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2 Idem, "The First Nephrologist at Bikur Holim Hospital," in *Modern Medicine in Jerusalem*, ed. and trans. A. Cohen, Baltimore, The Johns Hopkins University Press, 1991, pp. 121–144.

Books

3 Arthur Levy, *The History of Medicine*, Oxford, Oxford University Press, 1994, p. 21, n. 4.

4 Israel Levin and Martin Wolfson (eds.), *Medieval Dental Implements*, 12, London, Routledge, 1969, p. 33, nos. 41, 47, 49; p. 41, pl. 3. [Note: publication details are for the whole series if all volumes have the same name.]

5 David Jones, *Babylonian Medicine* in *Medicine in the Ancient World*, ed. Jonas Whitefish, New York, Columbia University Press, 1992. [Note: publication details are for the given volume, not for the whole series.]

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ETHICS AND THE HEALTH PROFESSIONS: EDUCATION ON THE HOLOCAUST AND HEALTHCARE

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THE IMPACT OF PAST EVENTS ON THE DEVELOPMENT OF HUMAN MEDICAL EXPERIMENTATION IN ISRAEL

by
LIMOR MALUL,* NADAV DAVIDOVITCH,** AND SHULAMIT ALMOG***

INTRODUCTION

The framing of key historical events in human medical experimentation creates specific understandings of it and has implications for policymaking in the area.[1] The Holocaust was a major event in the evolution of the theoretical field of collective trauma in the Western world.[2] The blatant trampling of human rights by Nazi physicians, which included human medical

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1 S. M. Reverby, *Examining Tuskegee: The Infamous Syphilis Study and Its Legacy*, Chapel Hill, University of North Carolina Press, 2009; idem, "'Normal Exposure' and Inoculation Syphilis: A PHS 'Tuskegee' Doctor in Guatemala, 1946–1948," *Journal of Policy History* 23, 1 (2011): 6–28.

2 M. Alberstein, N. Davidovitch, and R. Zalashik (eds.), *Collective Trauma in Israel: Historical, Social, and Political Perspectives* [in Hebrew], Faculty of Law, Bar-Ilan University Press and Hakibbutz Hameuchad, 2016, pp. 7–22.

experimentation, enhanced the status of human rights and the rights of medical test subjects in the international arena.[3]

During this period, the State of Israel emerged from the ruins of the Holocaust, which has been identified as a formative event in the Israeli experience.[4] This article uses the term "narrative of terror" to refer to the unequivocal and unreserved perception of Nazi medicine as a moral abomination that provokes extreme revulsion and genuine existential fear (henceforth "narrative of terror"). The "narrative of terror" frames Nazi medicine as an unbearable phenomenon and dictates that all social and legal means should be employed to ensure that it is not repeated. In relation to this narrative of terror, the article also examines the "continuum perspective" – the concept that there is a potential continuum between "Nazi medicine," including its therapeutic and experimental practices, and "conventional" or "normal" medicine, which is essentially any form of medicine not classified as "Nazi medicine" (henceforth "continuum perspective"). In this article we attempt to identify how the relationship between the "continuum perspective" and the "narrative of terror" affected the perception of events in this field, as well as the effects of this perception on the development of human medical experimentation in Israel, as indicated by the interviews.

3 L. M. Lee, K. Spector-Bagdady, and M. Sakhuja, "Essential Cases in the Development of Public Health Ethics," in *Public Health Ethics: Cases Spanning the Globe*, ed. Drue H. Barrett, Leonard W. Ortmann, Angus Dawson, Carla Saenz, Andreas Reis, and Gail Bolan, Cham, Springer International Publishing, 2016, pp. 37–58.

4 N. Davidovitch and M. Alberstein, "The Traumatic Memories of Nazi Medical Atrocities: Moving Toward a More Focused Analysis," *Korot* 19 (2008): 105–112; R. Zalashik, "Nazi Medical Atrocities and the Israeli Medical Discourse from the 1940s to the 1990s," in *Silence, Scapegoats, Self-Reflection: The Shadow of Nazi Medical Crimes on Medicine and Bioethics*, ed. V. Roelcke, E. Lepicard, and S. Topp, Göttingen, V&R unipress GmbH, 2014, pp. 195–210.

Science, Medicine, and History

Physician researchers who aspire to facilitate the innovations of the future while also pushing the boundaries of science have mostly described the history of medicine as uninspiring and even irrelevant to their professional aims.[5] The task of recording the history of medicine, originally undertaken by physicians in the context of medicine's absolute autonomy, has spread over time to include historians working within the context of the humanities and social sciences.[6] This shift led to new insights, including, among others, the inherent potential of incorporating Nazi medical crimes into the medical and bioethical discourse, while also taking into account the relevance of Nazi medical crimes to modern medicine in all its complexity.[7]

The interrelationship of medicine, science, and the development of social history is complex: on the one hand, medical, scientific, and technological development has yielded innovative medical

5 D. S. Jones, J. A. Greene, J. Duffin, and J. Harley Warner, "Making the Case for History in Medical Education," *Journal of the History of Medicine and Allied Sciences* 70, 4 (2015): 623–652.

6 R. C. Fox and J. P. Swazey, *Observing Bioethics*, Oxford University Press, 2008; S. Jasanoff, *Designs on Nature: Science and Democracy in Europe and the United States*, Princeton University Press, 2011; Jones et al., "Making the Case for History" (cit. n. 5); H. M. Marks, "Trust and Mistrust in the Marketplace: Statistics and Clinical Research, 1945–1960," *History of Science* 38, 3 (2000): 343–355; A. Petryna, "Ethical Variability: Drug Development and Globalizing Clinical Trials," *American Ethnologist* 32, 2 (2005): 183–197; S. M. Reverby and D. Rosner, "Beyond 'the Great Doctors,'" in *Health Care in America: Essays in Social History*, ed. S. M. Reverby and D. Rosner, Philadelphia, Temple University Press, 1979, pp. 3–16.

7 P. Weindling, *Health, Race and German Politics between National Unification and Nazism, 1870–1945*, Cambridge University Press, 1993; Fox and Swazey, *Observing Bioethics* (cit. n. 6); Jasanoff, *Designs* (cit. n. 6); B. H. Lerner, "Revisiting a 'Great' Doctor's Life," *Reviews in American History* 43, 3 (2015): 532–536; R. Proctor, *Racial Hygiene: Medicine under the Nazis*, Harvard University Press, 1988.

solutions and created social and moral dilemmas in the medical arena.[8] Medicine's application of advanced technologies has been a factor in shaping the identity of the individual within society[9] as well as the structures of society.[10] On the other hand, the growing proximity of medicine as an evolving discipline that is steadily consolidating a scientific and practicable identity to politics and key figures in various countries since the end of the twentieth century has transformed medicine into a central and dominant social institution.[11] The processes and social repercussions of medical and technological progress, alongside the autonomy of clinical and experimental medical activity, have resulted in the formation of social structures that many times lack self-reflection. This divide has been documented also within the research of social historian of medicine as well as other social scientists reflecting on the development of bioethics as a field.[12]

Historical Events and Collective Trauma

In recent decades, various disciplines have incorporated the concept of trauma to describe diverse experiences and situations, structure them, and draw insights regarding future measures.[13]

8 Fox and Swazey, *Observing Bioethics* (cit. n. 6).

9 M. Lamkin, "Regulatory Identity: Medical Regulation as Social Control," *Brigham Young University Law Review* (2016): 501.

10 Fox and Swazey, *Observing Bioethics* (cit. n. 6); Jasanoff, *Designs* (cit. n. 6); D. J. Rothman, *Strangers at the Bedside: A History of How Law and Bioethics Transformed Medical Decision Making*, Routledge, 2009.

11 N. Davidovitch, N. and S. Shvarts, "Immigration, Health and the Israeli Melting Pot" [in Hebrew], *'Iyunim Bitkumat Israel* 13 (2003): 181–201.

12 Fox and Swazey, *Observing Bioethics* (cit. n. 6); Jasanoff, *Designs* (cit. n. 6); Rothman, *Strangers* (cit. n. 10).

13 J. C. Alexander, "Toward a Theory of Cultural Trauma," *Cultural Trauma and Collective Identity* 76 (2004): 620–639; C. Caruth, *Unclaimed Experience: Trauma, Narrative, and History*, JHU Press, 2016; J. L. Herman, *Trauma and Recovery: The Aftermath of Violence: From Domestic Abuse to Political Terror*, rev. ed., New York: Basic Books, 1997.

Trauma has become a central issue in the study of past events and serves as a theoretical framework for their analysis and structuring.[14] The extension of narrative theories regarding self-identity to the study of the construction of group identity and collective memory has created a theoretical foundation for research on collective trauma.[15]

The conception of historical trauma as a representation, one that fills a social role detached from the event itself, characterizes collective memory as a constructed representation of a traumatic event.[16] The memories of traumatic historical events are constructed within contemporary social and cultural contexts, which often determine what will be included in the memory and what will be forgotten.[17] Collective memory is a product of struggles over competing narratives during a certain period, which take place among the powerful for the purpose of establishing a narrative that expresses the interests they consider important.[18]

Halbwachs[19] has argued that collective memory, which is essentially subjective, is processed according to the national, political, and social needs of a particular society at a given time

14 Alberstein, Davidovitch, and Zalashik, *Collective Trauma* (cit. n. 2).

15 Caruth, *Unclaimed Experience* (cit. n. 13); I. Csertő and J. László, "Exploration of Group Identity Processes by a Narrative Analysis of Intergroup Evaluation," in *EASP 2011 – 16th European Association of Social Psychology General Meeting*, Stockholm, Sweden, 2011, p. 36.

16 J. R. Gillis (ed.), *Commemorations: The Politics of National Identity*, Princeton University Press, 1996, pp. 258–280; A. Young, *The Harmony of Illusions: Inventing Post-Traumatic Stress Disorder*, Princeton University Press, 1997, pp. 118–143.

17 M. Zembylas and Z. Bekerman, "Education and the Dangerous Memories of Historical Trauma: Narratives of Pain, Narratives of Hope," *Curriculum Inquiry* 38, 2 (2008): 125–154.

18 Gillis, *Commemorations* (cit. n. 16).

19 M. Halbwachs, *The Collective Memory*, trans. Francis J. Ditter Jr. and Vida Yazdi Ditter, Harper & Row, 1980.

and place. The Holocaust was a central factor in shaping the national consciousness and creating a meta-narrative that emphasized the common denominator among all Jews, legitimized the establishment of the State of Israel, and reinforced the necessity of the Zionist struggle for security and survival. In contrast to this important influence of the Holocaust memory on the national sphere, the socio-cultural and medical spheres relegated representation of the Holocaust, including its survivors, to the social margins, and the Holocaust did not play a significant part in shaping the agenda.[20]

The conception of a historical event as collective trauma has implications for the ways in which society processes and copes with other events.[21] The Holocaust served as a frame of reference for analyzing other events.[22] The manner in which medicine developed in Germany after the Holocaust was characterized by motifs of coping with trauma, such as denial and avoidance of practices that could provoke memories of the Nazis' medical atrocities, as well as reflective coping that facilitated processes of learning, awareness, and taking responsibility.[23]

20 J. Brunner, "Attitudes of Mental Health Professionals towards Holocaust Survivors in Israel during Its Early Decades," in *Trauma's Omen: Historical, Social and Political Perspectives* [in Hebrew], ed. M. Alberstein, N. Davidovitch, and R. Zalashik, Faculty of Law, Bar-Ilan University Press and Hakibbutz Hameuchad, pp. 263–277.

21 N. McMillan, "Remembering 'Rwanda,'" *Law, Culture and the Humanities* 12, 2 (2016): 301–328.

22 Davidovitch and Alberstein, "Traumatic Memories" (cit. n. 4); W. Kansteiner, "Finding Meaning in Memory: A Methodological Critique of Collective Memory Studies," *History and Theory* 41, 2 (2002): 179–197.

23 V. Roelcke, "Trauma or Responsibility? Memories and Historiographies of Nazi Psychiatry in Postwar Germany," in *Trauma and Memory: Reading, Healing, and Making Law*, ed. Austin Sarat, Nadav Davidovitch, and Michal Alberstein, Stanford, Stanford University Press, 2007, pp. 225–242.

METHODS

This article is part of a broader study investigating the development of medical experimentation on human subjects in Israel. The collection of its data and its analysis were conducted according to standard criteria formulated in the qualitative research methodologies, including in-depth interviews and textual analysis of a variety of sources, with the purpose of ensuring transparency of process and improving the quality and reliability of the research.[24]

Interview Design

The study included a systematic analysis of archival documents from the Israel State Archives, the Ministry of Health's legal bureau, the Knesset archives, and the historical Jewish press. In addition, 45 in-depth semi-structured interviews were held between November 2014 and November 2017. The interviews were conducted in accordance with an interview briefing protocol designed to accommodate the flexibility required for real-time dynamic interaction.[25] The study was approved by Zefat Academic College's Ethics Committee (No. 41/14) and the Ethics Committee of the University of Haifa (Certificate No. 041/17).

Participants and Sampling

The interviewees were selected according to a purposeful sample methodology using high initial variance of theoretical sampling.[26]

24 A. Tong, P. Sainsbury, and J. Craig, "Consolidated Criteria for Reporting Qualitative Research (COREQ): A 32-Item Checklist for Interviews and Focus Groups," *International Journal for Quality in Health Care* 19, 6 (2007): 349–357.

25 E. Carey, "Navigating the Process of Ethical Approval: A Methodological Note," *The Grounded Theory Review* 9, 3 (2010).

26 K. Charmaz and L. Belgrave, "Qualitative Interviewing and Grounded Theory Analysis," in *The SAGE Handbook of Interview Research: The*

Forty-five subjects were interviewed: 18 women and 27 men; 24 physicians, including eight chairmen of committees for the approval of clinical trials or members of the Israel Medical Association (IMA) Ethics Bureau; seven regulators, including representatives from the Ministry of Health and its Legal Department as well as the Chief Scientist; eight bioethicists (half of whom were jurists); three representatives of the pharmaceutical industry; and three representatives from the medical insurance sector. We obtained consent from all participants to use the views and perspectives they expressed in the interviews and disclose their professional identity while concealing their personal identity. All interviewees met the inclusion criteria, i.e., a significant and ongoing connection with the field of medical experimentation on human subjects in Israel and involvement in various aspects of its development.[27]

Data Collection and Analysis

The interviews were recorded and transcribed verbatim, and after repeated readings, a holistic analysis was performed, leading to the identification of a number of themes. Personal anonymity was promised to the interviewees, who were designated only by category, as follows: P – physician, R – regulatory, B – bioethicist, I – representative of the insurance industry, T – representative of the pharmaceutical industry.[28]

Complexity of the Craft, ed. Jaber F. Gubrium, 2nd ed., SAGE, 2012, pp. 347–365.

27 Tong, Sainsbury, and Craig, "Consolidated Criteria" (cit. n. 24).

28 G. McGhee, G. R. Marland, and J. Atkinson, "Grounded Theory Research: Literature Reviewing and Reflexivity," *Journal of Advanced Nursing* 60, 3 (2007): 334–342; H. Starks and S. Brown Trinidad, "Choose Your Method: A Comparison of Phenomenology, Discourse Analysis, and Grounded Theory," *Qualitative Health Research* 17, 10 (2007): 1372–1380.

Eventually, a grounded theory was constructed using categorical content analysis as the major analytical tool, with structural analysis utilized as a secondary analytical mechanism.[29]

RESULTS

The interviews provided a rare opportunity to examine the perceptions of policymakers, key figures in various fields, representatives of the pharmaceutical and insurance industries, and physician researchers, all of whom have long been engaged at various levels in the field of clinical trials in Israel. We sought a maximum variance of interviewees in order to capture the framing process of this phenomenon in Israel.[30]

Here we address the central themes that emerged from the interviews regarding the implications of historical events for the development of the field of clinical trials in Israel. After the interviews, we identified several categories, which we grouped under the following headings: past events as a catalyst for change in the field of clinical trials, past events as a motive for change in physician-patient relations, and methods of coping with historical events. Each category was divided into subcategories based on the issues that surfaced in the context of that category during the interviews. The categories we identified and the subcategories that emerged from them will be discussed below alongside quotes from the interviews that back up the findings.[31]

29 Charmaz and Belgrave, "Qualitative Interviewing" (cit. n. 26); B. Glaser, *Discovery of Grounded Theory: Strategies for Qualitative Research*, Routledge, 2017; Starks and Brown Trinidad, "Choose Your Method" (cit. no. 28); A. Strauss and J. Corbin, *Basics of Qualitative Research: Grounded Theory Procedures and Techniques*, Sage Publications, 1990.

30 E. Goffman, *Frame Analysis: An Essay on the Organization of Experience*, Cambridge, MA, Harvard University Press, 1974, p. 21.

31 L. Côté and J. Turgeon, "Appraising Qualitative Research Articles in Medicine and Medical Education," *Medical Teacher* 27, 1 (2005): 71–75.

Past Events as a Catalyst for Change in the Field of Human Medical Experimentation

All the interviewees agreed that past events in the field of human medical experimentation that were perceived as negative or harmful had implications for the development and management of the field.

Past events as a source of boundaries

The interviewees used such terms as "warning signs" or "red lines" to refer to the role of these events in delineating the boundaries between what is permissible and what is prohibited, or between what is appropriate and what is inappropriate and deserving of condemnation, in this field. This is clearly reflected in the remarks of one interviewee regarding the Holocaust: "The trauma has continued to wane, and it will be remembered in the history books and always serve as a compass – where not to go!" (R20). According to an interviewee whose work involves training therapists:

> There is an obligation to include all the experiments that we "fell into" as part of the professional discourse, because there is nothing to prevent such things from happening again unless they are taught... so as to provide a warning and point out where there might be potential failings, where there might be pitfalls to which we could succumb. (B13)

Only a small portion of the interviewees used these events to draw more significant insights:

> We all need to think about the fact that highly cultured people with a great deal of knowledge managed to stray into completely unacceptable territory without seeing where they went wrong, because if they had seen and understood this they would not have done so…. They thought they were doing good for the German people, so this is undoubtedly one of the things that physicians do need to think about: How far am I capable of going in my efforts to do good? (B15)

Past events as a catalyst for development

Most interviewees mentioned the potential of past events to lead to change and promote the regulation and management of clinical trials. At the same time, a small portion of them believed that this potential is not being realized, which results in "history repeating itself." Most interviewees associated substantive progress in the field of clinical trials in Israel with the trials conducted at the Kaplan-Herzfeld Medical Center, which also drew the most condemnation.

> The big push undoubtedly came from… the trials at Kaplan and Herzfeld. After they became public, in 2007, there was a first reading of a legislative bill [on the matter], and it was no coincidence that this first reading happened then…. So these are two things that usually drive the process – either some great drama or someone who decides that the issue needs to be promoted. (R28)

This interviewee thought that the atrocities of the Holocaust had had a strong impact, although she found it difficult to identify the precise nature of the impact.

A member of the Helsinki Committee based at a major medical center mentioned the Holocaust in referring to developments in the field of clinical trials in Israel, but she then felt embarrassed and immediately added: "I don't know why I mentioned that. It is not that I really link it." She went on to state that "after the event at Kaplan and Herzfeld, from what I have heard, I know that they 'cleaned out the stables' and there is now more oversight there." At a later stage of the interview, she reiterated: "And this matter of the Holocaust, I do not really think it has anything to do with us" (B5).

Past events as a source of barriers

Interviewees mentioned an automatic association between clinical trials and feelings of fear, lack of control, uncertainty, aversion, and reluctance. Most referred to these feelings as stemming,

directly or indirectly, from past events that remain in the collective memory. One interviewee noted in this context:

> When you mention a "clinical trial" [*nisui*, also "experiment"], people get an impression of "guinea pigs" or "lab rats." The word "trial" [or "experiment"] has a bad reputation. It is linked in one's consciousness with the Holocaust and the German experiments. The public has some sort of association that often creates a barrier.

Immediately afterwards he noted that this fear has presumably always been linked with the field of medical experimentation on human subjects:

> When you say "experiment," you immediately see yourself in some sort of test tube at a pathology institute. In general, regarding the whole issue of scientists… there's a sort of ethos, beginning with Frankenstein and Dr. Jekyll and Mr. Hyde…. When I tried to think about it I tossed out the idea of the Holocaust but I don't know…. Anyway, it is an association for me too. (R19)

Representatives of the pharmaceutical industry expressed the belief that significant negative events can prevent progress in the field. One interviewee noted in this context:

> The issue of the Holocaust, for example, is part of the discourse. It must not be part of the discourse because that hurts Israel. Knesset members and people who wanted to move an issue forward have used it, and it always ignites the discussion and turns it into an argument because there is a complete lack of understanding among people. (I40)

Physicians expressed similar concerns as well.

Past Events as a Motive for Change in Physician-Patient Relations

Between trust and mistrust

Most of the interviewees referred to the loss of public trust resulting from negative historical events. One regulator said:

> In the past I thought that certain events are part of the Israeli DNA and that after the Holocaust people would be extremely cautious, but after the shocking event at Herzfeld Medical Center I don't know anymore. "Apparently we forgot"… and now we have fallen so far…. This really occupies people's minds. (R17)

Another interviewee noted that incidents taking place in Israel "pollute everything that's good" even though "we should have been more sensitive than any other people after what happened to us at the concentration camps, and I say 'us' because it happened to all of us in our national consciousness." In his view the result will be "the complete erosion of public trust, and without the public there will be no research" (P27).

At the same time, there were those who believed that negative events have not adversely affected public trust, given that "this was a small group, and efforts were made afterwards to remove the bad apples" (P34).

Between harsh condemnation and over-consumption

The interviewees linked harmful events that have taken place in Israel with Nazi medicine:

> I think that one of the most shocking things in the horrible experiments at Herzfeld Medical Center happened when one woman explained that her mother was a Holocaust survivor who had been subjected to experiments there […] but the doctors did not want to hear another case of "what happened in Germany"…. They immediately think that you're an extremist and a demagogue. That is the perception here, and

> it's problematic because we do not look directly at ourselves in the mirror and see who we are. (P14)

Nonetheless, the interviewees noted that Israel as a nation over-consumes medical services and actively promotes medical experimentation and participation in trials, in a manner that is disproportionate to progress on legislative and ethical regulation. Most interviewees saw this as a contradiction, but some saw it as a matter of course. One interviewee noted in this context:

> We are a startup nation, perhaps, in fact, because of the Holocaust. We know that we must develop and progress, including in the medical field. This is a very strong driver for advancing experimentation in Israel. (R42)

Another interviewee emphasized that despite the Holocaust, "ultimately, Israel's population inherently seeks innovations and progress in experimentation" (R28).

Methods of Coping with Historical Events

Delayed coping

All the interviewees raised the issue of Nazi medicine when asked about the development of human medical experimentation in Israel, but most found the issue disconcerting. They said that clinical practice in Israel used to be subject to the exclusive discretion of the physician researcher, and there was no systematic mechanism for conducting clinical trials:

> In the past, when we as doctors thought we had a good idea for treatment that had not yet been tested, we could examine whether it was effective and helpful…. I remember all these treatments in the 1960s and 1970s that had no scientific basis. The situation gradually changed as the issue of patients' rights and awareness of their rights gained ground. (R19)

One physician, a chair of the Helsinki Committee, referred to the harmful clinical trials that had taken place in Israel and noted that

> in my view, we have not processed or coped with this thing, which was so major and catastrophic, in the sense of culture and heritage. It might take another hundred years to reach some sort of balance in the matter…. It is clear that the entire world woke up after the Holocaust, but it is waking up slowly. (P12)

Denial and ambivalence

Another issue raised in the interviews was the public's fear surrounding clinical trials:

> We are overly sensitive and scared because of stories about Mengele and the Nazis…. On the other hand, this also drives us to be a superpower in terms of experimentation. (P35)

Another interview added:

> The Holocaust and subsequent events should have deterred us, but don't forget that global competition is very steep…. Another issue is the economic aspect of clinical trials, and money is a motive that also drives competition. (P39)

Alongside these observations, there emerged the issue of general public apathy towards promoting this field in a manner that would ensure its rights:

> I do not think the general public cares about researchers' conduct. I've never seen any public discourse on the matter…. When is it discussed? Only when some professor who had done something scandalous is caught. (B8)

Diverse forms of coping

There was a discernable difference between the approach of interviewees with bioethical training and that of interviewees without experience in this area. Interviewees in the first group had a more coherent approach to coping and a greater tendency to see historical events as relevant to modern medicine and as a potential source for learning and development. At the same time, there did

not appear to be any uniformity in the approaches. Most of the interviews indicated contradictory views. Some interviewees referred to the Holocaust and Nazi medicine as part of the past and therefore less relevant for them. A small portion of interviewees thought that the experience of the Holocaust could actually provide an important lesson for medicine: "I think it is possible to derive very deep insights from this event" (P12). In contrast, another interviewee found it difficult to consider past events or even discuss them. He said, almost angrily, that "it's not relevant. At the time people did not understand, and today we have advanced and are also making advances in medicine, and this gives us the drive to continue" (R4). The interviews revealed diverse forms of coping, which could not always be reconciled.

DISCUSSION

The Dynamics of Physician-Patient Relations: A Continuum of Trust

There is much evidence of mistrust of physician researchers in Israel. In the 1970s, the Public Committee for the Protection of Human Dignity sought to prevent the establishment of a "cancer research" department at a hospital for patients with incurable illnesses, as this could thwart the noble aim of treating those severely ill patients. The Committee stated that granting permission to conduct clinical trials at a site that is meant to ease the suffering of these needy patients would be a "double-edged sword."[32]

The inherent imbalance in physician-patient relations is amplified in the researcher-participant relationship.[33] Historical events that drew social disapproval and violated patients' rights have increased suspicion of physicians and researchers and

32 Letter of July 31, 1975, to Victor Shem-Tov, Minister of Health, Re: Further Discussion Following the Meeting of July 18, 1975 [in Hebrew].

33 G. Corbie-Smith, S. B. Thomas, and D. M. M. S. George, "Distrust, Race, and Research," *Archives of Internal Medicine* 162, 21 (2002): 2458–2463.

undermined trust.[34] Similarly, most of the interviewees regarded trust as an important element of physician-patient relations, and one that could turn into mistrust if the physician-researcher's actions cause harm or offense to the patient, for example.

According to literature in the field, this dichotomous view is overly simplistic. Although there is a consensus that scandalous cases have shocked the public and undermined its trust, it has also been argued that public trust has always been conditional and ambivalent.[35] In an effort to obscure mistrust and its implications, various physicians, scientists, researchers, and pharmaceutical companies have attempted to develop "objective" research methodologies aimed at assuaging suspicions and facilitating autonomy in human medical experimentation.[36] This endeavor established medicine as a scientific profession that promotes technological and scientific innovation alongside professional trust, with less reliance on personal trust.

A Dynamic of Collective Identity: Remembering and Forgetting

Although World War II and the atrocities of the Holocaust shaped many aspects of Israeli society,[37] the Nazis' medical crimes evidently had little impact on Israeli medical discourse prior to the

34 E. Azeka, F. Fregni, A. Junior, and J. O. Costa, "The Past, Present and Future of Clinical Research," *Clinics* 66, 6 (2011): 931–932; Corbie-Smith et al., "Distrust" (cit. n. 33); Reverby, *Examining Tuskegee* (cit. n. 1).

35 G. Haddow and S. Cunningham-Burley, "Tokens of Trust or Token Trust? Public Consultation and 'Generation Scotland,'" in *Researching Trust and Health*, ed. J. Brownlie, A. Greene, and A. Howson, Routledge, 2008, pp. 164–186.

36 S. R. Bates, W. Faulkner, S. Parry, and S. Cunningham-Burley, "'How Do We Know It's Not Been Done Yet?!' Trust, Trust Building and Regulation in Stem Cell Research," *Science and Public Policy* 37, 9 (2010): 703–718; Marks, "Trust and Mistrust" (cit. n. 6).

37 Davidovitch and Alberstein, "Traumatic Memories" (cit. n. 4); Zalashik, "Nazi Medical Atrocities" (cit. n. 4).

1990s.[38] The capacity of health professionals to deal with the trauma developed gradually and was characterized by patterns of coping with loss.[39] The recurring pattern in the medical profession, among organizations as well as individual physicians, was one of avoidance and refraining from confrontation with the past. The literature has identified this as an extreme form of medicine's disinclination to admit mistakes or investigate the origins of negligence and the mechanisms that shape it.[40] This pattern of behavior undermines public trust because society draws on narratives handed down from earlier generations, among other means, to interpret current events in the medical field.[41]

The tendency to exclude any representation of the Holocaust has also been evident in the regulatory sphere. Interviewees mentioned the difficulty of legislating a law titled "Medical Experimentation on Human Subjects" as well as the difficulty of engaging meaningfully in an issue that has strong connotations of Nazi medicine. These difficulties significantly prolong the legislative process.[42] There have been many legislative bills since the first one – the 1974 proposed law on human medical experimentation[43] – that, to date, have been unable to advance to the level of primary legislation.

The Holocaust has been identified as a central facet of Israeli nationhood. This is illustrated by the criticism that Minister of Culture and Sport Miri Regev drew for her decision to use sound

38 Zalashik, "Nazi Medical Atrocities" (cit. n. 4).

39 Brunner, "Attitudes of Mental health Professionals" (cit. n. 20).

40 D. J. Rothman, "Medical Professionalism – Focusing on the Real Issues," *New England Journal of Medicine* 342, 17 (2000): 1284–1286.

41 A. R. Denham, "Rethinking Historical Trauma: Narratives of Resilience," *Transcultural Psychiatry* 45, 3 (2008): 391–414.

42 Letter of May 10, 1998 to Dr. Boaz Lev, Medical Deputy to the Director-General, Re: Legislative Bill on Scientific Studies [in Hebrew], Archives of the Legal Department, Ministry of Health.

43 Israel State Archives, GL/5/12162, Government Ministries – Clinical Trials – Helsinki – General, January 1, 1974–December 31, 1977 [in Hebrew].

effects that simulate train locomotion and barking dogs, alongside visual images of children wearing yellow Stars of David, in ceremonies commemorating the seventieth anniversary of Israel's Day of Independence. By doing so she had, in her view, "cracked" the Holocaust enigma. In explaining the motto of the celebrations – "A Heritage of Innovation" – she stated:

> Israeli society has very strong national, historical, and traditional characteristics, which enable it to preserve its identity, its cohesion, and of course its physical security. As such, it is creative, it thinks about the future, it thinks outside the box, and it is a pioneer in research, medicine, and agriculture, thus making a decisive contribution to humanity as a whole.[44]

The automatic association between the Holocaust and medical progress, as illustrated in the interviews, is also evident in the national dimension. The Holocaust unconsciously served as an event that generated insights in Israel regarding the importance of progress generally and medical progress specifically. This process framed medical research and human experimentation as a means to achieving progress and innovation and as a practice that is essential for society.

A Dynamic of Needs: Between Historical and Contemporary Events

Physicians and medical organizations have been active in Israel since before statehood. They had to face the new challenges posed by the massive immigration of the 1940s and 1950s, which was perceived as "problematic" in terms of the immigrants' medical needs and cultural characteristics.[45] The close connection between science and the pursuit of this developing state's needs features prominently in a speech delivered by Abba Eban upon assuming

44 A. Daniel, "'Heritage of Innovation': The Logo for the Seventieth Independence Day Celebrations" [in Hebrew], January 15, 2018, Channel 20.

45 Davidovitch and Shvarts, "Immigration" (cit. n. 11).

the position of president of the Weizmann Institute of Science. Eban announced his intention to convene an international conference in 1960 on "the role of science in progress for young states." According to him, science would enable the young state to exploit its potential growth for the sake of its citizens' welfare.[46]

Physician researchers sought to legitimize research on cadavers by way of the Anatomy and Pathology Law. Prior to the adoption of this law, the dissection of corpses was permissible only for the purpose of determining cause of death, but the need to conduct autopsies for medical and educational purposes "became extremely acute after the Hebrew University–Hadassah Medical School was founded."[47] The debates surrounding this legislation underscore the great importance ascribed to science and progress in the state, which had been founded "in order to heal the wounds of exile." Accordingly, this law could lead to "independence and non-reliance on others in the field of scientific and applied medicine."[48]

The issue of autopsies in Israel became part of the discourse on the ongoing violation of rights, particularly the rights of disadvantaged population groups, for the sake of advancing clinical skills and medical science.[49] The public associated such infringements with Nazi medicine, comparing Israeli physicians with physicians such as Mengele.[50] A recently published article in the Israeli journal *Harefuah* revealed an ongoing practice of

46 Israel State Archives, G/7/3881, Press Reports – Science (including scientific institutions, medicine, Weizmann Institute, Scientific Council) [in Hebrew], January 1, 1959.

47 Legislative Bill, Explanatory remarks on the proposed 1953 Anatomy and Pathology Law [in Hebrew], March 5, 1953, pp. 183–184.

48 Knesset Plenary Records, Plenary 268 of the Second Knesset, Re: The 1953 Anatomy and Pathology Law (first reading) [in Hebrew], July 13, 1953, pp. 1912–1920.

49 Knesset Plenary Records, Plenary 693 of the Third Knesset, Re: Conclusions of the Constitution, Law, and Justice Committee on the Matter of Autopsies [in Hebrew], August 6, 1959.

50 H. Shorer, "Look at the Link" [in Hebrew], *Davar*, May 12, 1967, p. 3.

violating rights by conducting autopsies on infants without parental consent in order to improve the clinical skills of pediatricians and neonatologists.[51]

The Continuum Perspective: Between Historical Events and Contemporary or Future Events

Researchers have described historical events that became ingrained in public consciousness as milestones and transformative moments.[52] Yet it has also been found that ways of coping with the same event vary by location as well as in accordance with social context and the significance of that event at the time.[53] Interviewees cited the development of in-vitro fertilization and genetic engineering as two milestones in the field of human medical experimentation in Israel. According to some interviewees, these events exposed the laxity and lack of caution among those Israeli physician-researchers who sought to promote such innovative practices without a solid scientific basis. The events had negative connotations, bringing to mind the experiments of Nazi physicians who saw only scientific progress rather than patients. In the field of genetic engineering, Israel was the first to conduct an experiment at a hospital, Hadassah Medical Center. The experiment raised "doubts and fears," given that "this field has been completely neglected in Israel" and that there was no law to regulate it and define "the consent of the human 'guinea pigs' to these tests." The situation led to another proposal for legislation.[54]

51 S. Dolberg and Y. Bar-Ilan, "Learning to Resuscitate a Recently Deceased Infant" [in Hebrew], *Harefuah* 157, 4 (2018): 262–264.

52 Azeka et al., "The Past" (cit. n. 34); Petryna, "Ethical Variability" (cit. n. 6); Reverby and Rosner, "Beyond 'the Great Doctors'" (cit. n. 6).

53 R. Zalashik and N. Davidovitch, "Bioethics in the Shadow of the Holocaust: A Comparative Perspective" [in Hebrew], *Theory and Criticism* 40 (2012): 401–427.

54 A. Peleg, "The Golem in the Test Tube" [in Hebrew], *Maariv*, October 13, 1980, p. 65.

Following a number of media reports about the conduct of researchers and pharmaceutical companies in Israel, a legislative bill proposed by Knesset member Ḥaim Dayan was submitted for debate. Aside from the hospitals' interest in finding as many patients as possible to participate in trials, "which bring in a total of $55 million per year," concerns were voiced that Israel could turn into an "experimentation farm." Prof. Avinoam Reches of Hadassah Medical Center, referring to an article published in *Yediot Aḥronot* in early March 1997 under the headline "We Are the World's Guinea Pigs," observed that

> [t]he lowest point was when the journalist… mentioned clinical trials in Israel and Nazi "medical" experiments in Germany in the same breath. I think this is scandalous in the extreme.

Subsequently, he approached Knesset member Ḥaim Dayan to request that he withdraw the legislative bill because it "hurts us and is completely detached from the reality in which we operate. I am offended when I read it."[55]

The costs of establishing mandatory control and oversight prevented progress on the issue of oversight of medical experimentation on human subjects for many years.[56] Progress only began to take place after the 2005 Annual Report of the Ombudsman released findings that pointed to many flaws in medical experimentation on human subjects at various hospitals in Israel. According to the report, about 2,500 new requests to conduct clinical trials were being approved annually. These trials, and trials that had been approved in previous years, were being conducted without oversight. Of the eight hospitals where serious deficiencies were identified in the process of medical

55 Special Committee for Scientific and Technological Research and Development, Minutes of Meeting No. 13, Fourteenth Knesset, Re: Oversight of Human Medical Experimentation [in Hebrew], March 27, 1997.

56 Letter of July 5, 1998, to Talia Edri, Adv., Legal Department, Re: Legislative Bill on Clinical Trials [in Hebrew], Israel State Archives, GL/55001/4.

experimentation on human subjects, only small hospitals, such as Kaplan-Herzfeld, which treat disadvantaged population groups, "earned" unequivocal condemnation from nearly all the interviewees.[57]

LIMITATIONS

We acknowledge several limitations to this study. The findings reflect the specific cultural settings of the Israeli healthcare system; nevertheless, they seem to dovetail with previous studies from different cultures.[58] The patient-participant perspective is portrayed here from the physicians' and policymakers' perspective, which might differ from the patients' experience.[59] Hence, we are cautious about presuming to interpret or "make sense" of this complex picture, as there is a need for further study of the patient-participant perspective. In addition, the findings on the practices applied in the clinical trials, as well as in the therapeutic field, reflect the behavioral manifestations of the interviewees' self-reported practices, which may differ from actual behavior.

CONCLUSIONS

The State of Israel took shape within a scientific ideology that recognized the importance of clinical trials and promoted them despite feelings of ambivalence and concern. Science, which united the medical field with the government of Israel, provided the foundation for blurring the outer boundaries between the

57 Joint Committee: State Control Committee (No. 228) and Science and Technology Committee (No. 141) [in Hebrew], November 7, 2005.

58 Roelcke, "Trauma or Responsibility?" (cit. n. 23).

59 A. F. Cook and H. Hoas, "Clinicians or Researchers, Patients or Participants: Exploring Human Subject Protection When Clinical Research Is Conducted in Non-Academic Settings," *AJOB Empirical Bioethics* 5, 1 (2014): 3–11.

political establishment and the medical profession. In this context the "narrative of terror" served as a blurring agent, given the vital social needs of the hour. The process of formulating lessons learned from Nazi medicine was "diverted from its natural course," which in turn contributed to sidelining the "continuum perspective" and excluding it from medical and experimental discourse and practices.

The interviews outlined the complex dynamics by which Israeli medicine copes with Nazi medicine. Its coping patterns include such diverse mechanisms as denial and repression alongside complex and contradictory feelings that manifest as anger, ambivalence, and a need to speak out and confront, as well as difficulty in doing so. These patterns were found to be inherently characteristic of coping with collective trauma. In this context the "continuum perspective" is perceived as threatening, like any motif identified with Nazi medicine, and it was therefore excluded from the Israeli medical arena. Nonetheless, the picture that emerged might suggest how to channel the medical profession's process of coping into a process of healing and resolution and towards the formulation of a tailored policy that takes into account all the pertinent variables in managing the medical profession and applying therapeutic and experimental practices.