

Supplemental Materials

Study 1

Accounting for the Source of Social Exclusion

Table 1 summarizes the results of three regression models examining the moderation effects of the quantity and quality of intergroup social connections on the relationship between group-specific social exclusion and the resignation stage. The measures of quantity and quality of social connections and of the resignation stage are the same of Study 1. Group-specific perception of social exclusion was measured with three single items separately assessing how excluded participants felt by Italians, people from their nationality, and other asylum seekers and refugees in the previous three months (response scale: 1 = not at all, 5 = extremely; $M_{\text{Italians}} = 2.14$, $SD_{\text{Italians}} = 1.35$; $M_{\text{Ethnic group}} = 2.06$, $SD_{\text{Ethnic group}} = 1.53$; $M_{\text{Asylum-seekers and refugees}} = 1.49$, $SD_{\text{Asylum-seekers and refugees}} = 1.02$). The measures on the group-specific social exclusion were retrieved from the pool of variables that have been measured in the longitudinal study from what Study 1 was derived. The analyses were run on standardized Z-scores of all the measures. As shown in Table 1, the pattern of results of Study 1 and 2 were found only in the model with perception of social exclusion by the ethnic group as predictor. Simple slope analyses showed that social exclusion by the ethnic group was associated with the resignation stage only when social connections with Italians were low ($-1\ SD$: $\beta = 0.44$, $SE = 0.15$, $t = 2.92$, $p < .01$; mean: $\beta = 0.11$, $SE = 0.10$, $t = 1.06$, $p = .29$; $+1\ SD$: $\beta = -0.23$, $SE = 0.20$, $t = -1.16$, $p = .25$) and when social connections with people from participants' ethnic group high ($+1\ SD$: $\beta = 0.44$, $SE = 0.15$, $t = 2.84$, $p < .01$; mean: $\beta = 0.11$, $SE = 0.10$, $t = 1.06$, $p = .29$; $-1\ SD$: $\beta = 0.22$, $SE = 0.19$, $t = -1.19$, $p < .24$). The possible interpretation of these results, the caution with what these results must be taken and their implications for future researches are detailed in the footnote number 4 of the main document of the manuscript.

Table 1. How intergroup social connections moderate the relationship between group-specific perceived social exclusion and the resignation stage

	Resignation stage		
	β	<i>se</i>	η_p^2
Social exclusion by Italians			
Intercept	.04	.10	
Self-reported social exclusion	.16	.10	
Social connections with Italians	-.22	.13	
Social connections with other immigrants	.02	.13	
Social exclusion x social connections with Italians	-.20	.13	
Social exclusion x social connections with other immigrants	-.04	.11	
Adjusted R ²	.10		
F(df _n , df _d)	2.93 (5, 83) *		
Social exclusion by immigrants' ethnic group			
Intercept	-.01	.10	
Self-reported social exclusion	.10	.10	
Social connections with Italians	-.24	.13	
Social connections with other immigrants	.02	.13	
Social exclusion x social connections with Italians	-.33	.14*	.067
Social exclusion x social connections with other immigrants	.32	.13*	.065
Adjusted R ²	.11		
F(df _n , df _d)	3.08 (5, 81)*		
Social exclusion by other asylum seekers and refugees			
Intercept	.05	.11	
Self-reported social exclusion	.11	.11	
Social connections with Italians	-.31	.13*	
Social connections with other immigrants	.11	.14	
Social exclusion x social connections with Italians	.09	.13	
Social exclusion x social connections with other immigrants	-.16	.14	
Adjusted R ²	.04		
F(df _n , df _d)	1.67 (5, 81)		

Note. * $p < .05$

Confirmatory Factor Analyses on the *Resignation Stage Measure*

We run two confirmatory factor analyses (CFA) via *lavaan* package (Rosseel, 2010) to investigate if a monodimensional index of Resignation (model 1) fits the data better than a four factor solution (model 2), loading the items on the respective latent factors of depression, unworthiness, alienation, and helplessness. Both Model 1 ($df = 350$; CFI = 0.502; TLI = 0.462; RMSEA = 0.111; SRMR = 0.114) and Model 2 ($df = 344$; CFI = 0.572; TLI = 0.529, RMSEA = 0.104, SRMR = 0.112) showed a very poor fit to the observed data. Even if the X^2 difference test indicated Model 2 as better than Model 1 ($X^2_{diff} = 69.805$, $p < .001$), the goodness-of-fit of the Model 2 is so poor that its improvement compared to Model 1 is not meaningful or acceptable. These results must be taken with care considering that the too small sample size (the ratio of 106 respondents on 84 and 90 free parameters estimated did not satisfy the minimum criterion of 5 respondents per parameter; Bentler, 1995) could affect the reliability of the indices of model fit (Wang & Wang, 2012). However, to shed more light on the results, we studied the modification indices of the two models. In Model 1, the parameters that would significantly improve the fit of the model if included in the estimation regarded the correlations between the observed items (e.g., item8 of alienation with item1 of unworthiness; item2 of depression with item1 of unworthiness). In Model 2 the information of the modification indices was similar as in Model 1, but with the addition of some parameters regarding the items loading onto different latent factors (e.g., item1 of alienation onto the latent factors of unworthiness and of depression, item5 and item6 of depression onto the latent factor of alienation). Taken together, this information suggested us that the models' fit could significantly improve if considering the high correlations and the cross loadings of the items on the four factors. This speaks about the intertwined relationships between the items of the four constructs of the resignation stage, highlighting the conceptual convergence of the four outcomes into the broader stage of resignation. Finally, trying to better understand the results of the CFAs and to clarify the suspicious that the pool of items highly cross loaded onto the four factors, we run an exploratory factor analysis to observe how empirically the items loaded on the four hypothesized factors. As expected, we found that only the items

measuring alienation clearly loaded into one component (even if many of them showed a high saturation also onto the other three components), that was also saturated by item2 of helplessness and unworthiness and by item5 of unworthiness and depression. All the other items of the constructs were distributed on the other three components, making any differentiation of the four constructs impossible. If the resignation stage is conceptually and theoretically made by four different constructs, in our sample, we observed that the empirical discriminability of its components is hard to detect, given that the items of the four outcomes appeared to be highly correlated and converging. In conclusion, even if not representing the best factorial solution, given 1) the theoretical assumption tightly tying the four constructs into the overall resignation stage (Williams, 2009), 2) previous studies computing the overall index of resignation by averaging together all the items of the four constructs (Riva, Montali, Wirth, Curioni, & Williams, 2016; see also Wirth, Sacco, Hugenberg, & Williams, 2010), 3) the high reliability of the overall index of resignation of Study 1 (Cronbach's $\alpha = .84$), and 4) the research questions and hypothesis focusing on the **overall** resignation stage as the main outcome, we considered the monodimensional factor as the most appropriate solution to investigate the moderating effects of intergroup social connections on the relationship between persistent social exclusion and the resignation stage.

Quantity-only Social Connection indices as moderators

The Table 2 below, reports the regression coefficients of the models considering only the **quantity** of social connections with Italians and other immigrants as moderator. The effects remain the same as when considering the indices of **quantity and quality** of social connections with Italian and other immigrants (reported in the main document of the manuscript).

Table 2. How intergroup social connections moderate the relationship between perceived social exclusion and the resignation stage

	Resignation stage		
	β	<i>se</i>	η_p^2
Model 1			
Intercept	-.31	.17	
Self-reported social exclusion	.48	.11***	.17
Social connections with Italians	-.01	.12	
Social connections with other immigrants	-.03	.10	
Social exclusion x social connections with Italians	-.27	.13*	.03
Social exclusion x social connections with other immigrants	.41	.10***	.10
Length of stay in Italy	.02	.01*	.02
Adjusted R ²	.42		
F(df _n , df _d)	12.96 (6, 95)	***	
Model 2			
Intercept	-.35	.17*	
Self-reported social exclusion	.45	.09***	.15
Delta score	.00	.08	
Social exclusion x Delta score	-.30	.07***	.09
Length of stay in Italy	.02	.01	
Adjusted R ²	.42		
F(df _n , df _d)	18.97 (4, 97)	***	

Note. * $p < .05$; ** $p < .01$; *** $p < .001$

Common Method Variance Bias

The Common Method Variance (CMV) bias can be a concern in particular in cross-section researches where both the dependent and the independent variable are self-reported measures and the items measuring them are very similar (e.g., same response scale; Podsakoff & Organ, 1986). For this reason, we run *post-hoc* analyses checking the magnitude of the CMV only for Study 1, given that the predictor of Study 2 was a peer-reported measure. We also checked for the CMV bias only for the self-reported index of social exclusion (independent variable) and for the overall index of resignation stage (dependent variable), without considering the moderator given that the response

scale was completely different from the 5-points likert one of the dependent and independent variables (see the Measures section of Study 1). Following the procedure described in Lindell and Whitney (2001), we identified the marker variable in the social desirability scale that was included in the measures of the longitudinal study. The social desirability was measured with the 4-items *Brief Social Desirability Scale* (Haghighat, 2007); social desirability is commonly used as a marker variable when checking for the CMV bias (Tehseen, Ramayah, & Sajilan, 2017). Finally, we conducted a partial correlation between the overall index of resignation and the index of social exclusion controlling for the marker variable of the social desirability (see Table 3). The results showed that the positive correlation between resignation and exclusion holds after controlling for the marker variable, indicating that the common method bias is not significantly affecting the present research.

Table 3. *Post hoc* check for the CMV bias

	Social desirability	Exclusion
Exclusion	.094	
Resignation	-.148	.582***

Note. *** $p < .001$; The coefficients displayed are Pearsons' r . The correlation between Resignation and Exclusion is partialized for social desirability.

We also tested the influence of CMV via the *Harman's single-factor test*. Despite the test's validity was recently criticize, it still remains one of the most widely used techniques (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). We run an exploratory factor analysis on the items of the outcomes associated with the resignation and the two items of the self-reported social exclusion, constraining the number of factors to be extracted to 1. The unrotated solution show that the single factor accounted for the 24.11% of the common variance, largely below the cut-off of 50% indicating a substantial amount of CMV bias.

Study 2

Analyses run on second-generation immigrant participants

Given that second (or higher) generation immigrants are, compared to first-generation immigrants, at less risk to be social excluded and more social integrated, we expect that the buffering (vs. aggravating) effect of social connection with the participant without immigrant background (vs. participant with an immigrant background) found on first-generation immigrants would be reduced or non-significant in second-generation (or more) immigrants. In fact, this pattern of results could be an exclusive effect of the immigrant populations. To test this, we replicated Model 1 and 2 of Study 2 on this subsample, controlling for the effect of the countries, gender, and age. The analyses confirmed the hypotheses: only the aggravating effect of social connection with people with a migration background on the relationship between peer-reported social exclusion and resignation was significant, in the expected direction and with a decreased effect size compared to the analyses run on first-generation immigrant participant. The same was found for the moderating effect of the delta score (i.e., measuring the prevalence of social connection with people without migration background over people with a migration background) on the relationship between social exclusion and resignation (see Table 4 in the next page).

Table 4. How intergroup social connections moderate the relationship between perceived social exclusion and a) the resignation stage and b) life satisfaction on second (or higher) generation immigrant participants

	a) Resignation stage			b) Life satisfaction		
	β	<i>se</i>	η_p^2	β	<i>se</i>	η_p^2
Model 1						
Intercept	-0.32	.35		0.87	.38*	
Peer-reported social exclusion	.07	.02**	.003	-.10	.02***	.006
Social connections with native people	.00	.02		.01	.02	
Social connections with other immigrants	-.05	.02		.04	.02	
Social exclusion x social connections with native people	-.02	.02		.03	.02	
Social exclusion x social connections with other immigrants	.06	.02**	.003	.00	.02	
Gender (male)	-.48	.03***	.058	.38	.04***	.031
Age	.05	.02*	.001	-.09	.02***	
Country - Germany	-.12	.05*		.10	.05	
Country - Netherlands	-.50	.06***	.029	.38	.06***	.019
Country - Sweden	-.36	.06***		.40	.07***	
Adjusted R ²	.10			.07		
F(dfn, dfd)	35.06 (10, 3046) ***			9.89 (11, 1245)***		
Model 2						
Intercept	-.30	.35		0.86	.38*	
Peer-reported social exclusion	.07	.02**	.013	-.10	.02***	.006
Delta score	.02	.02		.00	.02	
Social exclusion x Delta score	-.05	.02**	.002	.02	.02	
Gender (male)	-.48	.04***	.060	.38	.04***	.033
Age	.05	.02*	.001	.05	.04	
Country - Germany	-.12	.05*		.10	.05	
Country - Netherlands	-.51	.06***	.033	.39	.06***	.024
Country - Sweden	-.40	.086**		.45	.06***	
Adjusted R ²	.10			.07		
F(dfn, dfd)	43.09 (8, 3048) ***			29.82 (8, 3048) ***		

Note. * $p < .05$; ** $p < .01$; *** $p < .001$

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