

Mental Toughness and Prenatal Depression Among Pregnant Women in Gaza

Supraja Thogarapalli Jayasankaran

Abstract

Pregnancy represents a period of heightened psychological vulnerability which is highly compounded in conflict affected settings like Gaza where women are vulnerable through displacement, insecurity, bereavement, financial hardship, disrupted healthcare and constant exposure to violence. There is evidence that has been seen in the Gaza Strip that prenatal symptoms of depression are very prevalent. A randomized sample of 400 pregnant women visiting primary healthcare systems reported moderate depressive symptoms in 33.3% and severe depressive symptoms in 18.5% and a study in a West Bank refugee-camp reported some level of depressive symptoms in 59.5% of 327 pregnant women. Mental toughness as a protective factor which encompasses perceived control, commitment, challenge appraisal, and confidence, represents an unexplored frontier of protective psychological resources that has yet to be examined in pregnant Gazan women. This is a critical review which compiles the evidence regarding prenatal depression in Gaza and Palestine, mental toughness and depressive symptoms, resilience, coping, social support and pregnancy under conflict. While direct evidence on perinatal is less studied upon, independent non pregnancy literature consistently showcases that mental toughness functions as a protective stress buffering factor rather than a direct risk factor; a recent community study revealed a significant buffering interaction between stress and mental toughness on depressive symptoms ($b = -0.16$, $p = .004$). There is also supportive perinatal evidence based on adjacent constructs: the stronger the social support and resilience, the lower the level of perinatal depression, and the avoidance of coping is related to a higher level of depressive symptoms. But the substitution of constructs, cross-sectional designs, dissimilar screening instruments and harsh contextual deficiency restrict causal inference. Available evidence thus shows that mental toughness is a potential/testable stress-buffering determinant as opposed to an established protective determinant of prenatal depression in Gaza. Future Gaza-based, validated Arabic measure studies are needed.

Keywords: mental toughness, prenatal depression, pregnancy, gaza, resilience, armed conflict.

1. Introduction

Prenatal depression is a critical maternal mental-health concern that impacts emotional functioning during pregnancy and could also be linked to poor obstetric, neonatal and developmental concerns. One umbrella review that synthesised 10 prevalence reviews and 306 studies and used 877,246 participants as participants reported a range of 15% to 65% as the

Published: 21 October 2026

DOI: <https://doi.org/10.70558/IJSSR.2026.v3.i5.301383>

Copyright © 2026 The Author(s). This work is licensed under a Creative Commons Attribution 4.0 International License (CC BY 4.0).

prevalence of antenatal-depression. The same review found that infants of mothers with antenatal depression had higher risks of low birth weight (RR = 1.49, 95% CI 1.32–1.68) and preterm birth (RR = 1.40, 95% CI 1.16–1.69) (Dadi et al., 2020). These estimates indicate that antenatal depression is not a personal issue of emotionality; it is a medical and community health concern of exposure and may have intergenerational effects.

The psychological situation of pregnancy in Gaza is fundamentally different in contrast with that presumed in the majority of the perinatal mental-health literature. Pregnant women can face recurrent traumatic experiences, displacement, food insecurity, bereavement, interrupted antenatal care and lack of confidence in the safety of the person and the unborn baby.

Murtaja and Thabet (2017) studied 400 pregnant women attending governmental and UNRWA primary healthcare facilities in the Gaza Strip using the Beck Depression Inventory (BDI). They reported moderate depressive symptoms in 33.3% and severe depressive symptoms in 18.5% of the sample population. As emphasized in comparative methodological reviews (e.g., Shqair et al., 2026) the noted figures reflect high screening based symptom burdens rather than formal diagnostic prevalence and must be interpreted carefully given the variations in the screening tools, cutoffs and contextual pressures.

Recent Palestinian data speaks in favor of high risk. Aljouadi et al. (2025) followed 304 pregnant women in a critical state across eight Palestinian hospitals and the mean Clinically Useful Depression Outcome Scale score was 55.72. Frequent crying was found in 51% with fatigue of 42.4% as “always” and 41.1% “sometimes.” The independent predictors of a higher severity of depression were financial instability ($p = .003$), previous miscarriage ($p = .005$), unintended pregnancy ($p = .001$) and rented housing ($p = .004$); the final model accounted 56% of variance (adjusted $R^2 = .56$, $p < .001$). Though this risky sample cannot be considered to be representative of all Palestinian pregnancies, it shows how in the context of socioeconomic and obstetric disadvantage depressive symptoms can become closely bound up.

The question that this review is answering is whether it is reasonable to think that mental toughness will help to alleviate vulnerability to prenatal symptoms of depression in pregnant women in Gaza. The construct of mental toughness has been given minimal consideration regarding maternal health as opposed to other constructs like resilience, self-efficacy, coping or social-support. The fact that there is a lack of direct studies does not mean that the proposed relationship is false, although it must take an evidence-adoption strategy. This review thus differentiates three levels of evidence; direct evidence of prenatal depression in Gaza/Palestine; direct evidence of mental toughness and depressive symptoms in other groups; and indirect perinatal data of conceptually related protecting factors like resilience, mastery, coping and social support.

2. Review Approach and Scope

This is a critical narrative review as opposed to a systematic review or meta-analysis. Searches focused on combinations of mental toughness, depression, depressive symptoms, pregnancy, antenatal or prenatal depression, resilience, coping, social support, Gaza, Palestine, war and armed conflict. Gaza and Palestinian studies that were the most relevant were accorded highest interpretive weight. More general patterns of effects were determined using systematic reviews

and meta-analyses; when single studies needed clinically useful numerical results or investigated plausible mechanisms, such studies were utilized.

There was a crucial difference between mental toughness and other related constructs. The measures of mental toughness were not considered interchangeably as resilience, self-mastery, social support and coping. This is because they shed light on mechanisms that intersect with mental toughness, especially perceived ability to control, persistence, adaptive appraisal and stress regulation, and due to the absence of direct evidence and pregnancy-specific mental-toughness evidence at the moment. Such a distinction is crucial to prevent construct inflation, as well as to prevent a review coming to appearances of proving an association that is not yet measured in the population of interest.

3. Mental Toughness: Construct, Mechanisms and Measurement

Mental toughness originated largely within the domain of sport and performance psychology, though contemporary literature views it as a broader psychological tool that applies to stress, coping and mental health. The significant 4C/6C tradition elucidates the concept of mental toughness as the capacity to be in control, committed, challenged and confident, and sometimes the concept of being in total control is further subdivided into life control, emotional control, confidence in abilities and interpersonal confidence. In a systematic review, Lin et al. (2017) found out that mental toughness positively correlates with positive psychological characteristics, more effective coping and improved mental-health results. Notably, large conceptual and measurement inconsistencies were also indicated across the literature, which implies that mental toughness cannot be viewed as a fixed and/or clinically valid entity.

Stress buffering is the most applicable theoretical mechanism that deals with prenatal depression. Transactional models postulate that the psychological distress is not only contingent on objective presence of stressors but also on the appraisal of demands in terms of resources to cope with them. Perceptions of helplessness could be mitigated by control and confidence, upholding goal-oriented behaviour in the face of disadvantage may come with commitment, and reducing the propensity to view every change as something that cannot be controlled may be facilitated by challenge appraisal. These processes correspond to cognition patterns which are pertinent to depression such as hopelessness, ruminations, withdrawal and sense of lack of control.

Objective data is found in recent evidence. Dziuba et al. (2026) investigated 402 community-dwelling participants (adults aged 34 to 90 years). Their model predicting depressive symptoms was significant, $F(3, 394) = 52.33$, $p < .001$, $R^2 = .44$. Perceived stress strongly predicted depressive symptoms ($b = 0.34$, $p < .001$), and the stress $\times$ mental toughness interaction was significant ($b = -0.16$, $SE = 0.06$, $p = .004$), adding 2.3% explained variance. The simple slopes indicated that depressions were predicted by stress at any level of toughness of their mind, but the tie became loose as the toughness was enhanced. This is of particular interest to the case of Gaza: the role of mental toughness as it could reduce the extreme stress outside is not entirely plausible, but it might modify the extent to which stress mediates into depressive symptoms.

This trend is backed up by other studies, but depicts shortcomings. Mojtahedi et al. (2021), studying mental health during the COVID-19 pandemic, found that mental-toughness

dimensions explained substantial proportions of variance in state depression before trait anxiety was added to regression models; in one sample the first-step model explained 55.2% of variance, and after trait anxiety the model explained 67.8%. These results suggest that there are significant overlaps among mental toughness, anxiety disposition and depression. They also warn against too much inflated claims of special effects since mental toughness can partially be the manifestation of more general emotional and trauma-level stability or vulnerability.

The indications that mental toughness is something that is adjustable, is not conclusive. Stamatis et al. (2020) were able to review 12 intervention studies and discovered a vast pooled pre-post intervention outcome of the mental-toughness training ($d = 0.80$, 95% CI 0.30 -1.28). Nevertheless, 75% of included studies were at high risk of bias, majority of the studies were sport based and most samples were mainly male. So the evidence of intervention cannot look like it can be directly applied to pregnant women in Gaza.

4. Prenatal Depression in Gaza and Palestine

The Gaza-specific study by Murtaja and Thabet (2017) remains particularly important because it directly measures depression during pregnancy in the population of interest. The overall proportion of radical intervention along with moderate to severe depression symptoms was 51.8% (33.3% moderate plus 18.5% severe) a figure that aligns with the upper threshold of global antenatal depression. However, because this study was based on cross-sectional design and relied on a screening tool rather than a diagnostic clinical interview, the finding show elevated symptoms of burden rather than the prevalence of severe depressive disorder.

This is indicated by data related to the West Bank refugee-camp. Al-Tell and Abu Iznait (2020) investigated 327 pregnant women in nine refugee camps with the PHQ-9. All of these feelings were found to have 59.5% some level of depressive feelings: 34.0% mild, 17.2% moderate, 6.1% moderately severe and 2.1% severe. Violence exposure, lack of support, age and parity were known to expose to depression and 57.1% of women with moderate levels of depression had been continually sexually violated by a husband. This result cannot be generalised directly to Gaza, but it does indicate the effect interpersonal violence and the lack of support has in magnifying more general structural insecurity.

The Shqair et al. (2026) narrative review of the evidence on the phenomena of antenatal-depression among Palestinians is helpful since it presents a comparison of the evidence and points out clearly that the problem of naive prevalence comparison Differences in instruments, cut-offs, sampling frames and local validation mean that a 59.5% PHQ-9 symptom prevalence in refugee camps and a 51.8% moderate/severe BDI burden in Gaza should not be interpreted as directly equivalent. This is important to any future study on mental-toughness because the measure of outcome needed should be ideally a culturally-validated Arabic scale and quantified continuously and by a clinically significant threshold.

The context under which psychological resources operate is also depicted using evidence of conflict in Gaza that is specific to the conflict. The qualitative interviews with 30 displaced Gazan women conducted by Hamamra et al. (2025) revealed five themes, such as collapse of maternal healthcare, emotional burden of motherhood, displacement and loss of dignity, food insecurity and maternal guilt, and resilience amid collective trauma. Depression or mental

toughness is not measured in the study, although it undermines individualistic understandings. The food shortage, lack of security, health care and social services limit psychological stability in these situations; individual strength can be replaced by systematic deprivation.

Longitudinal Gaza studies also indicate that the maternal mental health that is accompanied by war has consequences beyond the mother. Punamäki et al. (2019) evaluated 502 Palestinian families including pregnant women during the 2014 Gaza war to understand the maternal trauma during the war and its impact on mental health and family dynamic. The findings in this study demonstrated that war trauma exposure significantly elevates maternal post traumatic stress and depressive symptoms, which in turn affects the mother- infant attachment and emotional availability.

The evidence continues to support the research showing that, where the construct of mental-toughness is not taken directly, maternal psychological functioning is a significant node in a bigger family and developmental system.

5. Evidence From Resilience, Coping and Social Support

Since the topic of mental toughness has barely been investigated during pregnancy, the best pregnancy-specific mechanistic evidence is drawn by similar constructs. These data do not prove that mental toughness is protective, but they challenge whether non-physical resources on a psychological and interpersonal level can impact depression risk in pregnancy.

Peng et al. (2026) were able to conduct a synthesis of 29 studies using 18,213 participants. Aggregated, resilience/social-support protective factors overall in their relationship with the occurrence of perinatal depression were not statistically significant (OR = 0.83, 95% CI 0.66-1.05), which indicates a significant amount of construct and study heterogeneity. But the results were directionally consistent using the stratified results: the high resilience was found to relate to the lower odds of depression (OR = 0.73, 95% CI 0.62-0.87), whereas low resilience to the significantly higher odds (OR = 3.54, 95% CI 2.34-5.34). Strong social support was protective (OR = 0.65, 95% CI 0.50–0.84), whereas minimal support was associated with higher odds (OR = 3.90, 95% CI 2.46–6.18). The difference between the non-significant global pool effect and significant subgroup effect elucidates the importance of construct definition and reference-group coding.

Hajure et al. (2024) similarly concluded from a systematic review that higher perinatal resilience was associated with lower depression, anxiety and PTSD. The review conducted showed that positive appraisal, tolerance of uncertainty, family functioning, optimism, mastery, self-esteem, gratitude and forgiveness were some of the recurring resilience process. These elements are similar to, yet do not equal mental toughness. They are mechanistic in their value: that, perceived control, adaptive appraisal and self-belief might be clinically relevant in the course of pregnancy.

One of the social resources that should be emphasized especially in Gaza is social support as it is a psychological resource as well as a material resource. Bedaso et al. (2021) reviewed 67 studies that involved 64,449 pregnant women. Low social support was linked to antenatal depression (AOR = 1.18, 95% CI 1.01-1.41), and anxiety at antenatal (AOR = 1.97, 95% CI

1.34-2.92). Before trim-and-fill adjustment, the pooled odds ratio for low support and antenatal depression was 2.00 (95% CI 1.71–2.34), although heterogeneity was extreme ($I^2 = 98.9\%$). This heterogeneity warns that it is unwise to assume that support is a consistent exposure and argues that the source, reliability and cultural meaning of support needs to be evaluated.

Another bridge is the coping research. In a review of 45 studies ($n=16,060$) by Guardino and Dunkel Schetter (2014), they investigated avoidant and poor coping and found them to be statistically significantly linked to negative psychological outcomes, such as postpartum depression, but effects varied greatly between and among measures and study designs. Firouzbakht et al. (2022) found depression in approximately 40% of 318 pregnant women in a subsequent study, considering the COVID-19 pandemic; however, depression was only predictable by avoidance coping ($\beta = 0.226, p = .046$). Mental toughness theory would suggest increased application of active, problem-oriented or engagement coping and decreased avoidance hence coping is a valid mediator in the future studies on Gaza.

Intervention evidence is encouraging but still indirect. Walker et al. (2022) examined interventions which boost the resilience on antepartum depressive symptoms. All four interventions based on mindfulness-based interventions, five of six based on cognitive-behavioural ones, and the methodological quality of most studies were low-to-moderate, with only three actually determining the change in resilience factors. Therefore, the finding of depression after a resilience-focused intervention can not substantiate that resilience, or mental toughness was the causal factor.

6. Conflict Exposure as a Test of the Stress-Buffering Hypothesis

Mental toughness should be most relevant when the exposure to the stress is high. These are in line with the non-pregnant stress-buffering studies, as well as with the conflict-based pregnancy evidence. A study by Błaszczyk et al. (2025) on expectant Polish women during the conflict in Russia-Ukraine evaluated half of them on a measure of depression, anxiety and resilience and discovered that the variables resilience and depressive symptoms significantly correlated with global-situation anxiety. Despite significant dissimilarity between the Gaza sociopolitical context and the one whenever this research was conducted, the study contributes to the overall statement that one-on-one psychological resources are important in the face of prolonged geopolitical ambiguity.

Meanwhile, conflict studies provide a caution against psychologisation of distress which is structurally produced. In Gaza, exposure to stressors is not a simple, manageable stressor, but an overlapping environment comprising of safety threats, bereavement, homelessness, displacement, food insecurity, and interrupted healthcare. Recent Gaza maternal-health studies report significant obstetric and health care interference and qualitative studies report pregnancies without regular screening and birth in severely limited circumstances. In this situation, even very high levels of mental toughness can be seen to co-occur with clinically significant depression. A woman can be persistent, committed and confident yet experience depressive symptoms because external demands exceed any realistic individual coping capacity.

This difference implies a conditional as opposed to absolute model. Mental toughness can prove the most helpful as a moderator: in the group of women that are equally exposed to stressors, women with greater mental toughness can experience fewer symptoms of depression. It cannot be conceptualised as a shield that will eradicate the mental-health effect of war. The tests in future must then be on an interaction term between stress exposure and mental toughness not on a direct bivariate relationship.

7. Critical Evidence Matrix

Table 1: Key evidence relevant to mental toughness and prenatal depression in Gaza

Study	Population / design	Key statistical finding	Critical relevance
Murtaja & Thabet (2017)	400 pregnant women, Gaza; cross-sectional	33.3% moderate depression; 18.5% severe; 14.3% moderate anxiety; 8.8% severe anxiety; 6.3% comorbid depression/anxiety	Direct Gaza prenatal-depression evidence; screening-based and cross-sectional.
Al-Tell & Abu Iznait (2020)	327 pregnant women, 9 West Bank refugee camps	59.5% any depressive symptoms: 34.0% mild, 17.2% moderate, 6.1% moderately severe, 2.1% severe	Palestinian refugee context; instrument/cut-off differences limit direct comparison with Gaza.
Aljouidi et al. (2025)	304 critically ill pregnant women, 8 Palestinian hospitals	Mean CUDOS 55.72; adjusted financial instability $p=.003$, miscarriage $p=.005$, unintended pregnancy $p=.001$, rented housing $p=.004$	Shows concentration of obstetric and socioeconomic risk; high-risk sample limits generalisability.
Dziuba et al. (2026)	402 community adults; cross-sectional moderation analysis	Stress $\times$ MT for depressive symptoms: $b=-0.16$, $p=.004$; model $R^2=.44$; interaction added 2.3% variance	Direct evidence for MT as a stress buffer, but not pregnancy- or Gaza-specific.

Mojtahedi et al. (2021)	Two adult COVID-19 samples; regression analyses	MT dimensions explained 55.2% of variance in state depression in one sample before trait anxiety; full model 67.8%	Supports association but indicates overlap with trait anxiety and common-method variance.
Peng et al. (2026)	29 studies; N=18,213; systematic review/meta-analysis	High resilience OR=.73 (95% CI .62-.87); low resilience OR=3.54 (2.34-5.34); high social support OR=.65 (.50-.84)	Strong perinatal protective-factor evidence; resilience is not identical to MT.
Bedaso et al. (2021)	67 studies; N=64,449; systematic review/meta-analysis	Adjusted association of low support with antenatal depression AOR=1.18 (1.01-1.41); unadjusted pooled OR=2.00; I ² =98.9%	Support may buffer depression but heterogeneity is very high.
Firouzbakht et al. (2022)	318 pregnant women; cross-sectional	~40% depression; avoidance coping predicted depression (β =.226, p=.046)	Coping is a plausible mediator between MT and depression.
Dadi et al. (2020)	Umbrella review; 306 prevalence studies; 877,246 participants	Antenatal depression prevalence 15-65%; LBW RR=1.49; preterm birth RR=1.40	Establishes global burden and consequences; wide prevalence range reflects heterogeneity.
Błaszczyk et al. (2025)	Pregnant Polish women during Russia-Ukraine war	Resilience significantly negatively correlated with depression and global-situation anxiety	Conflict-pregnancy analogue; different culture/exposure profile from Gaza.

8. Critical Appraisal: What and What Can Not Be Inferred?

To begin with, there is a significant gap in the direct evidence. No known study has been conducted to test the mental toughness, prenatal depression in particular in pregnant women in

Gaza. Thus, the main relationship will be a hypothesis. The review can justify plausibility, identify mechanisms and justify empirical tests but has no ability to record a Gaza specific effect size.

Second, there is a big problem with construct validity. The constructs have overlapping concepts that include mental toughness and resilience, hardiness, self-efficacy, optimism and mastery, though the theoretical origins and measurements are different. Replacement would bloat the seeming evidence base. A quality future study ought to directly measure mental toughness, as it is most surely done with a validated Arabic version of a short tool like the Very Short Mental Toughness Questionnaire, and to have a measurement of resilience or coping should they be hypothesized as moderators.

Third, the literature on mental-toughness is predominantly founded on athletes, samples of students or communities and is cross-sectional. Reverse causality is a possibility even in condition of inverse relationships with depression, since depressed individuals might view themselves as more resolute, dominant and in control of their bodies. Longitudinal pregnancy research is required to determine time sequence.

Fourth, estimates of prenatal-depression in Palestine are quite sensitive to measure. Constructs, thresholds and population differ between the Gaza BDI study, West Bank PHQ-9 study and CUDOS study. The screening scores must not be reported as diagnostic prevalence. The future work should indicate whether it should be depressive symptoms, likely depression or clinically diagnosed major depression.

Fifth, the Gaza situation can result into ceiling effects of stress exposure. The best case scenario of protective effect of mental toughness is when the stressors are at the least manageable. With exposure to recurrence of bereavement, hunger, displacement or lack of access of obstetric care, individual differences may be overwhelmed by outside constraints. War exposure, displacement, food insecurity, social support, obstetric risk and prior mental-health history should then be incorporated into the statistical models as opposed to the use of mental toughness as a single determinant.

Sixth, there is a critical risk of misinterpretation that must be avoided carefully. The essence of framing depression as a result of lack of toughness is the tendency to attribute to women distress created at the hands of violence and deprivation. Mental toughness needs to be introduced as a possible resource as part of a multilevel approach that encompasses healthcare access, safety, socioeconomic resources, family support and humanitarian conditions.

9. Proposed Conceptual Model

A defensible model is: conflict-related adversity and pregnancy-specific stress increase prenatal depressive symptoms; mental toughness moderates this pathway by influencing appraisal, perceived control, emotional regulation and coping; social support and material security may strengthen or weaken this protective effect. The mediating roles of avoidance coping may include more depressive symptoms and the active coping, confidence and perceived control may mediate less symptoms.

The most important testable hypothesis can be expressed as directional yet non-causal, as it is higher levels of mental toughness that relate with fewer prenatal depressive symptom among pregnant Gaza women. A more powerful hypothesis moderates: there is less evidence of a positive relationship between stress rates around conflict and future depressive symptoms in prenatal among women of high mental toughness. This statement would best fit the best available evidence of mental-toughness and would not need us to posit that women of mental toughness are not susceptible to depression.

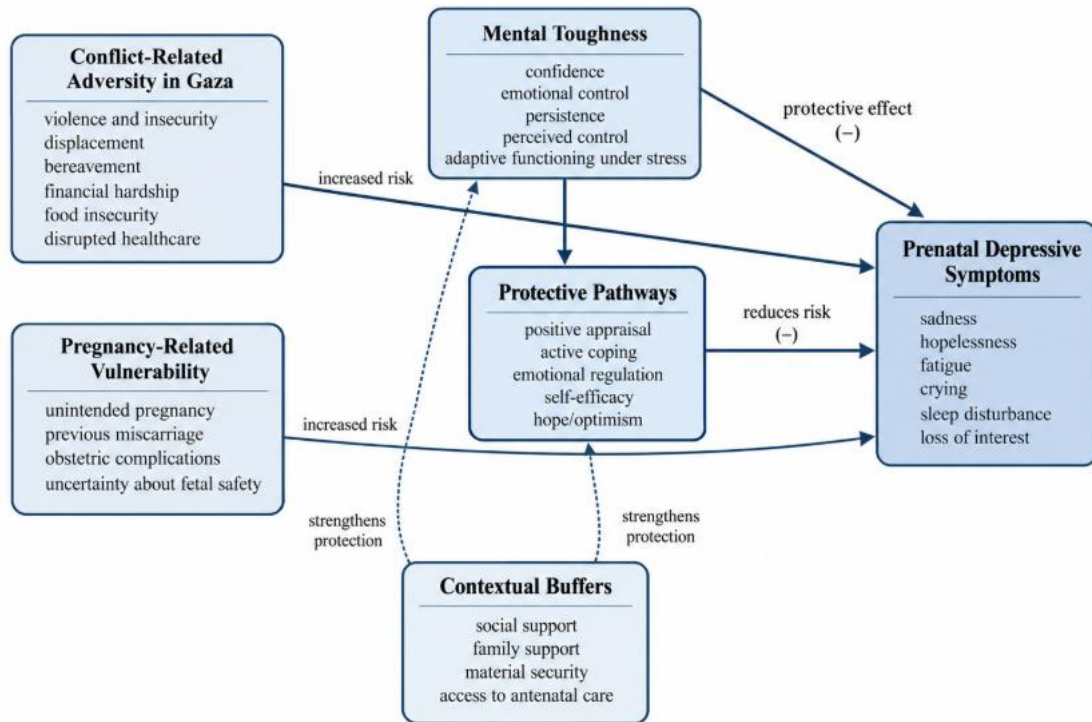


Figure 1: Proposed Conceptual Model

10. Implications for Research and Practice

The prospective or repeated-measures designs should be considered in future studies in Gaza. Early or mid-pregnant mentality toughness, depressive symptoms mid-pregnancy and in late pregnancy and follow-up subsequently after delivery (where possible) should be assessed. This would enable the examination of time stability and determine whether it is true that mental toughness is a predictor of change in depressive symptoms as opposed to a simple correlation with it.

Cultural validation is needed to measure. Any Arabic mental-toughness scale has to be subjected to translation, back-translation, psychological interviewing and psychometrics experimentation. Internal consistency is not enough, it would be useful with confirmatory factor analysis and convergent / discriminatory validity with resilience, self-efficacy and depression. Depression needs to be assessed using a validated Arabic perinatal measure and where feasible, be complemented by clinical measurement.

Multivariate analysis Multivariate regression/structural equation modelling would be able to investigate both direct and indirect relationships and control the effect of age, parity, gestational

stage, a previous depression, obstetric complications, pregnancy intention, displacement, bereavement, food insecurity, exposure to violence, financial hardship and social support. The stress-buffering hypothesis is a hypothesis in which an interaction term is between mental toughness and exposure to stress. It is more informative to report effect sizes and confidence intervals than p values.

The clinical implications must be reasonable in proportions to evidence. Direct local data could be used to screening prenatal depression in Gaza. Psychological interventions to enhance coping, perceived control and social support might be plausible constituents of care, but should be supplementary - not substitutive of - material, obstetric and humanitarian support. The systematic review conducted by Walker et al. (2022) implies that antepartum depressive symptoms can be decreased by means of cognitive-behavioural and mindfulness-based interventions, but the evidence that such effects are possible via the increase of mental toughness had not been proven yet.

11. Conclusion

Evidence has created a great load of prenatal depressive symptoms in Palestinian women and among women who are in special the pregnant women in Gaza. There is also a direct evidence that shows that mental toughness can be linked with the lessening of symptoms to depression and can break the connection between stress and depression in non-pregnant groups. The research of resilience, coping and social support in perinatal studies offers further support to the general hypothesis that psychological and social resources can have a buffer effect on maternal psyche. However, the main relation, which is between mental toughness and prenatal depression in pregnant women in Gaza has yet to be directly tested. Consequently, mental toughness should be conceptualized as a stress-buffering element, as opposed to a preventive determinant. Its possible utility ought to be looked at in a multilevel model which appreciates the unprecedented structural and traumatic exposures on pregnancy in Gaza. Prospective study that is well planned may significantly contribute in that it measures mental toughness directly, which is distinct on resilience and whether it also foretells fewer depressive symptoms compared with conflict exposure with obstetric risk and social support, being held constant.

References

- Aljoudi, M. N., Abu Ejheisheh, M., Aqtam, I., Ayed, A., & Batran, A. (2025). Prevalence of depression and associated factors among critically ill pregnant women in Palestine. *BMC Psychology*, 13, 370. <https://doi.org/10.1186/s40359-025-02698-w>
- Al-Tell, M., & Abu Iznait, A. (2020). Factors associated with antenatal depression in Palestinian refugee camps in West Bank/Palestine: Cross sectional study. *Global Journal of Reproductive Medicine*, 7(2), 555712. <https://doi.org/10.19080/GJORM.2019.07.555712>
- Bedaso, A., Adams, J., Peng, W., & Sibbritt, D. (2021). The relationship between social support and mental health problems during pregnancy: A systematic review and meta-analysis. *Reproductive Health*, 18, 162. <https://doi.org/10.1186/s12978-021-01209-5>

- Błaszczak, Z., Wyrzykowski, A., Plewka, M., Nowakowska-Domagala, K., Strzelecki, D., & Gawlik-Kotelnicka, O. (2025). Resilience of pregnant Polish women during the war between Ukraine and Russia. *Scientific Reports*, 15, 16228. <https://doi.org/10.1038/s41598-025-01108-w>
- Dadi, A. F., Miller, E. R., Bisetegn, T. A., & Mwanri, L. (2020). Global burden of antenatal depression and its association with adverse birth outcomes: An umbrella review. *BMC Public Health*, 20, 173. <https://doi.org/10.1186/s12889-020-8293-9>
- Dadi, A. F., Miller, E. R., & Mwanri, L. (2020). Antenatal depression and its association with adverse birth outcomes in low- and middle-income countries: A systematic review and meta-analysis. *PLOS ONE*, 15(1), e0227323. <https://doi.org/10.1371/journal.pone.0227323>
- Dziuba, A., Ennigkeit, F., Krell-Roesch, J., Appel, L., Englert, C., & Woll, A. (2026). The moderating effect of mental toughness on the relationship between stress and mental health. *Frontiers in Psychology*, 17, 1768455. <https://doi.org/10.3389/fpsyg.2026.1768455>
- Firouzbakht, M., Rahmani, N., Sharif Nia, H., & Omidvar, S. (2022). Coping strategies and depression during the COVID-19 pandemic in pregnant women: A cross sectional study. *BMC Psychiatry*, 22, 153. <https://doi.org/10.1186/s12888-022-03792-8>
- Firth, A., Haith-Cooper, M., Dickerson, J., & Hart, A. (2022). Perinatal depression: Factors affecting help-seeking behaviours in asylum seeking and refugee women. A systematic review. *Journal of Migration and Health*, 6, 100128. <https://doi.org/10.1016/j.jmh.2022.100128>
- Guardino, C. M., & Dunkel Schetter, C. (2014). Coping during pregnancy: A systematic review and recommendations. *Health Psychology Review*, 8(1), 70–94. <https://doi.org/10.1080/17437199.2012.752659>
- Hajure, M., Alemu, S. S., Abdu, Z., Tesfaye, G. M., Workneh, Y. A., Dule, A., Hussen, M. A., Wedajo, L. F., & Gezimu, W. (2024). Resilience and mental health among perinatal women: A systematic review. *Frontiers in Psychiatry*, 15, 1373083. <https://doi.org/10.3389/fpsyg.2024.1373083>
- Hamamra, B., Mahamid, F., & Bdier, D. (2025). Surviving trauma: Gazan women's mental health during genocide. *Discover Public Health*, 22, 229. <https://doi.org/10.1186/s12982-025-00637-z>
- Ismail, A. M., Afifi, T., Elejla, S. A., Samaan, M., & Hirst, J. E. (2026). Childbirth experience and its relationship with postpartum depression and anxiety: A cross-sectional study from Gaza. *Reproductive Health*, 23, 69. <https://doi.org/10.1186/s12978-026-02291-3>
- Jahan, N., Went, T. R., Sultan, W., Sapkota, A., Khurshid, H., Qureshi, I. A., Alfonso, M., & Jahan, N. (2021). Untreated depression during pregnancy and its effect on pregnancy outcomes: A systematic review. *Cureus*, 13(8), e17251. <https://doi.org/10.7759/cureus.17251>

- Lin, Y., Mutz, J., Clough, P. J., & Papageorgiou, K. A. (2017). Mental toughness and individual differences in learning, educational and work performance, psychological well-being, and personality: A systematic review. *Frontiers in Psychology*, 8, 1345. <https://doi.org/10.3389/fpsyg.2017.01345>
- Mojtahedi, D., Dagnall, N., Denovan, A., Clough, P., Hull, S., Canning, D., Lilley, C., & Papageorgiou, K. A. (2021). The relationship between mental toughness, job loss, and mental health issues during the COVID-19 pandemic. *Frontiers in Psychiatry*, 11, 607246. <https://doi.org/10.3389/fpsyt.2020.607246>
- Murtaja, E. F., & Thabet, A. A. M. (2017). Anxiety and depression among pregnant women in the Gaza Strip. *Psychology and Cognitive Sciences*, 3(4), 137–144. <https://doi.org/10.17140/PCSOJ-3-136>
- Peng, D., Chang, L., Liao, T., Mohd Zain, N., Abdul Kadir, A., Yan, M., & Yusuf, A. (2026). Role of psychological resilience and social support in perinatal depression: A systematic review and meta-analysis. *BMC Pregnancy and Childbirth*, 26, 1094. <https://doi.org/10.1186/s12884-026-09466-7>
- Punamäki, R.-L., Qouta, S. R., & Diab, S. Y. (2019). The role of maternal attachment in mental health and dyadic relationships in war trauma. *Heliyon*, 5(12), e02867. <https://doi.org/10.1016/j.heliyon.2019.e02867>
- Shastri, P. C. (2013). Resilience: Building immunity in psychiatry. *Indian Journal of Psychiatry*, 55(3), 224–234. <https://doi.org/10.4103/0019-5545.117134>
- Shqair, H., et al. (2026). Antenatal depression among Palestinian women: A narrative review of prevalence, methodological variations, and contextual challenges. *Journal of Palestinian Medical Research*, 14(1), 45–58.
- Stamatis, A., Grandjean, P., Morgan, G., Padgett, R. N., Cowden, R., & Koutakis, P. (2020). Developing and training mental toughness in sport: A systematic review and meta-analysis of observational studies and pre-test and post-test experiments. *BMJ Open Sport & Exercise Medicine*, 6(1), e000747. <https://doi.org/10.1136/bmjsem-2020-000747>
- Walker, A. L., Witteveen, A. B., Otten, R. H. J., Verhoeven, C. J., Henrichs, J., & de Jonge, A. (2022). Resilience-enhancing interventions for antepartum depressive symptoms: Systematic review. *BJPsych Open*, 8(3), e89. <https://doi.org/10.1192/bjo.2022.60>
- Yang, K., Wu, J., & Chen, X. (2022). Risk factors of perinatal depression in women: A systematic review and meta-analysis. *BMC Psychiatry*, 22, 63. <https://doi.org/10.1186/s12888-021-03684-3>