

Social psychological aspects of inter-organizational collaboration in a total defense context: a literature review

Social
psychological
aspects

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Abstract

Purpose – This paper aims to systematically review the extant research on social psychological aspects of civil-military inter-organizational collaboration, particularly in a total defense context.

Design/methodology/approach – A systematic scoping studies review was performed. Peer-reviewed articles were searched in PsycInfo and Sociological Abstracts. Inclusion criteria were met by 25 articles.

Findings – Four higher-order categories with underpinning categories were derived in the analysis. They were modeled as follows: antecedent conditions affect, informal processes and practical efforts, which, in turn, affect inter-organizational trust and collaboration. These higher-order categories are all influenced by formal organizational aspects and the society in which they are found.

Research limitations/implications – The existing literature covering the chosen study focus is limited. Further studies are needed and the presented model can serve as a road map.

Practical implications – A series of questions derived from the categories of the model is presented. The questions are included as a tool for practical reflection for collaborating actors in common education, training or exercise settings or in after-action reviews.

Originality/value – The focus on social psychological aspects of civil-military inter-organizational collaboration, particularly in a total defense context, is new. The suggested relationship between superior themes adds knowledge to a research field dominated by sociological and political science approaches.

Keywords Civil-military, Inter-organizational collaboration, Total defense, Leadership, Social psychological, Scoping review

Paper type Literature review



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Introduction

The first post-cold war decade was characterized by a heavy reduction of the military defense and a dismantling of the civilian defense in many nations (Hedlund, 2019). Gradually, however, strengthening of the military forces and a rebuilding of the civilian defense were started. Driving forces behind the latter development include a weakened security situation in the geopolitical landscape, technological and informational development and the rise of hybrid threats to the western democracies (Hampton, 2011; Hellman and Wagnsson, 2017).

The concept of “total defense” has become focused. This concept is built on the principle of mutual civil-military support and collaboration across the whole crisis spectrum from peacetime events to political security crises to armed conflicts (Kammel and Zyla, 2018). Much effort has been put into preparing the formal side of civil-military collaboration such as legal aspects, doctrines, mandates and principles of collaboration (Huxham *et al.*, 2004). A major underlying argument is that threats against modern globalized society, with all its interdependencies, tend to cut across different borders and involve the whole of society (Hyvonen and Juntunen, 2021; Kaneberg, 2018; Wither, 2020).

The building-up of civil-military collaboration takes its point of departure in already existing contacts and collaborations. The responsibility principle implies that the organization normally responsible for a given task, also has the same responsibility during a crisis, including taking initiatives to cross-sectoral collaboration. However, as society has become more complex, with more interdependences between different sectors, an increased uncertainty has been noted with regard to who is responsible for what (Deverell *et al.*, 2019).

Practical application of the rebuilt civil-military collaboration has taken place in natural disasters, large-scale accidents and the present Corona pandemic. Favorable outcomes have been reported, mainly in events taking place in foreign locations, such as the 2004 tsunami disaster in southeast Asia (Alvinius *et al.*, 2010a; Hutanuwatr *et al.*, 2013) and the 2014 Ebola outbreak in west Africa (Kamradt-Scott *et al.*, 2016). Typically, the military has provided personnel and logistic and intelligence assistance enhancing the possibilities for civilian rescue and healthcare organizations to act. Negative experiences have also been reported, including lack of knowledge of other organizations’ tasks, working procedures and organizational norms and identities (Albanese and Paturas, 2018). The lack of control possibilities and trust has, for instance, been reported as an obstacle to optimal information sharing (Bharosa *et al.*, 2009; Pramanik, 2015). A common part of the existing research is an emphasis on the importance of leadership to the quality of inter-organizational collaboration (Boin *et al.*, 2016).

The coronavirus pandemic has pointed to other domestic challenges from a total defense perspective. The responsibility principle mentioned above proved insufficient when the health-care sector and several other parts of the society were overwhelmed. This has resulted in demands for the centralized command to make necessary coordination and management efficient. The pandemic has also pointed to the need for redundancy, a certain overcapacity of personnel, various kinds of material supplies, etc., to handle long-term disturbances. All such total defense-rebuilding efforts carry high economic costs. Eriksson (2020) contrasts this with the question what the costs would be to be unprepared if resources have to be built up hastily once a crisis has begun or if central values, such as freedom, health and material assets, would already have been lost. On the other hand, planning and preparing for everything is impossible and there will always be a need for improvisation resilience, an ability to bounce back.

Summing up, the rebuilding of the total defense has been formally well-planned and presented in various public documents. Eriksson (2020) describes these aspects as necessary

but not sufficient for effective crisis management. There has also been a sharp rise in later decades when it comes to research on inter-agency collaboration from a governance perspective (Deverell *et al.*, 2019). What appears to be lacking are studies and reports of the informal or “soft” side of inter-organizational collaboration in the total defense context. According to Audet and Roy (2016), there is still no universal agreement on what inter-organizational collaboration is. One of the most used definitions, suggested by Gray (1989), states that it is “a process through which parties who see different aspects of a problem can constructively explore their differences and search for solutions that go beyond their own limited vision of what is possible” (p. 5). However, this is very general and needs to be understood within the total defense framework. In conclusion, there is a knowledge gap with regard to social psychological aspects of inter-organizational collaboration in general, and this is markedly so in the case of civil-military collaboration. Given this, it was regarded as most appropriate to explore the available literature before conducting empirical studies. Therefore, the aim of the research was to systematically review and evaluate the extant research on social psychological aspects of civil-military inter-organizational collaboration, particularly in a total defense context.

Method

The following questions formed the basis of the review:

- Q1. What relevant studies can be identified?
- Q2. What study designs have been used?
- Q3. What results are reported on social psychological aspects of inter-organizational collaboration and leadership, particularly in a total defense context?

A systematic scoping studies review (Arksey and O'Malley, 2005; Levac *et al.*, 2010) was undertaken to integrate and synthesize findings from qualitative and quantitative studies and from literature reviews. Given the scope of the review questions and the complete lack of studies using the gold standard, randomized control trials design, the methodological guidelines mentioned above were regarded as appropriate.

The review steps could be summarized as follows:

- Identification of relevant studies.
- Selection of studies for analysis.
- Charting of the data.
- Generation of a hierarchical system of codes, categories and higher-order categories from the data in an ongoing and iterative thematic analysis.

Search strategy and results of search

The search focused on the following descriptors, alone or combined, namely, “inter-organizational collaboration” OR “inter-organizational cooperation,” “total defense” (or “total defense”) and “civil-military collaboration.”

The literature was first retrieved by searching the databases PsychInfo and Sociological Abstracts in November 2020, covering the entire time period of each database. We limited our search (inclusion criteria) to peer-review research articles written in English. We had access to some Scandinavian and US so-called grey literature reports, but decided not to accept them in the review. Additional search of such reports would unavoidably contain a

strong random element. Moreover, the texts we scanned appeared to be more or less “political.” The searches used the descriptors listed above, specified as keywords and free text words. The strategy also included a hand search of the reference lists in the studies selected from electronic search.

Selection of literature

The electronic database searches on “inter-organizational collaboration” OR “inter-organizational cooperation” resulted in 424 records (138 in PsycInfo and 286 in Sociological Abstracts). After the removal of duplicates, 289 articles remained. When the same search terms were combined with “civil-military collaboration” OR “total defense” (or “total defense”), the result was 0 in both databases. “Civil-military collaboration” alone yielded 6 records in PsycInfo and 26 in Sociological Abstracts. “Total defense” (or “total defense”) alone resulted in 3 and 25 hits, respectively. The 26 plus 25 records in Sociological Abstracts were heavily dominated by articles with political science or international relations perspectives. Altogether, 2 of these 51 records were evaluated as having relevance from a psychological or social psychological perspective. Among the six plus three records found in PsycInfo, four were regarded as relevant. Thus, we had 289 general articles on inter-organizational collaboration and 6 articles focusing on civil-military collaboration or total defense. A hand search in the reference lists resulted in 11 additional articles. An analysis of the titles and abstracts of the 306 articles resulted in an exclusion of 281. Thus, we ended up including of 25 international peer-reviewed articles. However, single aspects in the rejected articles were used if they clearly supported a theme derived from the included articles.

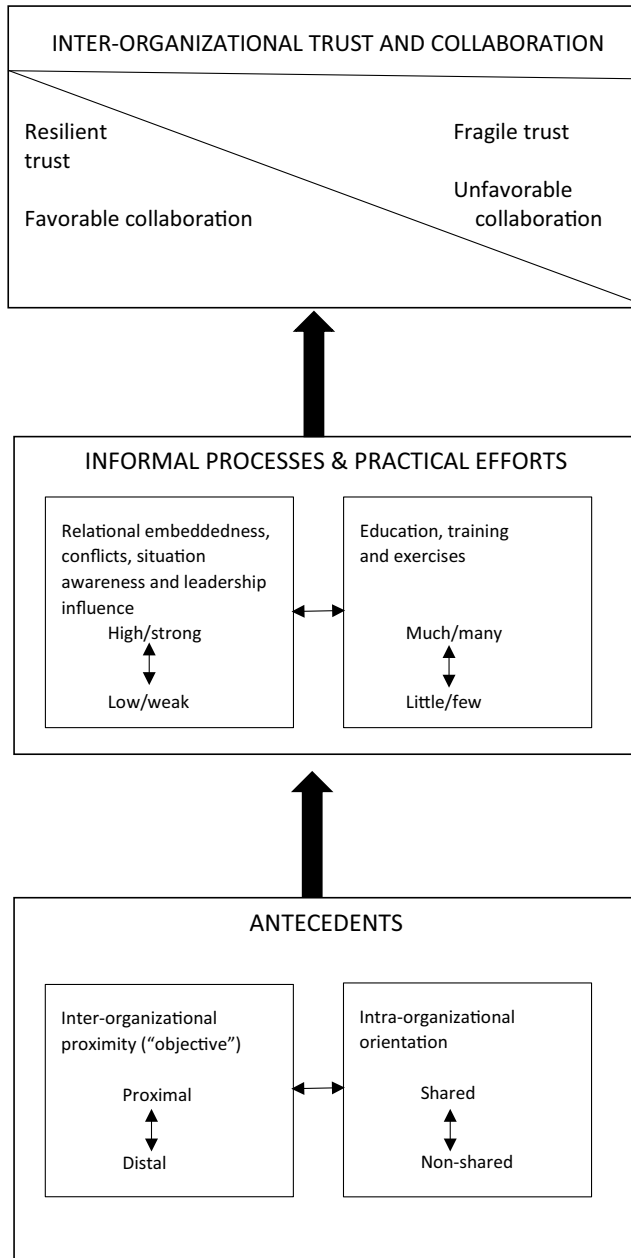
Review process and quality assessment

The scoring form used included data on study design, organizational setting, ethical considerations, analysis and findings. Most of the finally included studies were done in civil-military collaboration episodes (10), a collaboration of civilian crisis organizations (8) and collaboration between business organizations (5). The selected articles include 21 cross-sectional studies, 1 longitudinal study and 3 literature reviews. Among the empirical studies, 18 used qualitative methods and 4 quantitative methods. All steps in the selection process, and the appraisal and data extraction, were performed by two or three independent researchers, as recommended by [Levac et al. \(2010\)](#). Any differences or uncertainties were discussed by the research team until an agreement was reached.

The extracted findings were synthesized and analyzed according to the analysis stages specified by [Whittlemore and Knafl \(2005\)](#). This descriptive thematic analysis consists of data reduction, data display, data comparison, conclusion and verification. The format of the data reduction and display steps was guided by the four review steps presented above. The fourth and final step showed a close resemblance to the process entitled “open coding” in the constant comparative method tradition ([Glaser and Strauss, 1967](#)). A hierarchical pattern of codes, categories and higher-order categories was developed. This step was concluded by an attempt to create a model by fitting the higher-order categories together.

Results

In the following, the model is shown first ([Figure 1](#)), followed by a presentation of its higher-order categories. This particular order is used to give the parts their meaning when understood in relation to the whole model.



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Figure 1.
Model of key factors
influencing inter-
organizational
collaboration in a
total defense context

The emerging model

Figure 1 presents the suggested model of key factors influencing inter-organizational collaboration.

Figure 1 shows three of the suggested higher-order categories and their underpinning categories. The higher-order category “antecedents” consists of two interacting categories, namely, “inter-organizational proximity (‘objective’)” ranging from proximal to distal and “intra-organizational orientation” ranging from shared to non-shared. These aspects are antecedents in the sense that they are more or less stable and will have an impact on the second higher-order category “informal processes and practical efforts” in a broad variety of episodes. Thus, the second higher-order category is assumed to be more episode specific. It is built up by the interacting categories “relational embeddedness, conflicts, situation awareness and leadership influence” ranging from high/strong to low/weak and “education, training and exercises,” ranging from much/many to little/few. These informal processes and practical efforts, in turn, affect the third higher-order category “inter-organizational trust and collaboration,” ranging from resilient trust and favorable collaboration to fragile trust and unfavorable collaboration. Thus, this higher-order category can be regarded as the dependent variable of the model. All these three higher-order categories are constantly framed by the fourth higher-order category, “formal organizational aspects and the surrounding society,” which stretches from local organizational regulations to the society’s political, economic, geographical, technological, legal, social and cultural conditions at large and can range from favorable to unfavorable from an inter-organizational collaboration perspective. It falls beyond the aim of this study to analyze these last-mentioned aspects further and they are not included in Figure 1.

In summary, favorable inter-organizational collaboration is characterized by the following: proximal “objective” inter-organizational conditions, shared intra-organizational orientations, high relational embeddedness, the optimal level of task conflicts and low levels of relationship conflicts, shared situation awareness and strong collaboration-oriented leadership influence, much inter-organizational effort to enhance common education, training and exercises and, finally, a situation characterized by resilient trust. The higher-order categories will be further presented in the following.

Antecedents

The higher-order category “antecedents” consists of two interacting categories with their underpinning codes.

Inter-organizational proximity (“objective”) ranging from proximal to distal

This category draws on Boschma (2005), who emphasizes that proximity is not solely a geographical phenomenon. Rather, space is seen as produced through social practice (Nilsson and Mattes, 2015). Boschma (2005) suggests the following five types of proximity:

- (1) *Cognitive*: The extent to which peoples share the same knowledge base and expertise learn from each other.
- (2) *Organizational*: The extent to which relations are shared in an organizational arrangement, either within or between organizations.
- (3) *Social*: The extent to which relations are embedded in a social context at the micro-level (e.g. friendship, kindness and past experiences).
- (4) *Institutional*: The extent to which relations are embedded in an institutional framework (e.g. routines, established practices, laws and rules) at the macro-level.

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- (5) *Geographical*: The extent to which relations and knowledge are shared among geographically close actors.

Summing up, Nilsson and Mattes (2015) claim that geographical proximity is highly facilitative for the initial creation of the other forms of proximity, and resilient trust. However, they continue: “once resilient trust has been created our cases show that it can be maintained for long periods of time relatively independent from further face-to-face exchange” (p. 241; Nilsson and Mattes, 2015 for a more detailed discussion on the issue of spatiality).

Intra-organizational orientation – shared or non-shared

This category is based on the codes values and goals, tradition and routines and multiple identities. They can all range within and between collaborating organizations from shared to non-shared.

Shared *values* have been defined as: “the extent to which partners have beliefs in common about what behaviors, goals and policies are important or unimportant, appropriate or inappropriate and right or wrong” (Morgan and Hunt, 1994, p. 25). Favorable sharing and creation of values in inter-organizational collaboration has been found to add to the learning that occurs in the process (LePenneec and Raufflet, 2018).

Shared *goals* function as normative behavior guides to ensure the diverse goals and interests of different actors converge in terms of behaviors and common goals (Kashyap and Sicadas, 2012). According to Chen *et al.* (2014), “shared goals are the fundamental force that leads to a homogeneous behavior logic” (p. 569).

Tradition and organizational *routines* are other aspects of the intra-organizational orientation. Hibbert and Huxham (2010) describe tradition as “a process of preservation of symbolic content meaning, within a particular community, across time” (p. 525). Thus, tradition is cumulative, it carries cultural heritage forward through time. However, although the repetition of past meanings and behaviors is a strong force in organizational life, “a tradition has to ‘work’ if it is to persist” (Shils, 1981, p. 203). A related concept is routines. Although tradition stems from history, routines can be managed here and now in, for instance, standard operating procedures for collaboration.

The final concept included in our category “intra-organizational orientation” is *multiple identities*. A strong collaborative identity among inter-organizational collaboration partners has been regarded as a key enabler for successful collaboration (Zhang and Huxham, 2009). However, this has been challenged by Kourti *et al.* (2018), who highlights the paradoxical nature of collaboration, which requires relying on both collaborative and non-collaborative identities for the successful achievement of aims. Collaborating actors need to be able to act both in accordance with their interpretation of the professional identity of their home organization and according to the demands of a collaborating identity. Kourti *et al.* (2018) discuss this in terms of “the persistent tension between collaborative and non-collaborative identities and the need to maintain a delicate balance between these opposing but equally important identities” (p. 516). Successful inter-organizational collaboration is characterized by actors who manage to successfully balance this identity tension (Kourti *et al.*, 2018).

Summing up, intra-organizational orientation is facilitated by actors having common values and goals, functional traditions and routines and the ability to balance multiple identities. If these intra-organizational aspects are shared between different organizations, it is assumed that collaboration processes are promoted.

Informal processes and practical efforts

The higher-order category “informal processes and practical efforts” consists of four interacting categories with their underpinning codes.

Relational embeddedness

This category consists of literature findings from two related fields. The first draws mainly on general studies on inter-organizational collaboration and the second on studies of leadership in the defense and security sector. Beginning with the more general articles, the concept of relational embeddedness comes to the fore. In the business sector, [Chen et al. \(2014\)](#) state that relational embeddedness, comprising of social attachment and affiliation, is a strong social tie that significantly influences the economic behavior of the involved parties (p. 570). They further describe relational embeddedness as an informal, strong, social relationship developed on the basis of prior exchange experiences. It reduces communication barriers and enables the involved organizations to better predict each other’s behavior of each other ([Chen et al., 2014](#)).

Our interpretation is that a high degree of relational embeddedness is favorable for inter-organizational collaboration. It adds meaning to [Gray’s \(2008\)](#) four-step model of how to support such collaboration, namely, problem setting, direction setting, implementation and institutionalization. In addition to these four steps, [Audet and Roy \(2016\)](#) point to the need for a structured approach, a firm commitment from the top management of the involved organizations and, often, the support of an external consultant-facilitator.

Conflicts

Another aspect that we found in the general literature on inter-organizational collaboration deals with conflicts. [Hu et al. \(2016\)](#) summarize the extant research and point to two kinds of conflicts, namely, relationship and task conflicts. Relationship conflicts are often emotional and reflect interpersonal tensions and disagreements about personal values and interpersonal styles. Task conflicts are more cognitive and arise when disagreements occur among participants about how tasks should be accomplished. Relationship conflicts tend to have negative effects on inter-organizational collaboration and need to be resolved as early as possible. Task conflicts, on the other hand, tend to have an inverted U-shaped relationship with task performance. This is because a certain amount of task conflict can foster creativity ([Hu et al., 2016](#)). [Hjertø and Kuvaas \(2009\)](#) extended this model and found that emotional conflicts were positively related to performance when the emotions were task-related and not relationship-related. However, too high levels of task conflict may lead to cognitive overload or negative emotions, which may counteract inter-organizational creativity ([Fahr et al., 2010](#)).

Situation awareness

[Endsley \(2000\)](#) defined the concept of situation awareness and this has been developed to also treat shared situation awareness in cooperative contexts. The concept has been claimed to include the following three levels, namely, Level 1 situation awareness is awareness of elements in the area of interest, Level 2 is knowledge of the relationship among the elements and Level 3 is the anticipation of the future actions of the elements (e.g. “friends” and “enemies,” [Endsley, 2000](#)).

A shared Level 1 situation awareness is generated by a number of more or less neutral aspects of “mechanical” character, such as information and intelligence gathering. An information-based situational picture deals with the question: What is this? A shared Level 2 situation awareness refers to the degree to which all collaborating actors have accurate

knowledge of information and actions needed to reach the goals and sub-goals associated with their joint task (Bakken and Hørem, 2020; Burke *et al.*, 2006; Endsley *et al.*, 2003; Uitdewilligen *et al.*, 2010; Valaker *et al.*, 2018).

One setting that exemplifies some of the critical challenges of a total defense concept face is the development of shared situational awareness in counterterrorism operations, where there is a high interdependence among responders and a dynamic flow of events. Terrorism is a security challenge that often crosses organizational and national boundaries (NATO, 2016). Developing a shared Level 3 situation awareness in this context may require different skills, such as communicating within and between counterterrorism teams (Christensen *et al.*, 2013; NOU, 2012; Schraagen *et al.*, 2010), as well as communicating with the general public (Coombs, 1995; Park and Avery, 2016). Weick *et al.* (2005) point out that it can be challenging to communicate about and understand information on terrorist threats. To this end, counterterrorism teams have been set up to develop shared situation awareness (Boin *et al.*, 2014; The Guardian, 2015).

The issue of shared situation awareness is also relevant at the intra-organizational level. Optimal functioning requires that the top-level leaders, the mid-level and front-level leaders and the employees at the floor or front level, share the same situational picture. However, in the intra-organizational case, different professional/role-based and experience-based, differences are also to be expected regarding situational understanding (Danielsson *et al.*, 2014).

Mission command means that leaders at high levels express their intentions and make decisions on *what* should be accomplished, while subordinate leaders and followers are given freedom of action on *how* it should be done. It follows from this that high-level leaders need to be good at communicating – sense giving – for lower levels to make relevant sense of the message, so a shared situation awareness is achieved (Larsson and Berglund, 2019). Research shows that this leadership philosophy sometimes work, and sometimes does not. The most crucial aspects appear to be the trust and confidence the high-level leaders have in their subordinates (Lind, 1993).

Organizational use of so-called boundary spanners or liaison officers could be regarded as a special case of mission command, which is usually persons high up in the hierarchy who possess in-depth knowledge of the organization. In addition to this, they should also ideally be good at communication and creating trust in new encounters (Deverell, 2020). Thus, it is a planned role with the clear mandate “act first and asks your boss for permission afterward.” Provided that two or more collaborating organizations use competent boundary spanners or liaison officers, barriers between bureaucratic organizations can be bridged faster and more effectively (Alvinus *et al.*, 2010b).

Leadership influences

The final aspects derived from the literature belonging to informal processes of the higher-order category, cover different, but related, aspects of informal leadership behaviors aiming at influencing collaborating partners. Common concepts include social effectiveness (Semandar *et al.*, 2006), social smoothness (Alvinus *et al.*, 2014), emotional and behavioral contagion (Kemper, 2011), emotion shaping (Ohlsson and Larsson, 2017), political skill (Ferris *et al.*, 2007) and organizational emotional culture, including emotional surface acting and deep acting (Hochschild, 1983/2003). Typical components of these concepts are that they point to an ability to understand the other actors’ goals and interpretations of the task, as well as an ability to understand how the other actors see themselves and how they look on themselves. The latter skill is sometimes labeled “reflected appraisal” in the literature on empathy (Kenny, 1988). When these competencies are combined with communication skills

and an ability to create a tension-free atmosphere early on in new encounters, the inter-organizational collaboration will be facilitated.

Education, training and exercises

This category is mainly based on research found in institutional reports (grey literature). [Olsén and Johansson \(2020\)](#) describe the three concepts as follows: “education aims at increasing the individual’s theoretical knowledge, training aims to develop skills and exercises to put the two together to a whole” (p. 21, our translation). They further claim that inter-organizational exercises help elucidate the actors’ organizational borders, which technical interfaces exist and contribute to the building of relationships. This is supported by [Pramanik \(2015\)](#), who found that personal knowledge and expectations of future collaboration increased the likelihood of actual collaboration during a real crisis. [Costa and Bijlsma-Frankema \(2007\)](#) note that repeated interaction breeds inter-organizational trust. Common education, training and exercises can contribute to this ([Uhr, 2017](#)).

Inter-organizational trust and collaboration

A common theme in the literature on inter-organizational collaboration is the importance of trust. The concept of trust has several meanings at different levels ([Fors Brandebo et al., 2013](#)). In the context of inter-organizational collaboration, it has been defined as “the subjective belief with which organizational members collectively assess that a population of organizations will perform potential transactions according to their ability to fully monitor them” ([Pavlou, 2002](#), p. 218). Thus, inter-organizational trust rests on the subjective belief and prediction that collaborative partners intend to meet obligations. Combined with relationship commitment, organizations are encouraged to resist opportunistically alternative actions and preserve long-term exchange benefits ([Chen et al., 2014](#)).

It has been claimed that deeper trust requires direct, face-to-face exchange at the onset. Direct meetings create more resilient trust and do so at a higher speed. However, once resilient trust has been created, it can be maintained for long periods of time relatively independent of further face-to-face exchange ([Nilsson and Mattes, 2015](#)).

[Pardo et al. \(2006\)](#) take a broader perspective and claim that key factors behind inter-organizational trust are the clear distributions of roles and responsibilities and respect for the other actors’ self-determination. In summary, inter-organizational trust can be assumed to vary from fragile to resilient. Fragile trust leads to unfavorable conditions for inter-organizational collaboration, and resilient trust leads to favorable.

Discussion

The aim of this systematic scoping study was to review and evaluate the extant research on social psychological aspects of inter-organizational collaboration, particularly in a total defense context. A first finding is that the available research literature on social psychological aspects of inter-organizational collaboration with a total defense focus is limited. It mainly covers military security and logistic assistance to humanitarian aid operations.

A second finding is that there exists a considerable body of research on informal aspects of inter-organizational collaboration in civilian contexts that is the business sector ([Chen et al., 2014](#)), and the field of collaborative public management during normal circumstances ([Deverell et al., 2019](#)) in particular. Although we assume that many of these results also have relevance in a total defense context, we still have to accept that the empirical support for our proposed model is limited. Therefore, we suggest that the originality and prime value of the model is that it can serve as a hypothetical road map for future research. The presented

holistic framework tends to be lost in studies focusing on particular details of a model like ours.

We will conclude by pointing to two additional total defense-related aspects, which can be related to the higher-order model category “formal organizational aspects and the surrounding society.” The first is at the societal level and concerns morale. According to Landis’s (1941) classical work on morale and civilian defense, morale is a particular state of mind, which is shared by members of a group. The individuals involved are devoted to an idea and prepared to make sacrifices for it. Landis claims that civilian defense and morale build on total participation and that this requires reactivation of democratic ideals and acceptance of the responsibility for total defense efforts.

Given the multiplicity of modern society with different sources of dividedness, such as ethical, racial, socioeconomic and urban-rural, the totality of a moral commitment in Landis’s (1941) sense, must be questioned. Drawing on another classical scholar, Tönnies’s (1887/2005) writings on *Gemeinschaft und Gesellschaft* may be relevant. The solidarity and sense of societal meaningfulness appear to have been replaced by a sense of alienation for some population groups.

The second additional aspect concerns the role of gender in civil-military cooperation. Gender was not a prioritized issue in the reviewed literature. Cook and Winslow (2007) note that post-conflict reconstruction provides an opportunity to include the experience of women during war and capitalize on the shifting gender roles prompted by conflict, to advance a more equitable female citizenship. They note, however, that this opportunity has almost never been taken. The gender inequalities in crisis management still seem to prevail and Alvinus *et al.* (2021) talk about a power perspective, including a militarization, masculinization and male interpretive precedence in crisis management and organizational exclusion of women in collaboration contexts.

Methodological aspects

We will now turn to some study limitations. A study weakness is an unavoidable shallowness regarding each single model component of the presented holistic model. When the perspective of the broad picture is prioritized, this has to be accepted. Future research will show whether the aspects we derived from the literature are the most valid ones and if their individual content is relevantly summarized.

Another weakness of the study is related to the literature search. It was performed in the two databases considered most relevant, given the study aim. However, it is possible that we did not find all relevant peer-reviewed studies. Further, most of the included studies were based on retrospective case investigations and none included all the concepts forming our suggested model. The findings should be viewed in light of this. However, we have reported our method in detail and its trustworthiness was strengthened by a team of researchers working together and discussing each step in the synthesis of the findings to maximize rigor in all stages.

Suggestions for future research

A key contribution of our review is the tracing and reporting of the empirical studies providing insights into social psychological mechanisms studied in the total defense context. As the review demonstrates, few studies focus on the social psychological issues in the total defense context. Given this limited extant research, we present five future research suggestions. First, the generated model needs to be empirically tested using both qualitative and quantitative research designs. Second, it would be interesting to investigate the impact of asymmetric power relationships between collaborating actors. Power superiority could

imply interpretive precedence overruling formal statements on collaboration on equal terms. Third, one could study individual and organizational possibilities and obstacles for effective use of boundary spanners in total defense-related organizations. A fourth suggestion, drawing on the *Gemeinschaft und Gesellschaft* discussion above, could be to study the will to support the total defense concept in the general population. Fifth, it should be noted that all journal articles referred to in this study were performed before the coronavirus pandemic. New knowledge gained during the pandemic, such as the necessity of online exercises and meetings, should be included in future research.

Practical implications

We will now turn to some suggestions on how the model can be practically used when the military and one or more civilian collaborating organizations have common education, training and exercises. The suggestions follow the structure of the model and consist of questions aimed to increase awareness of the different actors' conditions, mandates, responsibilities, roles, etc. and to build increased trust ([Appendix](#)).

The questions shown in the [Appendix](#) should be regarded as prototypes that can be tailored to the specific circumstances in a given common education, training or exercise setting. The model and the same kinds of questions may also be suitable as a tool when inter-organizational collaboration is evaluated in after-action reviews.

Conclusion

The focus on social psychological aspects of inter-organizational collaboration in a total defense context adds new knowledge to an under-researched area. The suggested model is new and offers a holistic road map for future research and five specific suggestions are presented. Finally, several practical reflection tools for collaborating actors are presented that can be used in common education, training or exercise settings or in after-action reviews.

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Further reading

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Appendix

Suggested model-based questions for inter-organizational education, training, exercise and after-action evaluation gatherings – Input for reflection

Antecedents

Inter-organizational proximity (“objective”)

- How close to each other are/were we regarding:
 - A common knowledge base.
 - Prepared organizational collaboration issues, including routines and regulations.
 - Personal knowledge of each other.
 - Geographical proximity.

Intra-organizational orientation

- To what degree do/did we have shared:
 - Values.
 - Goals.
 - Traditions.
 - Identities.

Informal processes

Relational embeddedness, conflicts, situation awareness and leadership influence

- How strongly are/were we socially attached to each other?
- How strong support do/did we have from our respective top management?
- Do we foresee/did we experience task and relationship conflicts?
- To what extent do/did we have a shared situation awareness?
- To what degree have/had we planned for using/did we use mission tactics and boundary spanners or liaison officers?
- What challenges do we foresee/did we experience regarding the leaders’ informal influencing skills?

Inter-organizational trust and collaboration

Trust

- How do/did you experience the quality of the inter-organizational trust?

Collaboration

- How do/did you experience the quality of the inter-organizational collaboration?

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