



ТЕОРЕТИКО-МЕТОДОЛОГИЧЕСКИЕ ПОДХОДЫ К ИССЛЕДОВАНИЮ РАЗВИТИЯ ПСИХИКИ

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Article

From being “disadvantaged” to becoming the most advantaged

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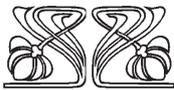
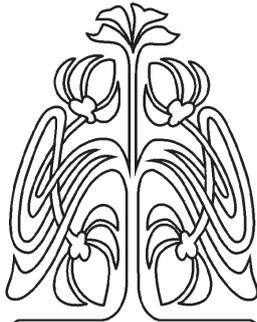
Abstract. Since Merton defined the self-fulfilling prophecy in 1948, it has been adopted to several disciplines, and yet, only a small proportion of researches was built on its original complete notion accurately. Empirical papers even met challenges in proving an important part of it, notably that the initial expectation, that came true unwittingly through the behaviour of participants, had to be “false”. That crucial point is the Achilles heel of self-fulfilling prophecy researches, including its special cases, the Galatea, Golem and Pygmalion effect experiments. The research gave an overview on the self-fulfilling prophecies’ related themes in Educational Research, Psychology and Sociology: interactions/stereotypes–stigmas and performance/achievement; and aimed to examine the (aggregate) role/potential of “disadvantaged” people (i.e. people with mental, physical, psychological problems, disadvantaged socioeconomic/familial backgrounds) in inducing the special cases of self-fulfilling prophecy – compared to other participants’ aggregate role/potential across all formerly reviewed studies. To this end, an umbrella review method was implemented, that has been unprecedented in social science. A research evidence-based inclusion–exclusion criteria, a PRISMA 2020-based search strategy, and a two-phase quality appraisal ((1) an author-led PRISMA 2020 assessment, (2) a two-researcher 10-step protocol; results: 4.3–4.4/5) were carried out, leading to a sample of two meta-analyses. The data collection and summary were based on qualitative and quantitative findings. The results showed that the effect sizes in “disadvantaged” experiments (d between 1.38–2.20) exceeded overall effect sizes of meta-analyses ($d_1 = 0.81$, $d_2 = 1.13$) and of most studies in their samples. With regard to that Merton’s “initially false conceptions” can/could be completely incorporated into the research design only when the “disadvantaged” are/were the subject of these experiments – i.e. indeed a self-fulfilling prophecy is/was measured –, the final conclusion is that the “disadvantaged” are actually “the most advantaged” people in inducing the positive cases of self-fulfilling prophecy, particularly Pygmalion effect.

Keywords: disadvantaged people, Galatea effect, Golem effect, Pygmalion effect, review of reviews, self-fulfilling prophecy, umbrella review

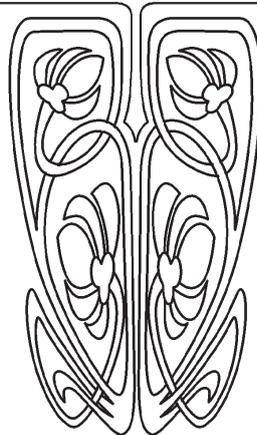
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НАУЧНЫЙ
ОТДЕЛ





Научная статья
УДК

От статуса «обездоленного» до наиболее преуспевающего

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Аннотация: Роберт К. Мертон в 1948 г. дал определение самоисполняющегося пророчества. С тех пор термин применялся в нескольких дисциплинах. Тем не менее лишь небольшая часть исследований была основана на первоначальной полной и точной интерпретации данного понятия. Авторы эмпирических исследований сталкивались с рядом трудностей, доказывая важную часть теории, в частности что первоначальный прогноз, который невольно сбывался в результате определенного поведения участников ситуации, должен был быть «ложным». Этот ключевой момент является ахиллесовой пятой исследований, основанных на теории самоисполняющихся пророчеств включая такие особые примеры, как эксперименты с эффектом Галатеи, Голема и Пигмалиона. В настоящем исследовании представлен обзор работ в области образования, психологии и социологии, связанных с самоисполняющимися пророчествами: взаимодействие / стереотипы-стигмы и эффективность поведения / достижения. Целью исследования стало изучение роли (совокупной) / потенциала «обездоленных» людей (т. е. людей с психическими, физическими, психологическими проблемами, неблагоприятным социально-экономическим / семейным статусом) в стимулировании особых случаев самоисполняющегося пророчества – в сравнении с совокупной ролью / потенциалом других участников всех ранее рассмотренных исследований. Для достижения поставленной цели в работе использовался метод «зонтичного» мета-анализа, что не имеет аналога в общественных науках. Применялись критерии включения-исключения, основанные на фактических данных исследования, стратегия поиска на основе PRISMA 2020 и двухэтапная оценка качества ((1) оценка PRISMA 2020, выполненная автором, (2) 10-этапный протокол двух исследователей; результаты: 4.3–4.4/5), что привело к выборке из двух мета-анализов. Сбор и обобщение данных основаны на качественных и количественных выводах. Результаты показали, что размеры эффекта в экспериментах с «обездоленными» (d между 1,38–2,20) превысили общие размеры эффекта мета-анализов ($d_1 = 0.81$, $d_2 = 1.13$) и большинства исследований в их выборках. В контексте сказанного упомянутые в теории Р. К. Мертона «изначально ложные ожидания» могут / могли бы быть полностью включены в исследовательский проект только в том случае, когда объектом экспериментов являются / были «обездоленные», т. е. Измеряется / измерялось действительно самоисполняющееся пророчество. Итоговый вывод исследования состоит в том, что «обездоленные» на самом деле являются «наиболее преуспевающими» людьми в контексте стимулирования положительных случаев самоисполняющегося пророчества, в частности эффекта Пигмалиона.

Ключевые слова: обездоленные люди, эффект Галатеи, эффект Голема, эффект Пигмалиона, обзор обзоров, самоисполняющееся пророчество, «зонтичный» мета-анализ

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Introduction/Background

The self-fulfilling prophecy was defined first in academia by Merton in 1948 as a “false definition of a situation that evoked such a behaviour that made that initially false conception come true” [1, p. 506]. Since then, the concept was adopted to several research areas (such as Accounting and Finance–Mathematics; Archaeology and History; Business and Economics; Education; Ethics; Management; Medicine and Health; Politics, Law, International Relations; Psychology; Sociology) and themes, including the original examples of bankruptcy, neurosis and racism/stigmatism. Our recent meta-narrative review [2] revealed that only 18 percent of the papers (in the sample of 83) implemented Merton’s original idea of an “initially false conception” coming true at referring to the self-fulfilling prophecy, and 62 percent comprehended the concept “as a (positive/negative) expectation of any sort (e.g. forecast, fear, hope etc.) that (predominantly unwittingly/subconsciously) induced such (human

or other e.g. value asset) behaviours/processes that resulted in the initial expectation coming true” [2, p. 13]. Hence, researches incline (d) to disregard, to not incorporate the “falsity” of initial conceptions in their study, while building on Merton’s idea – even theoretical materials misinterpreted or diminished the definition without the need to confirm the falsity by empirical means.

In areas and themes related to Education, Psychology and Sociology, although the main narrative was a two-way street (toward social interactions/stereotypes–stigmas and performance/achievement), researches were consonant in incorporating the initially false conceptions in their (mainly empirical) design. In case of social interactions/stereotypes–stigmas, the outcome of social interactions was “dependent on the expectations/fears for acceptance/rejection by individuals/groups that could result in behaviours confirming those expectations/fears” [1, p. 506], and stereotypes–stigmas were “false” constructs that represented a social “threat”. In case of performance/achievement, experimental manipu-



lations could make teachers/leaders falsely believe in their students'/subordinates' potential for higher achievement, which made the students'/subordinates' believe in their own capacities, have new motivations and put extra efforts resulting in the expected higher achievement (in e.g. intelligence tests, sport and other physical performance).

However, within the little fraction that held on Merton's original idea, empirical papers even met challenges in proving that the initial conception was indeed false in the examined contexts, particularly in the themes of social interactions/stereotypes–stigmas, where the perceptions of others are judgemental (biased). But even in intelligence, sport and other physical tests in general, data could not exclude the possibility of initial expectations being true/accurate from certain views, a limitation that, according to Madon et al. [3, p. 826] “characterises all correlational self-fulfilling prophecy research”. Nevertheless, a tiny proportion of performance/achievement investigations were/are definitely exceptions: the ones involving disadvantaged people [4, 5], whose limited capabilities could not be questioned from any views. When these people with mental, physical and psychological problems, disadvantaged socio-economic/familial backgrounds were the subjects of experiments, they were measured for the special cases of self-fulfilling prophecies, for Galatea, Golem and Pygmalion effects.

These cases or effects origin from Organisational Behaviour, at the intersect of Educational Research, Psychology and Management; are examined in leader–subordinate dyads, in different laboratory or field experimental contexts, and are closely related. The Pygmalion effect refers to when leader expectations for subordinate performance are increased by manipulation, and that unwittingly induces such a positive/supportive behaviour from the leader that is perceived by the subordinate, whose self-expectations for own performance also increase and result in more motivation, efforts and a higher achievement [6, p. 14]. Galatea effect refers to when the subordinate self-expectations increase as a result of Pygmalion effect or direct manipulation [5]. Golem effect refers to the reversed Pygmalion effect, when subordinates underachieve as a result of low leader expectations for their performance [7]. Hence, the first two are for positive expectations and higher achievement, the latter is for negative expectations and lower achievement.

A two-field experiment tested [4] and a case study described [5] these effects on the disadvantaged people. The experiments aimed to prevent Golem effect and to induce Pygmalion and Galatea effects on disadvantaged women at age 18–19, led by women during military training. Regarding the subordinates' capabilities, they had limited schooling, substandard scores on mental and aptitude tests, disadvantaged socioeconomic and familial backgrounds, all of which

their leaders were aware. The focus was placed on the female leaders, who could increase their expectations for the stigmatised subordinates' performance, accompanied by the appropriate leadership behaviour and motivation, for the first time in self-fulfilling prophecy researches. The case study explained when people with borderline IQ or psychological problems were trained not in a special but general military program, along people with normal abilities, due to administrative and organisational problems. The focus was placed on the organisational expectations and culture impregnating upon the disadvantaged trainees, who performed in the program as normal, when “treated as normal” [5, p. 884].

Therefore, the literature concentrated on the gender generalisability and organisational-level expectations or culture in inducing Galatea, Golem and Pygmalion effects. It disregarded the important practical and methodological contributions on the role and potential of disadvantaged people in self-fulfilling prophecy researches. Now we know that leaders, whether they are men or women, can increase their expectations for stigmatised disadvantage people's performance; who can react to these expectations and fulfil them as normal people, when they are treated as normal. Thus, we can see that the only experiments implementing completely and successfully Merton's original definition, were the ones involving disadvantaged people, who – while undoubtedly underachieving initially and having limited abilities – could fulfil the prophecy of higher achievement. Therefore, the main assumption of the study is that the “disadvantaged” are the “most advantaged” for self-fulfilling prophecy research, particularly for Galatea, Golem and Pygmalion effects experiments.

The research objective is to further examine the role and potential of “disadvantaged” people in inducing the special cases of self-fulfilling prophecy, through implementing a comprehensive overview on the former reviews. This overview of reviews, the umbrella review allows us to see the aggregate role/potential of the disadvantaged and compare to the other participants' aggregate role/potential across all studies included in the reviews. Therefore, to deduce overall conclusions from overall effect sizes.

First the umbrella review method and its applicability are discussed. Then we set the inclusion–exclusion criteria, carry out the search strategy and quality appraisal, collect and summarise data. Finally, we embark at the results and conclusions, and give propositions for future research with “disadvantaged” people with regard to Galatea, Golem and Pygmalion effects.

Method

The umbrella review has organically grown from healthcare and medical research as the review or overview of reviews [8, 9], for combining and



synthesising relevant data from at least two existing systematic reviews, meta-analyses (or other evidence syntheses/reviews) to “examine only the highest level of evidence” [10, p. 13]. The highest level of evidence” refers to the systematic review and meta-analysis themselves [9] as the most important and sophisticated stages of evidence syntheses in healthcare. About evidence syntheses see [11].

The systematic review compares the effectiveness of treatments/interventions in the different experiments [12]; the meta-analysis statistically measures the different studies’ overall effect size on the same treatment/intervention [13]; hence, they are based on (quasi) experiments. Although in many disciplines of social science such as Educational Research, Psychology and Sociology – where self-fulfilling prophecy originates from –, (quasi) experiments are carried out on a regular basis, the umbrella review has not set foot. The current is among the first attempts to apply it there (on search terms ‘umbrella review’, ‘review of reviews’, ‘overview of reviews’, EBSCO, JSTOR, Scopus, Web of Science databases generated results only in healthcare and medical science).

The umbrella review aims to compile proof from multiple research syntheses by a specific 11-step protocol worked out by Aromataris et al. [8]: (1) title and author information; (2) developing the title and question; (3) background; (4) review question/objective; (5) inclusion criteria; (6) search strategy; (7) quality appraisal; (8) data collection; (9) data summary; (10) results; (11) conclusion. Steps (1)–(4) are already implemented in the current review along the protocol (e.g. the expected content and length of the introduction/background), steps (5)–(11) are further developed in the upcoming chapters. Besides, Fusar-Poli and Radua [14] outlined ten complementary rules to consider, while carrying it out ((a) Ensure that umbrella review is really needed; (b) prespecify the protocol; (c) clearly define the variables of interest; (d) estimate a common effect size; (e) report the heterogeneity and potential biases; (f) perform a stratification of evidence; (g) conduct (study-level) sensitivity analyses; (h) report transparent results; (i) use appropriate software; (j) acknowledge its limitations). However, these were deduced from meta-analyses, while umbrella reviews are not exclusively used for those. Thus, Grant and Booth [15] remind users for its commons with other reviews: it gathers what is known and unknown about a topic, and makes recommendations for future research.

Inclusion–exclusion criteria

Aromataris et al. [8] sets the main inclusion criteria, in healthcare and medical science, “exclusively to syntheses of research evidence” such as systematic review, meta-analysis, rapid review, scoping review, integrative review, etc. (see full list on [11]); and the

exclusion criteria to reviews that involve any non-empirical papers. The minimum sample size of an umbrella review is two ($n_{\min} = 2$). In social science, both systematic reviews and meta-narratives can be found, but systematic reviews are not exclusively used for the measurement of treatments/interventions [16]. Nevertheless, at self-fulfilling prophecies, (as outlined before) we have the chance to implement an original umbrella review, and therefore to follow strictly the inclusion–exclusion criteria of Aromataris et al. [8]. These are narrowed down by a selection criteria that only research evidences can be finally included that involved studies measuring the role and potential of disadvantaged people in Galatea, Golem and Pygmalion effects.

Search strategy

The search strategy follows the steps and logic of PRISMA flow chart [17] in an adapted imagery. In the identification phase, it focuses on primary search terms such as ‘Galatea effect’, ‘Golem effect’, ‘Pygmalion effect’; accompanied by a secondary term such as ‘systematic review’ or ‘meta-analysis’ – in line with the inclusion criteria and the search suggestions of Aromataris et al. [8] – in four major scientific databases (i.e. in EBSCO, JSTOR, Scopus, Web of Science). Besides, the strategy disregards materials before 1990 since evidence syntheses are expected to appear after that time – as highlighted by Aromataris et al. [8] – and any reviews involving non-empirical studies – in line with the exclusion criteria. First results: EBSCO (9), JSTOR (2), Scopus (7), Web of Science (0), totalling 18 articles. Upon screening, the search is narrowed down to English-written, full-text materials, articles only – secondary inclusion criteria. Second results: EBSCO (5), JSTOR (2), Scopus (5), Web of Science (0), totalling 12 articles. In the eligibility assessment, the removal of duplications and textual reading (title, keywords, abstracts) are implemented. In the latter, only materials focusing on the special cases by a systematic review or meta-analysis are accepted, with a particular attention to involving studies about disadvantaged people – in line with research objective and former selection criteria. Finally, 2 meta-narratives are included (figure 1): Kierein & Gold [18] – referred to as Review 1, McNatt & McNatt [19] – referred to as Review 2.

Quality appraisal

The quality appraisal had two phases for maximising the level of assessment and minimising the possible bias. First, a 2020 PRISMA Statement was carried out with 27 items [17]. Secondly, a two-researcher protocol was implemented similarly to Razaghizad et al. [20], where the eligible papers were independently evaluated by the author and a research assistant. The papers were rated from very low to

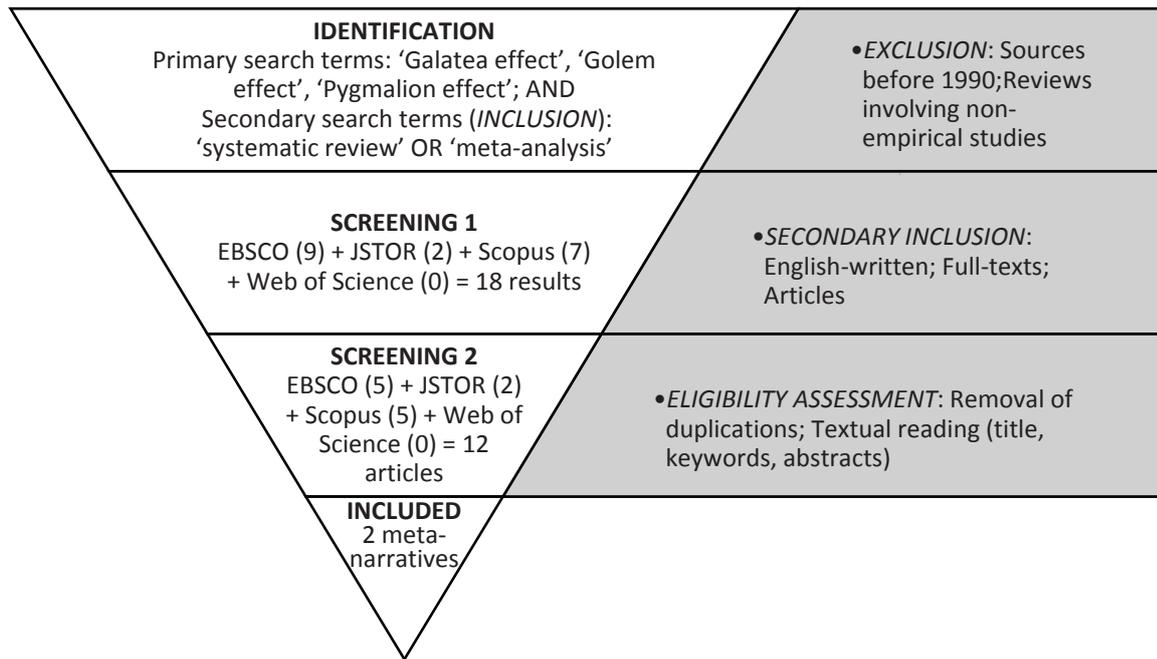


Fig. 1. Search strategy (Own work, 2021)
Рис. 1. Стратегия поиска (авторская работа, 2021 г.)

very high quality on a 5-point scale, based on the 11-step protocol of umbrella reviews, except title and author information (see Method), therefore, on 10 criteria tailored typically to appraisals, and particularly to meta-analyses: (1) title; (2) background; (3) review question/objective; (4) inclusion–exclusion criteria; (5) search strategy; (6) quality appraisal; (7) data collection; (8) data analysis; (9) results; (10) conclusion. Where the rating did not match, the reviewers engaged in a scientific discussion to get to consensus – there was no need for a third reviewer. The two papers were accepted for the umbrella review [18].

Data collection and summary

Both reviews draw conclusions on the margin of Pygmalion effect, the leader-initiated positive self-fulfilling prophecy that results in higher subordinate self-expectations, motivations, efforts and achievement. (However, they also deduce from the concepts of Galatea and Golem effects in their explanation, since those are closely related to the Pygmalion effect mechanism and experimenting.) For that, leaders received experimental manipulation, and sometimes were even deceived, that resulted in an increase in their expectations for their subordinates and a positive change in their behaviour toward them (e.g. they become more supportive, calm, patient, etc.) [20]. The reviews only included field experiments and aimed to measure the moderator effect of contexts, low performers, genders, and (one of them) the groups. Hence, the reviews examined the role and potential of these indicators in inducing Pygmalion

effect in the former experiments (study and overall effect sizes, *d*). In their sample, they collected data from both initially high and low performers. Within low performers, the formerly mentioned two-field experiment on only “disadvantaged” women subordinates can be found to meet our “disadvantaged” selection criteria. Besides, Review 2 collected data from King’s [21] study that investigated the „underprivileged workers’ performance”. However, since in his design, “underprivileged” is not a synonym for our and Eden’s “disadvantaged” (see description in Introduction/Background), but for a low position in the organisational hierarchy and a bad socioeconomic background, this study cannot be essentially regarded as part of our criteria.

Table 1 shows the summary of quantitative findings from the meta-analyses. The scope/aim of the reviews (to measure Pygmalion effect in work organisations/management contexts), number of involved primary studies (13–15), overall number of participants in the studies (2853–2874) were similar. The main deficiency of the papers is that neither implemented a quality appraisal protocol, but a briefly descriptive assessment where the examined materials lacked reliable or sufficient information. Nevertheless, the authors efforts have to be acknowledged where they reached out to the authors for making the datasets as complete as possible, and recalculated the singular effect sizes of more studies to avoid the former researcher bias/errors. Review 2 had a more diverse list of contexts (business, manufacturing, medical, military) and (re)calculated a greater number of effect sizes (58) in contrast to Review 1



Table 1 / Таблица 1

Summary of quantitative findings from the reviewed meta-analyses (Own work, 2021)
Краткое изложение количественных результатов рассмотренных мета-анализов (авторская работа, 2021 г.)

| Meta-analysis (Study) | Intervention | Primary studies (N) | Primary study quality assessment | Contexts | Participants (N) | Data synthesis | Effect sizes (N) | Studies involving “disadvantaged” effect sizes (d) | Overall effect size (d) on average | Review quality |
|---------------------------------|--|---------------------|---|--|------------------|----------------|------------------|--|------------------------------------|----------------|
| <i>Kierein & Gold</i> [18] | Pygmalion effect in work organisations | 13 | No protocol, but briefly assessed and noted where the materials lacked reliable or sufficient information | business (3) military (10) | 2853 | Qualitative | 13 | 1.86 [4] 2.20 [4] | 0.81 | 4.3 |
| <i>McNatt & McNatt</i> [19] | Pygmalion effect among adults within management contexts | 15 | | medical (1) manufacturing (1) business (2) military (8) | 2874 | Qualitative | 58 | 1.87 [24] 1.38 [25] | 1.13 | 4.4 |

Table 2 / Таблица 2

Summary of qualitative findings from the reviewed meta-analyses (Own work, 2021)
Краткое изложение качественных выводов из рассмотренных мета-анализов (авторская работа, 2021 г.)

| Moderator analysis | <i>Kierein & Gold</i> [18] | <i>McNatt & McNatt</i> [19] |
|---|---|---|
| Overall effect | Pygmalion effect can be produced in work organizations, and may be strong in a range of settings. | Pygmalion interventions may and may not result in sizable effect, depending on the context where they are undertaken. |
| Disadvantaged, underachievers, low performers | Pygmalion effect worked better among low performers. Reasons can be: they are “more responsive to the subtleties in the Pygmalion leadership style since this may be one of the few times they are expected to perform well”; they “have more room for improvement than do people who initially perform at higher levels” – hence, high performers have a ceiling (p. 925). | Pygmalion effect works the best among the disadvantaged or underachievers or the ones generally viewed with low potential/expectations (by leader or themselves). “Low expectations are not exclusively associated with disadvantaged sections of the population” (p. 319). |
| Genders | Gender differences among male versus female leaders and subordinates were not found. There may be a Pygmalion effect at groups led by female leaders, but it may be smaller than at groups led by male leaders. | Gender differences in (men versus women only) groups were not found, among male and female leaders yes. Gender differences when found can be due to sampling error. If these exist, they are smaller than previously assumed. |
| Settings | In military (versus civilian/business) context, stronger Pygmalion effect was found, that can be due to more reasons: in military, “leaders have more overt control over subordinates”; “military personnel are more closely monitored” than business employees; in military, subordinates do not question authority, therefore more likely to internalise leader expectations and beliefs; in military, subordinates are usually younger than the ones in business; all military experiments were carried out by Eden and colleagues, that could lead to higher effect sizes in military (p. 924–925). | The context was mainly military (especially regarding the sample sizes), an atypical “work” context, hence results are more robust there – in civilian settings, sampling error is more likely, thus more research should be implemented there. In military contexts, stronger Pygmalion effect was found that can be due to many reasons: in for-profit work contexts, it is more difficult to detect the effect; in military, there is a more frequent and enduring leader-subordinate contact – that is critical for Pygmalion effect. |
| Groups | Pygmalion effect can operate at whole groups, and be just as strong as when expectations are raised for individuals. | – |



(business, military; 13). Although there are differences between the results of the two meta-analyses, the effect sizes of studies on only “disadvantaged” women subordinates are outstandingly greater than the overall effect sizes. Particularly, in Review 1, the two-field experiment resulted in $d_1 = 1.86$ and $d_2 = 2.20$ (one effect size for each experiment in the study) compared to the overall $d = 0.81$, only King’s [22] ambiguous study could partly overtake it ($d_3 = 2.46$), where the data are insufficient/unreliable (e.g. participants’ sexes are unknown). In Review 2, the same two-field experiment’s conference version publication resulted in $d_1 = 1.87$ and $d_2 = 1.38$ compared to the overall $d = 1.13$, more studies could overtake it (i.e. Eden & Shani [23] $d_3 = 3.7$), including King’s [21] “underprivileged” study ($d_4 = 2.44–2.46$). With regard to their mild deficiencies and ruling dedication, the reviews received 4.3–4.4 on their quality appraisal.

Table 2 summarises the qualitative data synthesis of meta-analyses, based on the overall finding and the moderator analyses. The reviews were consonant in all aspects. Regarding the former, the reviews could agree on that depending on the context, the Pygmalion effect can be induced with a high effect size. Regarding the latter, the Pygmalion effect can work at both individual and group level (i.e. leader expectation can impact positively whole groups’ performance); it works better in military than in business context; it works equally at women and men or the differences smaller than former studies presumed (i.e. gender differences among male and female subordinates were not found, small differences among male and female leaders were found). And last but not least: Pygmalion effect works the best among the “disadvantaged” people or underachievers or the ones generally viewed with low potential/expectations (by their leader or themselves) – however, “Low expectations are not exclusively associated with disadvantaged sections of the population” [19, p. 319].

Conclusions

The data collection and summary, based on both qualitative and quantitative findings, highlighted the aggregate role/potential of the “disadvantaged” people compared to the other participants’ aggregate role/potential in inducing the special cases of self-fulfilling prophecy, across all studies included in the two meta-analyses under review. The results showed that the “disadvantaged” people are having a potential (d between 1.38–2.20) for inducing Pygmalion effect greater than “all experiments together” (i.e. overall effect size, $d_1 = 0.81$, $d_2 = 1.13$), and most experiments alone (i.e. study effect sizes). This refers to that when a leader increased his/her expectations for “disadvantaged” people’s performance, and showed a positive change in the behaviour toward them,

these people reacted to the higher expectations and supportive behaviour with higher self-expectations, more motivation, efforts, performance, and finally achievement. Higher than their own, and higher than “normal” people. With regard to that Merton’s “initially false conceptions” can/could be completely incorporated into the research design only when the “disadvantaged” are/were the subject of these experiments – i.e. indeed a self-fulfilling prophecy is/was measured –, the final conclusion is that the “disadvantaged” are actually “the most advantaged” people in inducing the positive cases of self-fulfilling prophecy, particularly Pygmalion effect.

The outstanding role of “disadvantaged” people played in Pygmalion effect would force us to continue self-fulfilling prophecy research with “disadvantaged” participants, and to focus on exploiting their – in contrast to the beliefs – almost unlimited potential. Their participation could be the basis of future conceptualisation and operationalisation of Pygmalion effect researches in which lately six problems and gaps have been identified (i.e. availability, harm, naturalness, research objects, settings, trust [26]). The research limitations include the possibility of bias mainly at quality appraisal. The main methodological contribution is the establishment of umbrella review, that has been unprecedented in social science.

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