 6 (N= 1500) online	To assess uniqueness of mindful gratitude practice as a method to reduce collective narcissists' distress and retaliatory aggression	-Pretested audio recording to guide mindful gratitude meditation vs. mindful attention meditation vs. control vs. self-affirmation vs.

	6 (mindful gratitude vs. gratitude vs. mindful attention vs. imagined intergroup contact vs. self-affirmation vs. control: between) X 2 (intergroup exclusion vs, inclusion: within) design. Collective narcissism, distress and aggression measured as continuous variables	gratitude (diary as in published studies) vs. imagined intergroup contact (as in publish studies. -Next the study will follow methodology of Study 1
Study 7 (N=200 in 4 waves)	To examine dynamics of the change, mediation hypothesis and how long the effects last in a longitudinal study lasting 12 weeks	-Prepared 6 weeks program of guided mindful gratitude meditation for 'treatment' group of preselected participants, high vs. low in collective narcissism, who participate in meditation and report mood daily and are examined in lab with methods of Study 5 in Weeks 1,6, 8 and 12. 'Waiting list group' starts training in Week 7 and is assessed in Week 1, 6, 8 and 12.

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H2. SZCZEGÓŁOWY OPIS PROJEKTU.

Research Project Objectives (research problem to be solved and project's research hypotheses)
The proposed research addresses a timely need to find ways of preventing political radicalization among members of marginalized social groups. In the globalizing world, complex intergroup interactions provide ubiquitous occasions for members of one group to feel excluded by members of another group (outgroups) (Williams, 2012). Collective narcissists see even accidental and unintended intergroup exclusion as threatening to their group (an ingroup) and engage in aggressive retaliation (Golec, et al., 2016). Such people are likely to radicalize towards political violence. Indeed, research shows that members of radical organizations that use aggression as political means score high on the Collective Narcissism Scale (Jaśko, et al., 2017). Collective narcissism is an emotional investment in exaggerated ingroup greatness contingent on external validation (Golec, et al., 2009). People who score high on the Collective Narcissists Scale agree that their group's importance and true worth is not sufficiently recognized by others, concur that their group deserves privileged treatment, and expect that their group obtains its due acknowledgement and respect. Collective narcissism predicts hypersensitivity to intergroup threat and retaliatory aggression: harming others, denying help, and rejoicing in their misfortunes (Golec, et al., 2016). Collective narcissistic leaders promote such behaviors as normative for their group (Federico & Golec, 2017). Finding ways of reducing collective narcissistic retaliatory aggression can help prevent radicalization among people most likely to radicalize towards political violence. Thus, the proposed research aims at answering **two questions:**

(1) whether collective narcissists are especially (and probably not knowingly) distressed by intergroup exclusion and reduce this distress by aggressive retaliation;
(2) whether mindful gratitude meditation - the practice of non-judgmental attention to and appreciation of the present moment – that fortifies against the particular deficits of the self-worth underlying collective narcissism (Golec, 2017) - offers an alternative and more constructive way of reducing collective narcissistic distress and retaliatory aggression.

The project proposes to test **two hypotheses:**

Hypothesis 1: collective narcissists feel distressed after being rejected by members of another group, they retaliate with aggression against this group, which, in turn, reduces their distress. Thus, aggression serves palliative function for excluded collective narcissists;

Hypothesis 2: mindful gratitude meditation reduces collective narcissistic distress in face of intergroup exclusion, therefore reducing their retaliatory aggression. Thus, mindful gratitude meditation can take over the palliative function served before by intergroup aggression.

The tested theoretical model is schematically presented in Figure 1. Premises of this model were initially supported by a large pilot study (N = 569).

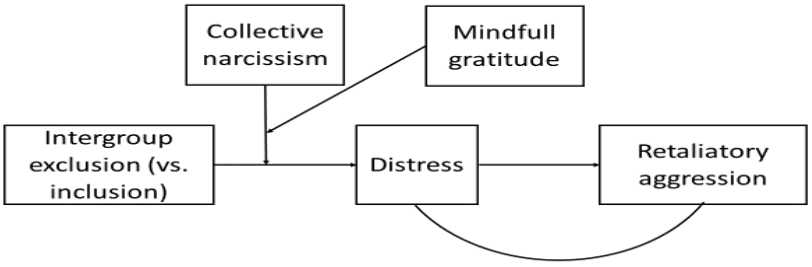

Figure 1. Schematic representation of the tested model.

Significance of the project. The state of the art and justification: Aggression is a frequent response to social exclusion, especially among narcissists: people who hold an inflated and grandiose self-image that is contingent on recognition and validation by others (Twenge et al., 2001). It has been postulated that individual narcissists overreact aggressively to interpersonal exclusion because they experience it as particularly painful. Research showed that the experience of social exclusion overlaps with the experience of physical pain. Social exclusion activates the neural regions that support the experience of physical pain (the dorsal portion of the anterior cingulate cortex (dACC) and the anterior insula, Eisenberger, 2010), and produces pupillary reactions associated with physical pain (Sleegers, et al., 2017). Individual narcissists show enhanced activation of social pain circuits in brain and an increased cortisol reactivity (indicative of a stronger distress response, Cheng et al., 2013; Edelstein, et al., 2010) in responses to social exclusion. However, they do not acknowledge this experience in self-report (Cascio, et al., 2014). Moreover, studies suggest that narcissists retaliate aggressively to social exclusion because they find the discrepancy between their grandiose self-image and its version threatened by exclusion aversive. As long as interpersonal exclusion activates concerns of such a discrepancy (as indicated by activation of the brain regions that subserve discrepancy detection and experience of social

pain) individual narcissists engage in aggressive retaliation (Chester & DeWall, 2015). In addition, retaliatory aggression brings momentary positive reinforcement after social exclusion (increases positive affect, Chester & DeWall, 2017, decreased negative physiological arousal, Verona & Sullivan, 2008). Thus, aggression may be a preferred reaction to social exclusion among narcissists who feel its distress particularly strongly.

Given the emerging understanding of the mechanism underlying narcissistic aggression in face of interpersonal exclusion, it is of paramount importance to understand whether a similar processes can be observed in the context of intergroup exclusion among collective, rather than individual, narcissists. Multiple studies show that collective, not individual, narcissism predicts intergroup attitudes and behaviors (Golec, 2017). There are several reasons to expect that collective narcissists may experience heightened distress after intergroup exclusion and to retaliate aggressively to reduce it. First, exclusion in intergroup contexts evokes reactions towards groups rather than individuals. Aggressive retaliation generalizes to all group members when exclusion is seen as perpetrated by a group rather than an individual (Geartner et al., 2008). People in groups react more aggressively to social exclusion (van Beest, et al., 2012), and negative effects of exclusion increase when exclusion is attributed to group membership (Goodwin, et al., 2010; Wirth & Williams, 2009). Indeed, it has been postulated that groups excluded from intergroup interaction may radicalize towards the use of aggression as means of attracting attention (Williams, 2012). Second, collective narcissism rather than individual narcissism (exaggerating the greatness of the self, rather than a group), nationalism (aiming for international dominance rather than protecting group's image) or non-narcissistic ingroup satisfaction (being proud to be a member of a valued group) predicts retaliatory intergroup aggression in response to perceived ingroup image threat (Golec, et al., 2009; 2013), and a tendency to perceive threat to the group's image in situations that go beyond definitions of insult or offence (Golec, et al., 2016). Collective narcissists' reactions have not yet been examined in the context of intergroup exclusion. Only one study showed that Turkish collective narcissists held hostile attitudes towards members of the European Union because they perceived the Turkish prolonged wait to become a member of the EU (approximation of intergroup exclusion) as an insult to their group (Golec, et al., 2016).

Although it has been previously proposed that collective narcissistic aggression is defensive and compensatory (Cichocka, 2016; Golec, et al., 2009; Golec et al., 2013), this claim has never been empirically tested. Demonstrating that collective narcissists use intergroup aggression to reduce the distress they experience in face of intergroup exclusion would provide such a test and considerably improve our understanding of the nature of collective narcissism. Such results would fit the latest findings indicating that collective narcissism is underlain by vulnerable sense of self-worth, self-criticism and negative emotionality suggestive of inability to constructively regulate emotions and self-soothe in face of adversity (Golec, et al., 2017). Collective narcissism predicts perceiving negative feedback to their group as personally threatening (Golec et al., 2013). It is associated with low personal control (Cichocka, et al., 2017), low self-esteem and vulnerable narcissism (Golec, et al., 2017). Such results suggest that collective narcissists may invest their self-worth in their group's image because they feel entitled to special treatment but helpless at the same time. Such an underlying sense of personal vulnerability may be the reason why collective narcissists feel constantly provoked and undermined by others. It may be also the reason why they may be driven to reinforcing function of retaliatory aggression as method of down-regulating distress of intergroup exclusion. The reinforcement model of retaliatory aggression (e.g. Chester & DeWall, 2017) has been introduced only recently, and it is not known whether its predictions are particularly applicable to certain groups of people (like collective narcissists who engage in aggression) and why.

The proposed research plans to address such gaps in our knowledge by directly examining whether retaliatory aggression reduces distress and pain experienced (although possibly not acknowledged) by collective narcissists in face of intergroup exclusion. Neural and physiological signatures of the pain of social exclusion (activation of the dAAC and left and right anterior insula accompanied by variability in heart rate, Chester & DeWall, 2015; Wagner et al., 2009; or pupil dilation, Sleegers, et al., 2016, cortisol response) will be assessed together with self-reported emotional reactions in order to determine whether experience of pain and distress leads to intergroup aggression and that intergroup aggression reduces this experience among collective narcissists. Based on previous research, we expect a divergence between self-reported and experienced distress of intergroup exclusion (Cascio, et al., 2015). Thus, the project would assess distress by self-report *and* by its physiological and neural signatures.

Crucially, once we understand the driving force behind collective narcissistic aggression, we can attempt to down-regulate it. Thus, the project will examine whether the dynamics of collective narcissistic intergroup aggression can be down-regulated by mindful gratitude meditation. Mindful practice of prosocial emotions fortifies against self-vulnerability, improves self-regulation, and reduces reactivity to threat (Brown & Ryan,

2003; Kabat-Zinn, 1982, 2005). As such, it may be particularly effective in addressing self-regulation deficits specific to collective narcissists. Mindful practice of prosocial emotions may be an alternative way of reducing distress of intergroup exclusion. It can decrease the link between collective narcissism and retaliatory intergroup aggression thus breaking the vicious circle of collective narcissistic aggressive retaliation. The present project will test whether mindful gratitude meditation is especially effective in reducing collective narcissistic retaliatory aggression. In doing so the project aims and filling gaps existing in our understanding of the role of mindfulness in intergroup context. First, mindful attention practice and mindful practice of prosocial emotions develop different skills and perspectives in practicing individuals (Hildebrandt, et al., 2017). Mindful attention practice results in increased attention to and awareness of the present experience and decreased impulsivity. Mindful experiencing of prosocial emotions is linked to increased compassion and self-kindness as well as improved physical and psychological health and resilience in face of adversity and threat (Kok et al., 2013).

However, it is still unclear aspect of mindfulness works, why and how in the context of intergroup attitudes. Research showed that a short practice of mindful attention reduced implicit racial prejudice because it decreased reliance on automatic associations (Lueke & Gibson, 2014). Short loving-kindness meditation - which instructed participants to send feelings of love to a member of an out-group targeted by prejudice - reduced prejudice by increasing positive other-regarding emotions (Stell & Farsides, 2015) and decreased explicit prejudice towards homeless people via reduced intergroup anxiety (Parks, et al., 2014). Six-weeks of loving kindness meditation decreased implicit prejudice towards homeless people via decreased psychological stress (Kang et al., 2013). Thus, mindful attention practice can reduce implicit prejudice and mindful practice of prosocial emotion can reduce implicit and explicit prejudice. However, it is not clear whether mindfulness can reduce retaliatory intergroup aggression in face of intergroup exclusion. It is also unclear whether mindful attention or mindful practice of prosocial emotion is required to reduce intergroup aggression, especially among collective narcissists who report and embrace explicit prejudice and engage in intergroup aggression.

We propose that mindful attention practice may not be sufficient to reduce retaliatory intergroup aggression among collective narcissism because the underlying mechanism of their aggression is based on inability to constructively self-soothe in face of exclusion. Mindful practice of prosocial emotions fortifies this ability but not all prosocial emotions may be easy to introduce among collective narcissists. We expect that loving-kindness and compassion meditations may not be effective among collective narcissists because they encounter resistance from people, who like collective narcissists, are highly self-critical people (Gilbert, et al., 2012). In addition, convincing collective narcissists - who embrace intergroup hostility - to feel loving kindness or compassion towards threatening outgroups is unlikely to be effective. However, experiencing gratitude may increase pro-social emotionality even among collective narcissists, who may not object to counting their blessings. Gratitude is related to physical and psychological well-being (Emmons & McCullough, 2004; Wood et al, 2009), positive mood (McCullough et al., 2004) and reduced interpersonal aggression (DeWall, & Lambert, 2012). Experiencing gratitude and other prosocial emotions fortifies against experiencing distress in face of adversity (Kok, et al., 2013), and social exclusion, specifically (Riva, 2017, Wesselman, et al., 2017). Thus, mindful gratitude meditation may be effective in soothing distress of intergroup exclusion *and* less likely to encounter resistance from collective narcissists than other prosocial emotions such as loving-kindness or compassion.

These expectations were supported by results of a pilot study on 569 adult participants which compared the role of mindfulness and mindful gratitude meditation (vs. control) in reducing collective narcissistic prejudice towards a threatening outgroup. The results indicated that mindful gratitude meditation, specifically decreased the link between collective narcissism and prejudice by decreasing the perception of the targeted outgroup as threatening. This effect was specific to collective narcissism and independent of individual narcissism, ingroup satisfaction, motivation to avoid prejudice or trait mindfulness. Such findings suggest that the planned research can bring ground-breaking insights in our understanding of ways of reducing collective narcissistic aggression and warrant further, more in-depth investigation of its underlying mechanism. Apart from examining the hypotheses regarding the psycho-physiological mechanism underlying collective narcissistic aggression and the mechanism underlying the down-regulating role of mindful gratitude meditation, the proposed project plans also to test:

(1) the unique role of collective narcissism in this model (comparing its role to individual narcissism, self-esteem, other forms of ingroup positivity and other variables predicting intergroup hostility i.e. right wing authoritarianism and social dominance orientation);

(2) the unique role of mindful gratitude meditation in reducing collective narcissistic retaliatory aggression (by comparing it to other interventions – mindful attention practice, gratitude without

mindfulness practice, self-affirmation (which reduces aggressiveness among individual narcissists) and imagined intergroup contact (which reduces prejudice but it is not clear whether it works also on particularly prejudiced people);
(3) how the predicted changes dynamically occur and how long they last in a longitudinal study.

Pioneering nature of the project: The project is based on the cutting-edge research on collective narcissism (Cichocka, 2016; Golec, 2017); neural and physiological correlates of distress of social exclusion (Eisenberger, 2012; Hartgerink et al., 2015; Krach, et al., 2015), among individual narcissists, (Chester, et al., 2016; Chester & DeWall, 2015, 2016); and the role of mindfulness and prosocial emotionality in reducing distress (Kang et al., 2013; Kok & Fredrickson, 2013). The project brings together the leading experts in those fields (Professor Constantine Sedikides, University of Southampton (narcissism), Professor Kipling Williams, Purdue University (social exclusion), Dr David Chester, Virginia Commonwealth University (neural substrates and physiological signatures of distress of exclusion, positive feedback of aggressive retaliation, soothing role of mindfulness). The proposed project is likely to make a substantial advance in the state-of-art within the field of intergroup relations, social exclusion and the role of prosocial emotionality in those contexts. The proposed research uses novel concepts and theorizing in a creative way that is likely to inspire new perspectives. The project will creatively combine experimental methods, priming procedures, questionnaires, with measured of neuroscience and physiology and behavioural, symbolic and self-reported measures of intergroup aggression to fill the gaps in previous research on the role and reduction of retaliatory aggression especially among collective narcissists. Specifically, the project is likely to bring substantial theoretical advances in our understanding of the nature of collective narcissism and compensatory and defensive nature of collective narcissistic intergroup aggression. The project can also make a substantial advancement in our understanding of individual difference and situational factors moderating the effects of intergroup exclusion by clarifying whether collective narcissism is related to increased (and unacknowledged) distress in face of intergroup exclusion and differentiating the role of *collective* narcissism (vs. nationalism and ingroup satisfaction) in the dynamics of *intergroup* exclusion from the role of *individual* narcissism in the dynamics of *interpersonal* exclusion. Moreover, the project is likely to advance our understanding of the still relatively unexamined role of mindfulness in shaping intergroup attitudes. It will clarify which aspect of mindfulness is the most effective in reducing intergroup aggression. The project will specifically examine the mindful practice of gratitude: noticing and appreciating positive aspects of individual experience. It will advance our understanding of this understudied prosocial emotion.

The impact of the project results on the development of the research field and scientific discipline: In the context of the global terrorism threat, one of the vital challenges for social sciences is examining ways of preventing political radicalization of groups whose members may feel marginalized in intergroup relations. Thus, the planned research can have a significant impact on development of social sciences allowing us to better understand the psycho-physiological mechanism underlying collective narcissistic retaliatory aggression in face of intergroup exclusion and ways of constructively down-regulating this mechanism. This knowledge will be of importance also in integrating and multi-cultural Europe, where the issue of maintaining harmonious and productive intergroup relations is fundamental especially, while it is facing the refugee crisis and needs to rapidly address the issue of psychological consequences of social marginalization. In addition, neither the effectiveness of mindfulness as a method of prejudice reduction, nor the effectiveness of other methods of reducing intergroup hostility (such as the intergroup contact) have been sufficiently examined among people prone to prejudice and intergroup hostility. Programs for improving intergroup relations through contact have proven successful. However, their effectiveness among people particularly prone to radicalization and intergroup aggression – is debated (Dhont & van Hiel, 2009; Dhont, et al., 2014; Kteily et al., 2017). It is not yet clear how those interventions may work among people who invest their self-worth in their group's image and embrace prejudice and intergroup hostility. Such people may not be inclined to engage in or imagine positive intergroup contact or any interventions that require active re-working of negative attitudes towards outgroups. Thus, we need new, more subtle, cost-effective and sustainable interventions to reduce perceived exclusion and intergroup aggression. The proposed research can open a new perspective on the ways of reducing collective narcissistic intergroup aggression and, more broadly, the adverse effects of social exclusion. As such the project has a strong applied value. It can inform interventions to reduce intergroup aggression and prejudice as well as adverse effects of social exclusion in other contexts such as schools or workplaces where group-based exclusion is a frequent problem. Thus, the proposed project will also have a strong applied value and theoretical consequences for other social sciences such as mental health and organizational psychology, political sciences, education, or criminology.

Work plan (outline of the work plan, critical paths, state of preliminary and initial research indicating feasibility of research objectives): A series of experimental studies will test the project's hypotheses. All studies will manipulate mindfulness by mindful attention and **mindful gratitude meditation** lead by an audio recording, prepared by an experienced mindfulness trainer based on a technique called 'body scan' in which attention is focused on the body and breathing (Kabat-Zinn, 1982, 2005). During the body scan feeling of gratitude is directed towards each scanned body part. The pilot version of mindful gratitude meditation was pretested in a sample of 569 adults who listened to a 10 minutes recording (in comparison to a recording of a body scan without gratitude vs. a recording of anatomical description of the body also pretested in the pilot study). This study demonstrated that mindful gratitude mindfulness significantly increased state mindfulness in comparison to control and to mindful attention conditions. Mindful gratitude meditation decreased prejudice among collective narcissists. Another pilot study (N= 550), demonstrated that self-affirmation, which reduces aggressiveness among narcissists (Thomaes, et al., 2009), was ineffective in reducing prejudice among collective narcissists. This technique will be used in Study 6 testing uniqueness of mindful gratitude meditation in comparison to other interventions.

In all studies (except studies 4a and b, which uses a pretested (N = 176) minimal group paradigm to test generalizability of the findings outside of the Cuberball paradigm) **intergroup exclusion** (vs. inclusion) will be manipulated using the Cyberball paradigm adapted for the intergroup context (Williams & Jarvis, 2006). In this computer based game participants are asked to toss a virtual ball to two other participants who either toss the ball back (inclusion condition) or not (exclusion condition). Typically, of the 30 (60 in pupilometry studies) ball tosses pre-programmed into the game, participants are randomly assigned to receive either 30% tosses distributed equally throughout the task (inclusion condition) or just 1% tosses at the beginning of the task and then no more while their partners pass the ball back and forth to one another (exclusion condition). In the intergroup version of the game participants are asked to indicate their ingroup and the alleged co-players represent an outgroup. In all studies using this paradigm the same manipulation check questions will be asked regarding participants' subjective perception of being excluded from interaction solely based on their group membership.

Distress will be assessed by multiple methods including self-report, physiological and neural methods. Specifically, to assess self-reported distress we will use, like previous research on social exclusion the Positive and Negative Affect Scale and the Need Threat Scale (Chester & De Wall, 2015). In order to assess the neural substrates we will examine activation of pain circuits in the brain (activation of dorsal anterior cortex dAAC and anterior insula) and resilience to threat (activation of ventromedial prefrontal cortex, VMPFC, Maier & Watkins, 2010; Wager et al., 2008). In addition, we will use physiological measures of distress (combining them with each other or with neurological measures to obtain a more reliable objective indices of distress, Wagner et al., 2009): dilated pupils, heightened cortisol response and heart rate and respiration variability (respiratory sinus arrhythmia). The project will be supported by a confirmed collaboration with Dr David Chester from Virginia Commonwealth University. His lab has necessary equipment and trained staff to perform fMRI and HRV studies. Dr Chester has a track record of successful studies that examined neural substrates of pain and resilience among narcissists facing interpersonal exclusion (Chester & DeWall, 2015, 2016). In addition, the project will recruit full time lab manager experienced in psycho-physiological assessment and a postdoctoral researcher with expertise in social neuroscience.

Intergroup aggression will be assessed by multiple methods. Three paradigms will be used: (1) Taylor Aggression Paradigm (Chester, 2017) in which intensity and duration of a white noise blast is used as an objective and ethically acceptable index of aggressive behavior; (2) the Voodoo Doll Task assessing symbolic aggression (DeWall et al., 2013) and (3) a role playing paradigm in Study 4 that was previously pretested to assess aggressive behavior in online studies. It leads participants to believe they can harm others by their resource distribution decisions (N = 176). All paradigms are described in detail in the Methodology section below. All studies will assess **collective narcissism** and a number of continuous **covariates** usually controlled in studies on collective narcissism to indicate uniqueness of the latter's predictions: individual narcissism (because it predicts retaliation after interpersonal exclusion, Chester & DeWall, 2015), nationalism (because it predicts hypersensitivity to intergroup threat when collective narcissism is not covaried out, Golec et al., 2016) and ingroup satisfaction (because covarying it out typically enhances the effects of collective narcissism, Golec et al, 2013, 2016) as covariates to ensure the expected links are unique for *collective* narcissism in face of *intergroup* exclusion. The studies will also assess covariates usually taken into account in studies on intergroup aggression: Right wing authoritarianism (RWA) and social dominance orientation (SDO) and self-esteem. Those variables will be assessed by relevant scales that have been used in previous studies both in

Polish and English language context and they demonstrated excellent validity, reliability and comparability across cultures.

Statistical analyses: Most of the studies will use moderated mediation in regression context in order to analyze the using PROCESS macro for SPSS (Hayes, 2013) and testing the model depicted as in Figure 1. In the longitudinal study 7 moderated mediation will be tested in a cross lagged model in structural equation models contexts performed in Mplus or R. The project assumes confirmed collaboration of senior scientists (Professors Williams and Sedikides) who will facilitate the analyses and interpretation of the research results. In addition, the project will hire statistical help when needed and train doctoral researchers in methods of analysis required for the project.

Feasibility of research objectives: The proposed research program tests hypotheses based on cutting-edge, but already recognized and reliable, results. Its hypotheses are daring and unconventional but are based on sound theoretical reasoning and supported by such results. The basic predictions of the tested theoretical model were confirmed in a large pilot study. Initial results from another pilot study point also to the uniqueness of mindful gratitude meditation as a method of reducing collective narcissistic aggression. All methods used in the planned research were used in previous studies and proven valid and reliable or successfully pretested for the purposes of the present project. All sample sizes were estimated based on effect sizes from previous studies. The project will develop mindful gratitude training in collaboration in expert mindfulness trainers. The project will recruit support of experienced postdoctoral researcher and lab manager with suitable expertise and hire technical and statistical support when necessary. The project has already recruited confirmed collaboration from three renowned experts in the relevant fields and support for MRI research from a specialized laboratory. The track record in successful research projects and publications of the international collaborators and the principle investigators points to extensive experience in conducting and disseminating results of cutting-edge, influential research. All those aspects of the project ensure that the projects tasks are feasible and can be successfully carried out.

Research Methodology (underlying scientific methodology, data reduction and treatment schemes, type and degree of access to the equipment to be used in the proposed research)

Study 1 (N = 500)

Cross-sectional, experimental Study 1 will be conducted aiming at conceptually replicating the results of the pilot study. It will test the expectation that mindful gratitude meditation will reduce collective narcissists' self-reported distress of intergroup exclusion and aggressive retaliation, not only in comparison to the control condition, but also to mindful attention condition. The results indicating that mindful gratitude reduces aggression among collective narcissists would increase our confidence in effectiveness of mindful gratitude meditation which will be used in all other studies. In Study 1, we want to test whether we can detect expected changes in self-reported distress. However, results suggesting no change would not disqualify our hypothesis about distress. They will be compared to results of further studies testing neural and physiological indicators of distress because distress of social exclusion may not be available to collective narcissists in introspection. The online Study 1 will use a mixed experimental design with intergroup exclusion (vs. inclusion) manipulated as a within factor and mindfulness as a between factor. A 3 (mindful gratitude vs. mindful attention vs. control: between) X 2 (intergroup exclusion vs. inclusion: within) design will be used. Collective narcissism (moderator) and covariates, distress (mediator) and retaliatory aggression will be measured as continuous variables. Distress will be assessed before and after the experience of exclusion (vs. inclusion) and after aggression. **Collective narcissism** and individual difference covariates will be first measured together with demographic variables.

Intergroup exclusion: Study 1 will use the online version Cyberball game to manipulate intergroup exclusion. The online Cyberball has been used in multiple studies with excellent reliability and with the results closely replicating those obtained in the lab based version of the Cyberball (Williams, 2011).

Distress will be measured by Positive and Negative Affect Scale and the Need Threat Scale.

Aggression will be assessed by the online version of the Voo Doo Doll task reliably used in previous studies (Chester & DeWall, 2016). The Voodoo Doll Task is a relatively novel task to measure aggressive behavior (DeWall et al., 2013). It is based on the human tendency to bestow certain objects with magical properties (King, et al., 2007). It asks people to imbue an inanimate doll with features of actual individuals (members of the excluding outgroup). Then, participants are given the option to stab 0 to 51 pins in the doll, a form of aggression. This task has shown excellent reliability over time, corresponds to other measures of aggression, exhibits appropriate responsiveness to laboratory provocations (Chester et al, 2015). The Voodoo Doll Task does not signify 'actual' aggression because the victim does not experience direct harm. Instead, the Voodoo

Doll Task captures symbolic aggression. However, cognitive, emotional, and behavioral overlap exists between actual and symbolic forms of behavior (King et al., 2007) and this task brought about results similar to actual aggression (Chester & DeWall, 2016).

Sample size and equipment: Study 1 will be conducted online using the research panel of a company experienced in conducting online surveys. The adult sample will ensure that the results are generalizable beyond typical samples in psychology such as undergraduate students. We will request a sample of 500 participants based on a pilot study in a similar design for which the sample size estimation assumed a small effect size (f = 0.15), between participants design with 3 research conditions, 2 within conditions and a continuous moderator was suggested to be N = 432 which will be increased to account for data loss.

Study 2 (N = 80)

Study 1 will give us an initial test of the hypotheses in a large sample of participants but it has to use self-report measures of distress. Thus, this study will have to be complemented by a series of studies that use neural and physiological measures of distress which may drive collective narcissists' aggression but which they may not be able to access in introspection. Therefore, the theoretical model depicted in Figure 1 will be tested in following studies using multiple objective ways of assessing distress. Study 2 will use mixed experimental design manipulating mindful gratitude (vs. control) as a between factor and intergroup exclusion (vs. inclusion) as a within factor, measuring collective narcissism as a moderator (low vs. high), distress as a continuous mediator and aggression as continuous dependent variable. It will have a 2 (mindful gratitude vs. control: between) X 2 (collective narcissism high vs. low: between) X 2 (intergroup exclusion vs. inclusion: within) design. Individual levels of collective narcissism will be first measured in a large sample (mass testing among students in the beginning of the academic year). Participants who score high (+1SD) vs. low (-1SD) on the **Collective Narcissism** Scale (Golec, et al., 2009) will be selected and randomly assigned to a 'waiting list' (control) or a 'treatment group' (mindful gratitude meditation). The experimental group will first participate in a guided 10 minutes-long mindful gratitude meditation before testing in the scanner. The plan of Study 2 is presented in a schematic way in Figure 2.

Intergroup exclusion (vs. inclusion) will be manipulated with the intergroup Cyberball which participants will play in the fMRI scanner believing that their co-players are examined indifferent scanners (Chester & DeWall, 2015).

Distress will be assessed in the MRI scanner which will assess activation of the activation of dAAC and anterior insula (social pain brain circuits) and ventromedial prefrontal cortex (VMPFC). Decades of research have supported the interpretation of dAAC area as pain circuits in brain. Research also indicated critical role of the ventromedial prefrontal cortex (VMPFC) in resilient responses to stressors and threats (Maier & Watkins, 2010; Wager et al., 2008). The VMPFC exerts adaptive response to threats through its direct interface with the parasympathetic branch of the peripheral nervous system, which allows the VMPFC to down-regulate physiological threat responses and upregulate more adaptive coping responses (Thayer et al., 2012).. Functional magnetic resonance imaging (fMRI) can be used to measure those objective indices of distress and reliance. In addition, heart-rate variability (HRV) is an often used operationalization of adaptive responses to threats (Segerstrom & Nes, 2007). By combining fMRI measurements with a physiological assessment of HR and respiratory patterns (e.g., respiratory sinus arrhythmia), we can effectively estimate distress and resilient coping responses to exclusion (Wager et al., 2008). Thus, the heart-rate variability (HRV) and respiratory patterns will be simultaneously assessed while participants take part in the Cyberball game. We expect that dAAC response will be increased among high collective narcissists while VMPFC response will be particularly low among collective narcissists in face of intergroup exclusion. The self-reported measure of distress will be also taken after exclusion and after aggression by the Need Threat Scale used by previous research (Chester & DeWall, 2015).

Aggression will be assessed in the Taylor Aggression Paradigm (Chester, 2017) as intensity of white noise blasted at a member of the excluding outgroup. Participants in the scanner will play a competitive reaction-time task against a different partner from the same national outgroup that their Cyberball partners were from. In this game the winner could deliver aversive noise blasts to the loser. Prior to each of the nine trials, participants will set the volume of the noise blast their partner would receive, ranging from Level 1 (60 decibels) to Level 10 (105 decibels) in 5-decibel intervals. A nonaggression option, Level 0, will be provided. Participants will also set the duration of the noise blast, which could range from 0 s to 5 s in half-second intervals. The higher levels of white nouse noise are unpleasant and the intensity of the noise is used as a measure of behavioral aggression (Bartholow & Anderson, 2002; Bushman & Baumeister, 1998; Geartner et al., 2008). After each competition, participants will see whether they "won" or "lost," as well as the volume and duration settings their partners had ostensibly set for them. Participants will win five trials and lose four trials. The intensity and duration of the noise blast across the winning trials will be used as an indicator of

aggression. The reliability and validity of this task as behavioral measure of aggression are well established (Chester, 2017).

Sample size and equipment. Study 1 will be conducted at Virgina Commonwealth University (VCU) where the equipment, software and trained research staff necessary to perform such simultaneous measurements of dAAC and VMPFC activity and HRV are readily available to Dr. Chester at VCU's Collaborative Advanced Research Imaging facility. Dr Chester has confirmed his readiness to collaborate in this research and made his lab and staff available for its purposes and possibility of using VCU students as participants. The sample size for Study 1 is planned to be $N = 80$ participants based on a similar studies using the within participants design that examined the activation of the social pain brain circuits among individual narcissists after interpersonal exclusion and after inclusion (Cascio et al., 2015; Chester & DeWall., 2015).

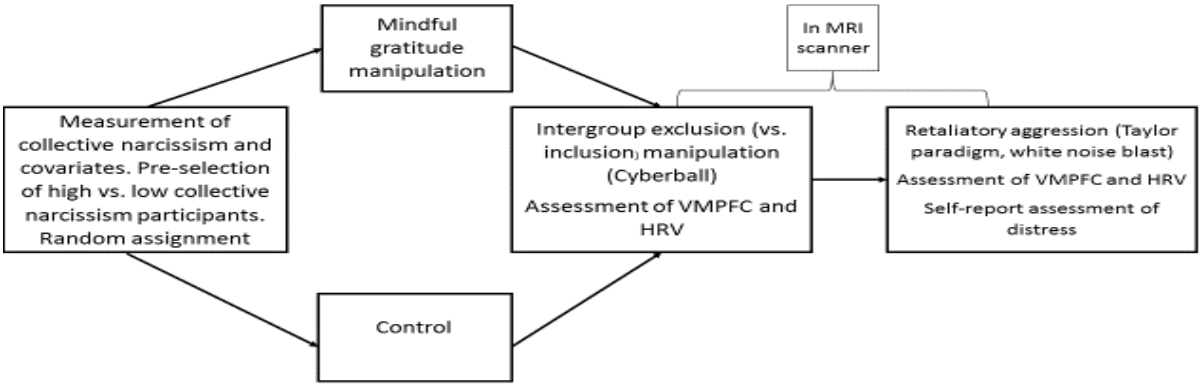

Figure 2. Schematic representation of the fMRI study 2.

Study 3 (N = 160)

Study 3 will use a different method of assessing distress to increase reliability of findings of Study 2. It will also allow us to compare the effects of intergroup to interpersonal exclusion (vs. inclusion). Study 3 will use a mixed experimental design manipulating mindful gratitude (vs. control) as a between factor and exclusion (vs. inclusion) as a within factor, measuring collective narcissism as moderator (low vs. high), distress as continuous mediator and aggression as continuous dependent variable. Thus, the study will use a 2 (mindful gratitude vs. control: between) X 2 (collective narcissism high vs. low: between) X 2 (exclusion vs. inclusion: within) design.

Levels of **collective narcissism** will be pre-tested on a larger sample of students. Participants who score high (+1SD) vs. low (-1SD) on the Collective Narcissism Scale (Golec, et al., 2009) will be selected and randomly assigned to a 'waiting list' (control) or a 'treatment group' (mindful gratitude meditation). The treatment group will first participate in a guided 10 minutes-long mindful gratitude meditation.

Intergroup exclusion (vs. inclusion) will be manipulated using computer based Cyberball game.

Distress will be assessed in an alternative way. In Study 3 pain reaction will be examined by pupilometry based on previous studies showing that pupils dilate when people experience pain and contract when the subjective experience of pain is lessened. Pupilometry has been used in social exclusion research to assess social pain (Silk, et al., 2012). In order to collect sufficient data the duration of the cyberball game will be adjusted following a similar procedure from previous studies (Sleegers, et al., 2017). Pupil dilation will be assessed during the Cyberball task and during the Taylor Aggression Paradigm. In addition, heart-rate variability (HRV) will be measured during both tasks and a self-reported measure of distress will be taken as in Study 2 before and after aggression measure. In the intergroup version of the Cyberball game Polish participants will play the game believing that they are a part of an Polish team playing against German team because Polish attitudes towards Germans are not negative but the two nations are often competitive towards each other. In addition, such intergroup setting will allow us to generalize the findings into a different intergroup context. Study 3 will require a professional eyetracker with sufficient resolution and relevant software like the Eyetracker Tobii Pro Spectrum TX 300 Hz with iMotions software CORE. Study 3 (and several other studies in the project) will require a HRV measurement and respiratory sinus arrhythmia measurement. Thus, the project requires a professional equipment to measure blood pressure and perform pulmometry at the same time and relevant software like the Shimmer3 ECG / EMG Kit and iMotions software.

We plan to acquire professional equipment and software to support this measurement. They will equip a new psycho-physiological measurement lab at University, SWPS, Poznań.

Aggression will be assessed as in Study 2 in the Taylor Aggression Paradigm.

Sample size and equipment. Study 3 will be conducted at University of Social Sciences and Humanities with the help of Eyetracker and Shimer ECG acquired for the purposes of the present project. The sample size for Study 3 is planned to be $N = 120$ participants based on a similar study with within-subjects design that examined the pupillary activity in response to interpersonal exclusion and inclusion (Sleegers et al., 2017).

Study 4a and b (N = 800 each)

Studies 2 and 3 will allow to test the proposed model using physiological and neural measures of distress. Due to the nature of these measurements these studies will be conducted on smaller samples and will use collective narcissism as dichotomous variable. In order to correct those shortcomings and test the proposed model in a different intergroup settings we will conduct Study 4. Previous studies will be conducted using existing intergroup context and real social groups. Study 4 will aim to collect data online from a large sample of adults to test the theoretical model (Figure 1) in the context of novel social groups created for the purpose of the study and in fully between-subjects design (2 (mindful gratitude vs. control) X 2 (intergroup exclusion vs. inclusion) X 2 (opportunity to aggress vs. control) with collective narcissism, distress and aggression measured as continuous variables. Study 4 will be conducted in Poland (4a) and in the US (4b) to examine whether the tested theoretical model generalizes between different national contexts. In Study 4 immediate pain and distress will be measured by self-report measures just before and after the intergroup exclusion and after the aggression (Hartgerink, et al., 2015). After the assessment of individual difference variables and mindful gratitude manipulation (vs. control) participants will be asked to engage in a pre-tested fantasy role-playing game. They will be given a mock personality test and randomly allocated to one of two groups playing the game in order to create an intergroup context. They will be given information about their group and its members to create the intergroup context and unfold the exclusion (vs. inclusion) in the governing process manipulation and aggression assessment. Participants will make a choice of helping (vs. withdrawing help) in a situation in which members of the outgroup fall to a mysterious disease and their group knows the cure. The study will use a setting of role playing game pretested in a pilot study ($N = 176$) which indicated that ingroup satisfaction and collective narcissism can be reliably assessed with reference to such novel ingroup and make the same predictions for intergroup attitudes as the same variables measured with reference to existing groups. Such intergroup settings would allow us to generalize the findings to any similar intergroup settings.

Ingroup satisfaction and collective narcissism with respect to this experimentally induced group will be measured with Collective Narcissism Scale (Golec et al., 2009) and Ingroup Satisfaction Scale (Leach, 2008). Other covariates will be also assessed as in previous studies.

Intergroup exclusion: Participants will be randomly allocated to intergroup exclusion vs. inclusion conditions induced by giving participants additional information about whether their group is included vs. excluded in power sharing process by members of another group inhabiting the same imaginary world. Effectiveness of this manipulation was pre-tested but it will be tested in Study 4 by questions regarding participants' perception of their group being included vs. excluded by the other group.

Distress: Participants' emotional responses will be assessed by PANAS and the Need Threat Scale used by previous research (Chester & DeWall, 2015).

Aggression: Participants will be randomly allocated to take part in a task in which they can negatively affect the desirable outcomes of the out-group by their decision (vs. an alternative task in which they can help the outgroup). A decision to withdrawing help will be indicative of aggressive behaviour.

Sample size and equipment: Study 4 will be conducted online using the research panel that supported multiple studies conducted by our team. We will request a sample of over 800 participants recruited by an external company with an online panel of participants. Study 4 will also be conducted in the US using the MTurk participants to test whether the findings regarding the model presented in Figure 1 generalize across different nations and cultures.

Study 5 (N = 200)

Studies 1-4 will give us a very good, multimethod test of the theoretical model. Those studies, especially the large study 4 will also allow us to test whether the expected effect is unique to collective narcissism (we will control the same individual difference covariates in all studies). In the next study we plan to assure that the expected effects are unique to intergroup (vs. interpersonal) exclusion. Thus, Study 5 will use mixed experimental design manipulating mindful gratitude (vs. control) as a between factor and intergroup (vs. interpersonal) exclusion (vs. inclusion) as within factors, measuring collective narcissism as continuous moderator, distress as continuous mediator and aggression as continuous dependent variable. The sample sizes in lab-based studies 2 and 3 are typical for fMRI and eye-tracker studies but small to draw firm conclusion regarding the moderated mediation links between collective narcissism and measured aggression or self-

reported distress. The design will be 2 (mindful gratitude meditation vs. control: between) X 2 (interpersonal vs. intergroup: within) X 2 (exclusion vs. inclusion: within). Collective narcissism, distress and aggression will be measured as continuous variables. Study 5 will use different methodology to assess retaliatory aggression and distress than Studies 2 and 3. **Collective narcissism** and individual difference covariates will be measured together with demographic variables.
Intergroup (vs. interpersonal) exclusion: (vs. inclusion) will be manipulated by the Cyberball game.
Distress: Participants' emotional responses will be assessed by PANAS and the Need Threat Scale used by previous research (Chester & DeWall, 2015) as well as heart rate variability (HRV) and cortisol reactivity (Cheng et al., 2013). Self-reported distress will be assessed before and after exclusion and after aggression.
Aggression will be assessed by the Voo Doo doll task.
Sample size and equipment: Sample size for Study 3 is planned to be between $N = 200$. This sample size was estimated with G*Power 3.1 (Faul, Erdfelder, Lang, & Buchner, 2007) for a between subject design, one continuous moderator and one continuous mediator based on the Rsquare of 0.06 (*f* squared= 0.064), from a similar study investigating the link between collective narcissism and intergroup hostility under perceived in-group insult (Study 5, Golec, et al., 2016). Input parameters in G*Power were as follows: effect size *f* squared= 0.064, $\alpha = .05$, power = .8, number of predictors=3. The output parameters resulting from this analysis showed that for a critical *F* of 2.41, with the actual power of 80%, it will be required a total sample size of 192 participants. We will aim for higher N in case of data loss and because correlations seem to stabilize in a sample of this size (Schönbrodt & Perugini, 2013).

Study 6 (N = 1500)

Study 6 will assess uniqueness of mindful gratitude meditation as a method to reduce collective narcissists' distress and retaliatory aggression. Study 6 will use a mixed experimental design with different interventions to reduce intergroup hostility as a between factor and intergroup exclusion (vs. inclusion) as a within factor, collective narcissism as a continuous moderator, distress as a continuous mediator and aggression as continuous dependent variable. The design will be 6 (mindful gratitude vs. mindful attention vs. gratitude vs. imagined intergroup contact vs. self-affirmation vs. control: between) X 2 (intergroup exclusion vs, inclusion: within). In order to established uniqueness of mindful gratitude meditation as an effective practice to reduce collective narcissistic aggression, Study 6 will compare the mindful gratitude meditation on the link between collective narcissism, distress and retaliatory aggression to 4 alternative manipulations: mindful attention to the present moment (body scan only), gratitude without mindfulness practice (diary method), (imagined) intergroup contact (a well-established by literature method of reducing prejudice and intergroup hostility, Pettigrew & Tropp, 2008, we will use the imagined intergroup contact manipulation developed by previous studies and used online Crisp, et al., 2009), self-affirmation (a tested method of reducing interpersonal aggressiveness among individual narcissists, Thomaes, et al., 2009, pre-tested for the present study in N = 550 and control conditions. Most of the manipulations were previously tested and deemed effective in online studies. Gratitude manipulation will be pretested before the study. Schematic presentation of the plan of this research can be seen in Figure 3. This study will use the same aggression measurement and intergroup exclusion manipulation method as Study 5. It will assess distress like Studies 4a and b.

Sample size and equipment: Study 6 will be conducted online using the research panel that supported multiple studies conducted by our team. We will request a sample of over 1500 participants based on a calculation assuming a small effect size ($f = 0.15$), between participants design with 5 research conditions and a continuous moderator and 3 and the analysis suggested a same of $N = 1315$ which was increased to account for data loss.

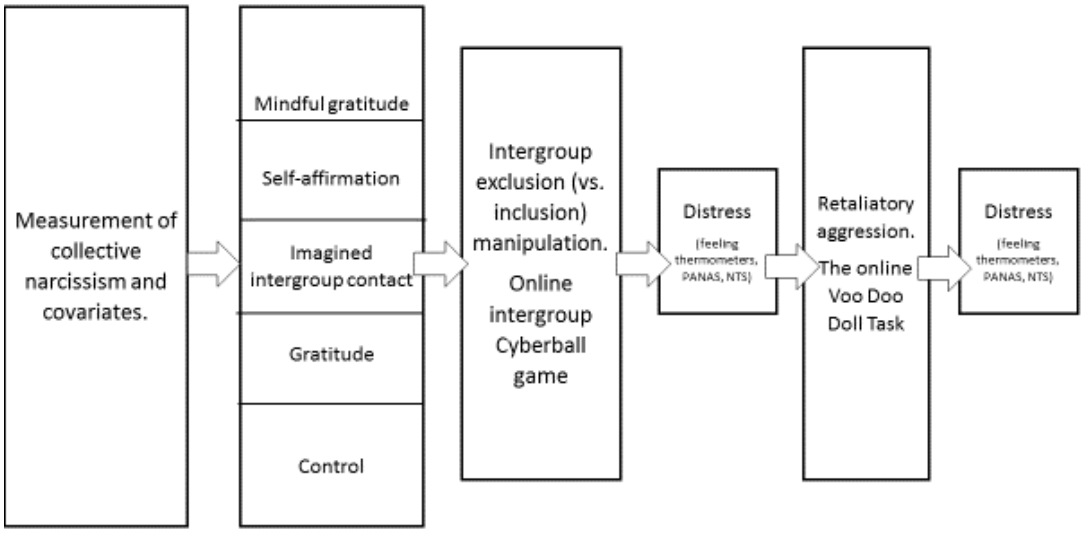

Figure 2. Schematic representation of the plan of Study 6.

Study 7 (N = 200 in 4 waves)

Studies 1-6 will allow us for a very good, multi-method test of the moderation aspect of the proposed model and initial conclusions regarding the mediation aspect. However, cross-sectional design does not allow to test how the change occurs in time and is not ideal for testing mediation. Thus, the last planned study will be longitudinal. It will allow us to examine those aspects in the reliable way. Study 7 will last 12 weeks. A 6-weeks training is planned to gradually introduce and support consistent daily mindful gratitude meditation. The course will follow the logic and typical duration of mindfulness training (Gilbert et al., 2011). It will be developed in collaboration with an experienced mindfulness trainer and supported by an app (developed for the purposes of the project) which selected participants will be asked to download to their phones. On one hand, the app will support a daily mindful gratitude meditation providing participants with daily, guided 10 minutes meditation which would gradually increase their focus on appreciation of the experience of present moment. On the other hand, the app would allow researchers to monitor whether participants engage in daily meditation and to remind participants to do so in case they were forgetting. The app will also control participants' moods before and after the meditation reminding them to record daily mood in the morning and after the training. Participants will be examined in the lab 2 times during the training: before the training commences (Week 1), in the in the end of the training (Week 6). Participants will be also examined 2 (Week 8) and 6 weeks (Week 12) after the training finished in order to examine whether and how long the effects of the training last. The results will be compared between the 'treatment' group which will start the training in Week 1 and 'waiting list' group that will start the training in Week 7. Participants from this group will be assessed in the lab during the same weeks as participants from the 'treatment group'. The research design and procedure will be the same at all time points.

Sample size and equipment is estimated for 200 participants based on the previous longitudinal mindfulness intervention studies (Alkoby, et al., 2017). Half of the sample of people scoring low on the Collective Narcissism Scale and half of the sample of participants scoring high will be randomly assigned to take part in the 6 weeks mindful gratitude training. Another group will be randomly assigned to wait 6 weeks and will start the training in week 7. However, the second, control (or 'waiting list') group will also be monitored by the app to take the same measurements as the 'treatment' group during the day and in 4 measurement points. Between-group comparisons between the treatment and control group will increase the reliability of findings. Both groups will be assessed for the last time in week 12 when the second group finishes the training. The plan of this study can be seen in Figure 4.

Study 7 will require construction of an application allowing participants to participate in mindful gratitude meditation in a longitudinal study. The app will allow for controlling that participants meditate and collect daily mood measurements. Study 7 will require a website allowing participants to check their progress and obtain additional information to increase their engagement in the project. External company will be hired to

program the app that participants would be able to download to their phones and computers. The same company will be hired to create and support the website.

First, participants will respond to the **Collective Narcissism** Scale and they will be selected to represent high and low levels of collective narcissism as in Studies 1 and 6. Other relevant individual difference variables will be measured as in previous studies. In addition, we plan to assess participants' beliefs about various minority groups as threatening and levels of negative feelings towards those groups (similar to the pilot study, to assess intergroup threat and prejudice). To this end, we will use the reliable and frequently used Feeling Thermometers and a shortened version of intergroup threat measure by Cottrell and Neuberg (2005). This assessment is planned in order to examine whether the effects of mindful gratefulness training generalize on participants' self-reported intergroup threat and prejudice.

In Weeks 1 (before the training commences, when participants are trained to use the app), 6, 8 and 12 participants will take part in a lab-based study which will use a within subjects design to manipulate **intergroup exclusion** (vs. inclusion) using the intergroup Cyberball game like in previous studies.

Distress will be assessed by the Need Threat Scale like in previous studies. In addition, physiological measures will be taken after intergroup exclusion and after retaliatory intergroup aggression. Specifically, heart-rate and respiration variability (HRV) will be measured.

Aggression will be assessed in the Taylor Aggression Paradigm.

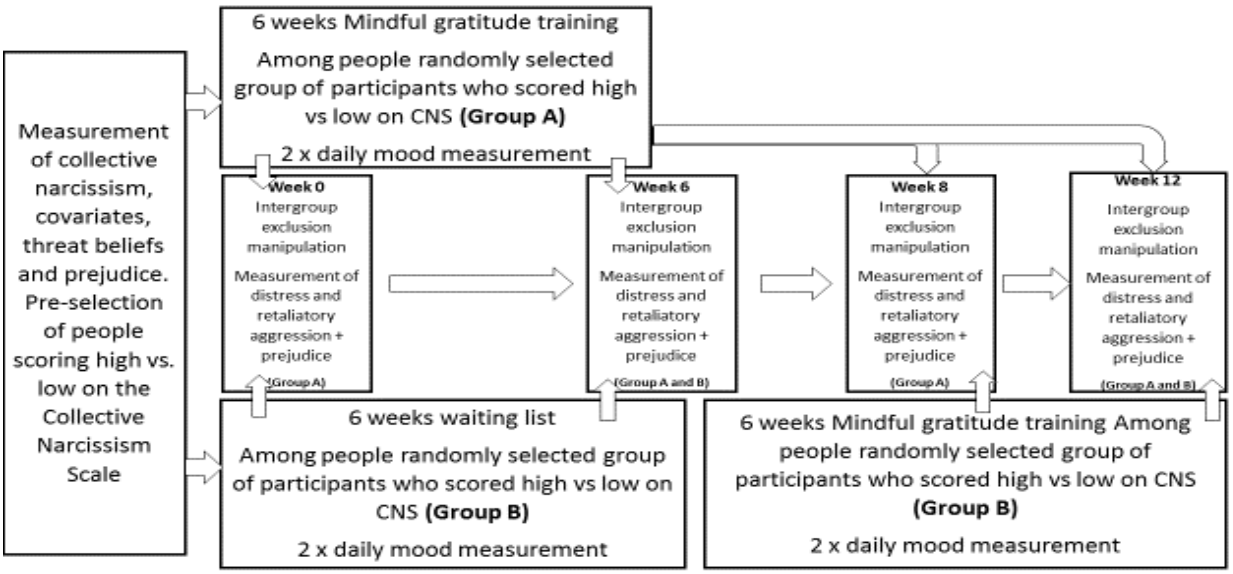

Figure 4. Plan of Study 7.

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I. ZAŁĄCZNIKI

Poniżej wymienione załączniki są załączone do niniejszego wniosku.

SWPS Uniwersytet Humanistycznospołeczny z siedzibą w Warszawie, Wydział Zamiejscowy w Poznaniu

1. Podmiot nieotrzymujący dotacji na działalność z budżetu nauki.

SWPS Uniwersytet Humanistycznospołeczny z siedzibą w Warszawie, Wydział Zamiejscowy w Poznaniu

2. Oświadczenie o niewystępowaniu pomocy publicznej wraz z kwestionariuszem.